



State of Oregon Department of Environmental Quality

Notice of Proposed Rulemaking

June 29, 2021

Cleaner Air Oregon and Air Toxics Alignment and Updates Rulemaking

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Introduction

DEQ invites public input on proposed permanent rule amendments to chapter 340 of the Oregon Administrative Rules. Parameters and requirements for these proposed rules specific to Cleaner Air Oregon are set forth in Senate Bill 1541, enacted by the 2018 Oregon Legislature. DEQ proposes changes to OAR 340, division 245 and 246 and the creation of a new division of OAR rules, division 247 to align newly adopted CAO rules with the existing Air Toxics program, and provide limited updates to the CAO program based on experiences thus far from implementation.

Request for Other Options

During the public comment period, DEQ asks for public comment on whether there are other options for achieving the rules' substantive goals while reducing the rules' negative economic impact on business.

Overview

DEQ proposes to amend existing program rules relating to DEQ's toxic air contaminant programs: Cleaner Air Oregon (Division 245) and the Oregon State Air Toxics Program (Division 246). Additionally, DEQ proposes to adopt rules under a new division (Division 247) that would establish health risk-based standards for toxic air contaminants and the process for updating these values for DEQ's toxic air contaminant programs.

In April 2018, the Oregon legislature enacted [Senate Bill 1541](#), which authorized and funded the Cleaner Air Oregon Program (CAO) and set parameters and requirements for future program rules. CAO is a health risk-based program that regulates toxic air contaminant emissions from industrial sources, which is implemented through DEQ's existing air quality permitting framework. CAO was adopted by the Environmental Quality Commission on Nov. 15, 2018.

Prior to the adoption of Cleaner Air Oregon, toxic air contaminants were largely addressed under the Oregon State Air Toxics Program, adopted in 2003. In addition to addressing toxic air contaminants in Oregon, the Oregon State Air Toxics Program established the Air Toxics Science Advisory Committee (ATSAC), an advisory committee that advised DEQ on health risk-based benchmark values for ambient concentrations of toxic air contaminants of concern.

DEQ is initiating this rulemaking to better integrate its air toxics programs and address the following priorities:

- Strengthen the process for setting and revising toxicity values for toxic air contaminants;
- Align the Oregon State Air Toxics Program and the recently established CAO Program to promote clarity and use of best science to protect the health of all Oregonians, including sensitive and vulnerable populations; and
- Clarify certain CAO requirements for facilities and address inefficiencies in the risk assessment process.

The timing of these updates is especially important. DEQ needs to update the process for reviewing toxic air contaminant standards and reporting lists before initiating the first triennial review of Toxicity Reference Values which is set in rule to begin in late 2021.

Strengthen the process for setting and revising toxicity values for toxic air contaminants

The rulemaking proposes the role of the Air Toxics Science Advisory Committee (ATSAC) be updated to provide feedback on the triennial review of TRVs required by CAO. Additionally, the rulemaking proposes that the list of authoritative sources, the expertise required on the ATSAC and the petition process be updated to provide the best scientific foundation for TRVs.

Align the Oregon State Air Toxics Program and the recently established Cleaner Air Oregon Program

DEQ's two programs addressing toxic air contaminants maintain separate lists of toxic air contaminants with respective toxicity values and different processes for updating these lists. The rulemaking proposes to create a new division, division 247, to house an integrated list of toxic air contaminants, their reference values, and the process for future updates. This would align DEQ's toxic air contaminant programs and ensure consistent application of the best available science in current and future planning, regulatory and toxic air contaminant reduction efforts, and eliminate the need to update multiple lists. The rulemaking would also address redundancies between programs since the passage of Cleaner Air Oregon in 2018, such as the Safety Net Program.

Clarify certain CAO requirements for facilities and address inefficiencies in the risk assessment process

Updates specific to Cleaner Air Oregon program are generally informed by the first two years of program implementation and are intended to clarify rule language and improve efficiency of facility risk assessments to ensure that the program is protective of human and environmental health. The proposed rules would address unintended gaps that would improve implementation of the CAO program. In addition to housekeeping updates, the proposed rules would clarify certain requirements for facilities completing CAO risk assessments and address known inefficiencies in the risk assessment process.

Sources conducting risk assessments for Cleaner Air Oregon would be affected by the rules. DEQ staff have met with industrial and environmental stakeholders multiple times throughout the rulemaking. DEQ established a rules advisory committee and fiscal advisory committee to provide input and recommendations on proposed rules and evaluate the potential impacts of the rulemaking. DEQ considered recommendations of the rules and fiscal advisory committee in preparing the proposed rules.

Potential fiscal impacts are detailed in the statement of fiscal and economic impact. This rulemaking does not include changes to existing fee structures and DEQ has determined that there are no significant fiscal impacts related to the following rulemaking objectives:

- Strengthen the process for setting and revising toxicity values for toxic air contaminants
- Align the Oregon State Air Toxics Program and the recently established Cleaner Air Oregon Program to promote clarity and use of best science to protect the health of all Oregonians, including sensitive and vulnerable populations.

DEQ determined that most of the rule changes in division 245, to clarify certain CAO requirements for facilities addressing inefficiencies in the risk assessment process, are likely to have a fiscal impact on a limited number of sources subject to Cleaner Air Oregon. Overall, adoption of the proposed rule changes are not expected to have significant fiscal or economic impact.

Procedural Summary

More information

Information about this rulemaking is on this rulemaking's web page:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaoAT2021.aspx>

Public Hearings

DEQ plans to hold one public hearing. Anyone can attend a hearing by webinar or teleconference.

Date: Tuesday, July 20, 2021

Start time: 5:30 p.m.

Webinar link: [Link](#)

NOTE: If this link does not work, you can type in this web address:

<https://us02web.zoom.us/j/85899222339?pwd=ODR5aHhBSm9OakJFdkFuamxvbDhNZz09>

[Join by phone:](#)

Teleconference phone number: 833-548-0282

Meeting ID: 858 9922 2339

Passcode: 423310

Instructions on how to join webinar or teleconference: [Instructions](#)

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments by email, regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by 4 p.m., on July 30, 2021.

Submit comment by email

Any person can submit comments by sending an email. Commenters should include “Rulemaking Comment” in the email subject line. Submit emails to:

CAOAT2021@deq.state.or.us

Note for public university students:

ORS 192.345(29) allows Oregon public university and OHSU students to protect their university email addresses from disclosure under Oregon’s public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

By mail

Oregon DEQ
Attn: Tori Heroux
700 NE Multnomah St., Room 600
Portland, OR 97232-4100

At hearing

Tuesday, July 20, 2021 at 5:30 p.m.

Accessibility Information

You may review copies of all documents referenced in this announcement electronically. To schedule a review of all websites and documents referenced in this announcement, call Tori Heroux, DEQ, 971-808-7046.

Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format, or any other arrangements necessary to accommodate a disability. To make these arrangements, contact DEQ, Portland, at 503-229-5696 or call toll-free in Oregon at 1-800-452-4011, ext. 5696; fax to 503-229-6762; or email to deqinfo@deq.state.or.us. Hearing impaired persons may call 711.

Sign up for rulemaking notices

Get email or text updates about this rulemaking by either:

- Signing up through this link: [Cleaner Air Oregon GovDelivery](#);
- Signing up on the rulemaking web site: [CAO and Air Toxics Program Alignment and Updates rulemaking web page](#).

Get email or text updates about other, future DEQ rulemaking by signing up through this link: [DEQ Email Notice List](#).

What will happen next?

DEQ will include a written response to comments in a staff report DEQ will submit to the Environmental Quality Commission. DEQ may modify the rule proposal based on the comments.

Proposed rules only become effective if the Environmental Quality Commission adopts them. DEQ's intended action is to present the proposed rule changes to the EQC as soon as possible after the earliest date on which the rule changes could take effect. DEQ intends to submit the proposed rule changes to the EQC on or after Aug. 17, 2021.

Statement of Need

Proposed Rule or Topic	Discussion
Strengthen the process for setting and revising toxicity values for toxic air contaminants	
What need would the proposed rule address?	DEQ’s two programs addressing toxic air contaminants maintain two lists of toxic air contaminants and their respective toxicity values. Each program has a different process in rule for updating these values. The proposed rules establish a uniform process for future updates to these lists in advance of the first triennial Toxicity Reference Value review. The Air Toxics Science Advisory Committee would provide technical consultation as a part of the triennial TRV review.
How would the proposed rule address the need?	The proposed rules would strengthen and streamline the process for setting and updating new health risk-based reference values by creating a single process and reference point for the list of toxic air contaminants and their respective Toxicity Reference Values. Creating a single set of values would support DEQ and OHA’s efforts, as part of this rulemaking, to align DEQ’s two programs addressing toxic air contaminants and make the triennial review process more efficient. Input from the ATSAC would allow for technical consultation on TRVs proposed by DEQ, and the ATSAC would serve as an independent body for reviewing updates as part of future triennial TRV review rulemakings.
How will DEQ know the rule addressed the need?	The process for establishing standards for health-risk based values for toxic air contaminants would be updated prior to initiating the first triennial review, set to begin in November 2021. If the proposed rules are adopted, sources that are required to complete a risk assessment under division 245 would report emissions of the toxic air contaminants listed under OAR 340-247-8010 Table 1 and would be regulated based on the RBCs that are derived from TRVs under OAR 340-247-8010 Table 2. Another indicator of success would be the reflection of the best available science and input from a re-scoped ATSAC in the first triennial TRV review following the updated process outlined in rule.
Align DEQ’s Toxic Air Contaminant Programs	
What need would the proposed rule address?	The alignment of DEQ’s toxic air contaminant programs under division 245 and 246 provide a common reference to a single set of health risk-based values and processes for updating these values. The alignment also addresses necessary updates to the Oregon State Air

	Toxics Program, originally adopted in 2003, and removes rules made redundant by the passage of Cleaner Air Oregon in 2018, such as the Safety Net Program.
How would the proposed rule address the need?	The alignment of DEQ’s two programs addressing toxic air contaminants includes removing the Safety Net Program and re-scoping the Air Toxics Science Advisory Committee. The proposed rules would streamline existing processes, remove outdated requirements and continue supporting future work to address toxic air contaminants in a way that is based on the best science available.
How will DEQ know the rule addressed the need?	The proposed rule language sets the foundation for future DEQ efforts to develop a revised Air Toxics Program for Oregon. Cleaner Air Oregon would complement these future efforts by continued data collection from stationary sources using a unified list of toxic air contaminants and toxicity values, and establishing a pilot area risk program. These combined efforts would support future understanding and assessments of toxic air contaminants for future planning activities.
Clarify Requirements and Address Inefficiencies in the Cleaner Air Oregon Risk Assessment Process	
What need would the proposed rule address?	With over two years of experience implementing Cleaner Air Oregon, this rulemaking aims to address housekeeping items and inefficiencies to ensure that the program is able to complete risk assessment and protect public health through issuing permits that are health protective. Implementation of existing CAO rules in division 245 has surfaced unintended gaps and unclear requirements in the risk assessment process.
How would the proposed rule address the need?	The proposed rules are intended to address known inefficiencies in Cleaner Air Oregon and provide more clarity on various parts of the program. Addressing the identified inefficiencies in this rulemaking will improve ongoing implementation as additional facilities are called into the program. Addressing these gaps would create clear expectations for facilities and ensure a comprehensive risk assessment that balances the need for certainty and flexibility that businesses rely on to comply with CAO requirements and ensures that public health is protected.
How will DEQ know the rule addressed the need?	The proposed updates would provide more clarity and certainty around the requirements of existing rules. As a result of this effort, the time to complete future risk assessments for both new and existing facilities may decrease. Businesses would have more certainty around program requirements and could see reductions in costs to complete CAO risk assessments. DEQ can be assured that completed risk assessments account for all appropriate risks from the source.

Rules affected, authorities, supporting documents

Lead division

Operations/Air Quality, Headquarters

Program or activity

Cleaner Air Oregon, Air Toxics, and Air Quality Permitting

Chapter 340 action

Adopt				
Division 247				
340-247-0010	340-247-0020	340-247-0030	340-247-0040	340-247-0050
340-247-8010				
Amend				
Division 245				
340-245-0010	340-245-0020	340-245-0022	340-245-0030	340-245-0040
340-245-0050	340-245-0060	340-245-0100	340-245-0110	340-245-0120
340-245-0130	340-245-0140	340-245-0150	340-245-0200	340-245-0210
340-245-0220	340-245-0230	340-245-310	340-245-0320	340-245-0400
340-245-8010	340-245-0005			
Division 246				
340-246-0010	240-246-0030	340-246-0050	340-246-0090	340-246-0110
340-246-0130	340-246-0150	340-246-0170	340-246-0190	340-246-0210
340-246-0230				
Other Air Quality Rules				
340-200-0020	340-216-0090	340-218-0020	340-218-0110	
Renumber/Repeal				
340-245-0300 ¹	340-246-0070 ²	340-245-8020 ³	340-245-8030 ³	340-245-8040 ⁴
340-245-8050 ⁴				

¹ This rule is being moved and amended under [340-247-0030]

² This rule is being moved and amended under [340-247-0050]

³ The tables in these rules are being moved to [340-247-8010]

⁴ The tables in these rules are being moved to [340-245-8010]

Statutory Authority - ORS				
468.020	468.065	468.035	468A.015	468A.025
468A.040	468A.050	468A.070	468A.135	468A.155

468A.337	468A.345	Or Laws 2018, ch. 102	Or Laws 2018, ch. 7	
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Statutes Implemented - ORS				
468.065	468A.010	A68A.015	468A.025	468A.035
468A.040	468A.050	468A.070	468A.155	468A.335
468A.337	468A.343	468A.345	Or Laws 2018, ch. 102	Or Laws 2018, ch. 7

Legislation

Senate Bill 1541, approved in April of 2018, established the basis for Cleaner Air Oregon. While there was no specific legislative mandate directing the Department to develop an Oregon air toxics program existing statutes authorized the Commission to adopt the program.

Documents relied on for rulemaking

Document title	Document location
Oregon State Air Toxics Rulemaking Staff Report (2003)	https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/caoATstaffRep2003.pdf
Cleaner Air Oregon Rulemaking Staff Report (2018)	https://www.oregon.gov/deq/Rulemaking%20Docs/cao-pn2notice.pdf

Fee Analysis

This rulemaking does not involve fees in addition to those already required under the Cleaner Air Oregon program.

Statement of fiscal and economic impact

The key goals of the Cleaner Air Oregon and Air Toxics Alignment and Updates 2021 rulemaking are to:

- Strengthen the process for setting and updating new health risk-based standards for air quality;
- Align the recently established Cleaner Air Oregon program with the Oregon State Air Toxics program adopted in 2003; and
- Clarify certain Cleaner Air Oregon requirements for facilities and address inefficiencies in the risk assessment process.

The rulemaking proposes changes to Cleaner Air Oregon (division 245) and the Air Toxics Program (division 246) in order to achieve the goals as shown below:

- Specifically, to strengthen the process for setting and updating new health risk-based reference values, DEQ proposes updates to:
 - Authoritative sources for developing Toxicity Reference Values [OAR 340-247-0030(1)(a-e)];
 - Petition requirements to revise, add, or remove a toxic air contaminant from the Priority list or Toxicity Reference Value [OAR 340-247-0040(2)(b), (4)(d)(B)(iii)]; and
 - Re-scoping ATSAC to provide technical consultation during the triennial Toxicity Reference Value review [OAR 340-247-0030(1), (3)(b, e, f), and (6)].
- In order to align DEQ's two toxic air contaminants programs, namely Cleaner Air Oregon (division 245) and the Oregon State Air Toxics program (division 246), DEQ proposes:
 - Moving the reporting list of toxic air contaminants [[OAR 340-245-8020 Table 2](#)] and their Toxicity Reference Values [[OAR-245-8030 Table 3](#)] from division 245 to a newly created division 247;
 - Updating the process for modifying the toxic air contaminants to be reported and the table of Toxicity Reference Values;
 - Defining Ambient Benchmark Concentrations in division 246 [OAR 340-246-0030(2)] in terms of Toxicity Reference Values in division 247; and
 - Removing the rule language while retaining future intent to develop the Safety Net Program [OAR 340-246-0010(1) and [OAR 340-246-0190 through -0230].
- Additionally, DEQ proposes certain changes in order to clarify and address inefficiencies in the following rules in Cleaner Air Oregon (division 245) by:
 - Updating the 'New Source' definition to include relocation;
 - Requiring risk from aggregated Toxics Emissions Units to be included in the risk assessment;
 - Reducing Risk Assessment timelines for sources DEQ anticipates may be over the Immediate Curtailment Risk Action Level;
 - Reducing Risk Reduction Plan timelines to 30 days (from 120 days);
 - Allowing DEQ to request periodic statewide emissions inventories at other than three year intervals;

- Updating New Source Review submittal requirements, and to include State Type B New Source Review;
- Clarifying modeling parameter requirements for Level 1 Risk Assessments;
- Revising the list of categorically exempt Toxics Emissions Units;
- Updating Toxic Air Contaminant Permit Addendum application and modification procedures;
- Clarifying risk reduction and postponement of risk reduction;
- Updating Pollution Prevention Plan requirements
- Updating the ‘Regulated Air Pollutant’ definition in division 200; and
- Other housekeeping changes throughout.

Fiscal and Economic Impact

Overall, adoption of the proposed rules is not expected to have significant statewide fiscal or economic impacts. The proposed rule changes create no new fees and do not modify the existing fee structure.

The proposed rule changes to strengthen the process for updating health risk-based values and to align divisions 245 and 246 are anticipated to have no fiscal impacts. Some changes proposed to division 245 rules to address clarifications and inefficiencies may have a fiscal impact on all facilities, either a net increase or decrease in cost. However, most of the rule changes in division 245 are likely to have a fiscal impact on only a limited number of the approximately 2,701¹ facilities (including private businesses and some government and public entities) that hold Air Contamination Discharge Permits and that would be subject to these rules.

Two of the proposed rule changes in division 245 have a minor fiscal impact on all permitted facilities: reducing the number of paper copies of the Toxics Air Contaminant Permit Addendum Application and updating the definition for Regulated Air Pollutant in division 200. Updates to the statewide emissions inventory reporting requirements also have the potential to effect all sources subject to CAO, but depend on EPA’s National Emissions Inventory reporting cycle. The remaining rule changes (that propose to clarify a rule or address an inefficiency in division 245) would have a fiscal impact on only a limited number of the total number of facilities that are subject to these rules. Each of these proposed rule changes applies to a subset of operating conditions for permitted facilities. Since the operating conditions for each facility are different, facilities are likely to see different fiscal impacts, either as a net increase or net decrease in cost for each facility. These fiscal impacts are described in greater detail below.

While there could be significant fiscal impacts for a limited number of sources based upon proposed updates to division 245, there may be options to offset increases in costs as detailed below. Furthermore, some of the proposed rules may result in health benefits to the public, although it is difficult to quantify the impact of potential health benefits at this time.

¹ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

Fiscal impact of changes made to strengthen health-risk based toxicity reference values

The proposed rule changes to strengthen health-risk based toxicity reference values (summarized on page 10) are procedural changes intended to streamline, update and clarify the process for setting and updating Toxicity Reference Values. These changes are not expected to have a fiscal impact for DEQ, other state agencies, local governments or large and small businesses. In the long term, DEQ expects that strengthening the process for setting health risk-based values would provide greater health benefits to the public.

Fiscal impact of alignment changes to Divisions 245 & 246

The proposed rule changes to align division 245 and 246 are summarized on pages 10-11. The first three proposed rule changes under the alignment subsection on page 11 represent a reorganization of existing rules to create a new division that can be referenced by both divisions 245 and 246. The proposed changes are not expected to have a fiscal impact on DEQ, other state agencies, local governments or large and small businesses. The proposed rule changes to align division 245 and 246 are not expected to have any direct effect on public health.

As part of the alignment, DEQ also proposes to remove rule language pertaining to the Safety Net Program while retaining the rule section indicating future intent to develop new Safety Net Program rules. The effort to develop future rules for the Safety Net Program falls outside the scope of the current rulemaking. Since the Safety Net program has not been invoked since adoption, DEQ estimates that removing the Safety Net Program rule language would have no fiscal impact on businesses or DEQ.

Fiscal Impact of changes to Division 245 to address clarification and inefficiencies

The proposed changes addressing clarifications and inefficiencies to division 245 rules, may have no fiscal impact, a cost decrease or cost increase on sources. The proposed changes do not adjust any fee schedules currently required by the program; however, updates to the applicability of the current fee schedule to sources affected by these proposed changes could result in fiscal impacts (see Attachment A and B).

Estimates of the fiscal impact of proposed rule changes, beyond specific program and activity fees, are based on the 2018 fiscal impact analysis included in the [2018 Statement of Fiscal and Economic Impact](#) from the Cleaner Air Oregon rulemaking, more specifically, Attachment C and D. DEQ concludes that the cost ranges in the CAO fiscal analysis have not changed significantly since that analysis was completed, and they are still an accurate approximation of potential costs that may be referenced to assess the potential fiscal impacts of proposed updates to division 245.

It is important to note that the scope of this current fiscal impact analysis and statement is limited to only those proposed changes in this rulemaking.

Estimated Fiscal Impacts by Proposed Rule Change (Division 245)

New Source Definition [OAR 340-245-0020(33)]

This proposed rule change would require an existing source that relocates its operations to a new location to be re-defined as a new source in the CAO program. For sources choosing to relocate, this proposed change would result in an increase in CAO Specific Activity Fees,² based on the “existing” versus “new” source call-in fees; the amount of these cost increases is based on the type of Air Quality permit the source is required to obtain.

This proposed change would require a relocating source to comply with the new source Risk Action Levels under [OAR 340-245-8010 Table 1](#). The new source Risk Action Levels are more stringent than the existing source Risk Action Levels (i.e., regulatory action could be required at lower risk levels for a new source). In some cases a relocated source could present risk levels below the new Source Permit Risk Action Level and no further regulatory action would be required by CAO. In other cases, a relocated source could present risk levels that may exceed new source Risk Action Levels and would then be required to take action under the CAO program to reduce its source risk, incurring additional cost. This could mean a relocated source may be required to perform any of the following actions based on potential Risk Action Level exceedances:

- Apply for a Toxic Air Contaminant Permit Addendum to regulate source risk;
- Meet formal Community Engagement program requirements and fees³, or
- Install controls or change production to meet the required health standards for new sources.⁴

These Specific Activity Fees can be found under [OAR 340-216-8030 Table 3](#) (Attachment A) and the estimated fiscal impacts for these actions are summarized in the 2018 fiscal impact statement.⁵

An additional potential fiscal impact related to this proposed change would be the public health benefit from any reductions in toxic air contaminant emissions and risk from sources that could be required to meet the more stringent, health-protective new source Risk Action Levels. Descriptions of these benefits may be found in the 2018 fiscal impact statement.⁶

DEQ anticipates the overall impact of this proposed rule change will affect only a small number of sources in the regulated community.

² Attachment A. Cleaner Air Oregon Specific Activity Fees [OAR 240-216-8030 Table 3].

³ See page 25 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018) for Community Engagement requirements and Attachment A for Community Engagement Fees.

⁴ Attachment D. Pollution Control Equipment for Toxic Air Contaminant Emissions (2018).

⁵ Estimates for the cost of emissions analysis and risk assessments (Attachment C) and pollution control equipment (Attachment D) (2018).

⁶ See Pages 33-43 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

Aggregated Toxics Emissions Units [OAR 340-245-0020(54), -0050(4)(c), & -0060(4)(c)(B)]

The proposed rule changes regarding aggregated Toxics Emissions Units would require a source to include the emissions and risk from these aggregated TEUs in its source risk calculations and risk assessment. A source must determine that the risk from aggregated TEUs would not exceed the levels established in [OAR 340-245-8010 Table 1](#). Additionally, under the current rules, any source with risk levels in exceedance of the Source Permit Levels [[OAR 340-245-8010 Table 1](#)], and that has aggregated TEUs, would have monitoring, recordkeeping, and reporting requirements in their permits to ensure risk from these TEUs remains below the aggregated TEU levels. Therefore, in this case, no additional risk analyses would be required by these sources under the proposed rule changes, leading to no fiscal impact.

In some cases, inclusion of risk from aggregated TEUs in the final source risk, as proposed in the rule changes, could lead to additional costs if that added risk from the aggregated TEUs were to cause an exceedance of a Risk Action Level. This exceedance may then require a source to: apply for a Toxic Air Contaminant Permit Addendum that regulates source risk; meet formal Community Engagement program requirements and fees⁷; or install controls to meet the required health standards.⁸ The specific activity fees can be found under [OAR 340-216-8030 Table 3](#) (Attachment A) and the estimated fiscal impacts for these actions are summarized in the 2018 fiscal impact statement.⁹

Current rules provide for an automatic ten day approval when a source uses a Level 1 risk assessment to demonstrate risk from a new or modified aggregated TEU. The proposed rule changes remove the current automatic ten day approval. DEQ will prioritize meeting this current approval timeline for these types of construction or modifications requests, but the proposed change could lead to minor delays in approval of construction or modification of these aggregated TEUs. DEQ does not have information to verify if any potential delays in construction or modification of an aggregated TEU would have a fiscal impact.

In general, the proposed rule changes related to aggregated TEUs could provide public health benefits from the inclusion of risk from these TEUs in the risk assessment, as well as the increased review and oversight required for new or modified aggregated TEUs. Descriptions of these benefits may be found in the 2018 fiscal impact statement.¹⁰

DEQ anticipates the overall impact of these proposed rule changes would affect only a small number of sources who use aggregated TEUs, and for whom the inclusion of the aggregated TEUs causes an exceedance of a Risk Action Level which may require higher levels of mitigation activity. To date, there have not been any sources requesting to include aggregated TEUs in their risk assessments since CAO rule adoption.

⁷ Page 25 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

⁸ Attachment D. Pollution Control Equipment for Toxic Air Contaminant Emissions (2018).

⁹ Estimates for the cost of emissions analysis and risk assessments (Attachment C) and pollution control equipment (Attachment D) (2018).

¹⁰ Pages 33-43 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

Risk Assessment Plan Submittal Timeline [OAR 340-245-0030(1)(d)(iv)]

This proposed change would allow DEQ to require an existing source to expedite the submittal of its final risk assessment for approval when DEQ anticipates the source risk may exceed the Immediate Curtailment Risk Action Level, based upon the approved emissions inventory, modeling protocol, and risk assessment work plan. This change requires reducing the submission timeline from 60, 120, or 150 days (depending on the level of risk assessment). There is no change in the work needed to produce the assessment. There are no fiscal impacts to sources related to program fees, but there may be some additional cost associated with expediting this current program requirement timeline; however, there is no way for DEQ to estimate what these costs, if any, would be.

As of April 2021, DEQ has not approved any existing source risk assessments that exceed the Immediate Curtailment Risk Action Level. DEQ expects this proposed change would affect only a small number of existing sources.

Risk Reduction Plan Submittal Timeline [OAR 340-245-0030(1)(i)]

This proposed rule change would reduce the time required for an existing source with an approved risk assessment demonstrating risk in exceedance of the Toxics Best Available Control Technology Risk Action Level to submit its Risk Reduction Plan to DEQ from 120 to 30 days after approval of the risk assessment. There is no change in the work needed to produce the plan. There are no fiscal impacts to sources related to program fees, but there may be some cost associated with expediting this current program requirement timeline, depending on the nature and scope of required reduction activities. However, there is no way for DEQ to estimate what these costs, if any, would be. Extensions to submittal timelines, if approved by DEQ, can further mitigate potential increased costs.

As of April 2021, DEQ has only approved one existing source risk assessment, which did not include a Risk Reduction Plan, and therefore cannot anticipate how many existing sources this proposed change may affect.

Periodic Statewide Emissions Inventory [OAR 340-245-0040(2)(a)]

This proposed rule change removes the language limiting the periodic statewide CAO emissions inventory request to once every three years. The intention of the periodic statewide CAO emissions inventory is to have it coincide with the reporting years for EPA's National Emissions Inventory as stated in the current rule language, which occurs on a triennial basis. This proposed change allows for flexibility to ensure that DEQ can adjust the reporting schedule if necessary to keep the statewide inventory schedule aligned with EPA's National Emissions Inventory reporting. DEQ anticipates an adjustment of this schedule would primarily result in a delay or reduction in reporting requirements of the statewide inventory. This proposed change could result in a decrease in costs to sources by potentially reducing the cost estimates described in the 2018 fiscal impact statement related to this emissions inventory reporting delay.¹¹ In the unexpected event that EPA alters the National Emissions Inventory reporting schedule to shorten the frequency between reporting periods, the proposed rule change would allow DEQ the flexibility to shift the statewide

¹¹ See emissions inventory estimates in Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment (2018).

periodic emissions inventory to match this change at the federal level. DEQ acknowledges there would be fiscal impacts associated with any shortening of the periodic statewide emissions reporting for CAO; however, there is no way for DEQ to estimate what these costs, if any, would be. Such costs would vary by company. This rule change could affect all facilities required to report during the statewide emissions inventory.

Existing Source Modifications Triggering New Source Review [OAR 340-245-0050(1)(b)]

These proposed rule changes would update the CAO requirements for when an existing source proposes changes that trigger New Source Review as required under OAR chapter 340, division 224. The current rules require that existing sources undertaking a modification that triggers Federal and State Type A New Source Review perform a risk assessment, demonstrate compliance with the CAO program requirements, and include this compliance demonstration in their application for New Source Review. The proposed rules substitute the requirement for these existing sources to perform a risk assessment with a requirement only to submit, and obtain DEQ approval of, an emissions inventory specific to the modification prior to approval of the application for modification. DEQ will then use that updated emissions information when determining the source's priority to be called in to demonstrate CAO compliance, under OAR 340-245-0050(1)(a), but that review would be "disconnected" from the source working through the NSR approval process. The proposed rule changes also add a requirement that existing sources proposing modifications that trigger State Type B New Source Review OAR 340-245 must also submit an emissions inventory.

Including existing sources that propose modifications triggering State Type B New Source Review in the proposed rule changes would lead to additional costs of preparing an emissions inventory for the proposed modifications.¹² However, the proposed substitution of requiring an emissions inventory, instead of a full risk assessment, may provide a significant decrease in costs for existing sources proposing federal and State Type A NSR modifications – detailed estimates of the costs associated with these activities can be found in the 2018 fiscal impact statement.¹³ DEQ anticipates these fiscal impacts will affect a very limited number of sources – there have been only fourteen modifications triggering New Source Review over the past ten years.

Over time, all larger existing facilities will be required to perform CAO risk assessments, so cost changes in some cases are only related to timing of the work.

Level 1 Risk Assessment – Qualifying Criteria for Modeling [OAR 340-245-0050(8)(c) & -0200(2)(c)(C)(iii)]

These proposed rule changes stipulate when DEQ may not allow a Level 1 Risk Assessment to be used when performing a risk assessment. This could occur when aspects of a source's facility design or operations invalidate the assumptions used to develop the dispersion factors currently used for modeling in the Level 1 Risk Assessment under [OAR 340-245-8050 Table 5](#). DEQ is proposing these changes to ensure that if these Level 1 assumptions

¹² See emissions inventory estimates in Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment (2018).

¹³ Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment (2018).

are not valid (and therefore may not be sufficiently conservative) for a source choosing this level of risk assessment, DEQ would have authority to require a more technically appropriate risk assessment. For example, if a source has emission points lower than five meters, or there are exposure locations closer to an emissions point than 50 meters, DEQ may evaluate the appropriateness of using the Level 1 risk assessment dispersion factors, and in some cases may require a source to use a Level 2 or Level 3 risk assessment. In these instances there could be fiscal impacts associated with increased Specific Activity Fees under [OAR 340-216-8030 Table 3](#), as well as any associated costs related to completing a higher level risk assessment as estimated in the 2018 fiscal impact statement.¹⁴ However, in some of these cases, DEQ may be able to provide Small Business Technical Assistance to some of these sources to help offset any additional costs incurred by requiring a higher level risk assessment.

DEQ anticipates the fiscal impact from these proposed changes would be minor and affect only a very limited number of sources. Since program implementation, only two sources have requested to use a Level 1 risk assessment which did not meet the criteria of the assumptions used to create the dispersion factors. In both cases, DEQ was able to determine that a Level 1 risk assessment was appropriate to ensure representative emissions estimates for their risk assessments so a more complex risk assessment was not required.

Exempt Toxics Emissions Units [OAR 340-245-0060(3)(b)]

This proposed change would update the list of Categorically Exempt TEUs for the CAO program. The removal and revision of some of these activities from the original rules could lead to an increase in costs for sources. Sources retain the ability to demonstrate to DEQ that an activity not considered automatically exempt under the proposed rule change meets the criteria of an exempt TEU. In this case, DEQ anticipates this analysis could add a minor cost to sources. In instances where an activity does not meet the criteria of an exempt TEU in the proposed rule, a source would be required to include the risk from this TEU in its risk assessment, either as an aggregated or significant TEU. In this case, cost impacts associated with estimating emissions from these TEUs could range from minor to moderate. DEQ is unable to accurately estimate these costs. However, DEQ provides small business technical assistance which could offset some of the potential costs to small businesses impacted by this proposed change.

Inclusion of risk from an activity that is no longer exempt due to the proposed rule change in the final source risk may lead to additional costs in the event that the additional risk causes the facility to exceed a Risk Action Level. This may require a source to apply for a Toxic Air Contaminant Permit Addendum that regulates source risk, meet formal Community Engagement program requirements and fees¹⁵, or install controls to meet the required health standards.¹⁶ These specific activity fees can be found under [OAR 340-216-8030 Table 3](#)

¹⁴ See Attachment A for Specific Activity Fees for Cleaner Air Oregon and Attachment C for Cost to Facilities for Emissions Analysis and Risk Assessment (2018).

¹⁵ Page 25 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

¹⁶ Attachment D. Pollution Control Equipment for Toxic Air Contaminant Emissions (2018).

and the estimated fiscal impacts for these actions are summarized in the 2018 fiscal impact statement.¹⁷

In general, the proposed rule changes related to exempt TEUs could provide public health benefits from the inclusion of risk from these TEUs in the Risk Assessment. Descriptions of these benefits may be found in the 2018 fiscal impact statement.¹⁸

Toxic Air Contaminant Permit Addendum Application [OAR 340-245-0100(3)]

This proposed change would reduce the number of paper copies of the Toxics Air Contaminant Permit Addendum application that a source would be required to submit to DEQ from two to one. This proposed change would have a marginal reduction in costs to all sources required to apply for a CAO permit addendum.

Toxic Air Contaminant Permit Addendum Public Modifications: Public Notice & Fees [OAR 340-245-0100(8)(f)(A)&(B)]

These proposed changes would revise the public notice requirements for sources modifying their Toxic Air Contaminant Permit Addendum when the proposed modification would increase source risk. The proposed changes qualify the types of increases to source risk that would require Category III Public Notice under division 209, as well as remove the language excluding modifications that increase source risk from the Category I Public Notice requirements. These public notice requirements serve as the basis for the fees required to modify a source's CAO permit addendum, with Category III Public Notice requirements having the highest fees. These proposed changes would allow sources making modifications that increase source risk below specified levels (e.g., increases in source risk that do not exceed a Risk Action Level) to be subject to lower Categories of Public Notice, and thus reduced fees for an overall decrease in costs to sources.¹⁹

DEQ anticipates these proposed changes could have a moderate to significant impact in reducing costs as sources modify their operations and air permits.²⁰

Risk Reduction & Postponement of Risk Reduction [OAR 340-245-0130(3),(4),(6) and (7) & OAR 340-245-0150(1)]

These proposed changes would clarify the distinctions between chronic and acute Risk Reduction Plan timelines (these also apply to Voluntary Risk Reduction Plans); require full implementation of risk reduction, rather than initial implementation, by the timelines presently in rule; and provide a timeline and requirements for sources exceeding Immediate Curtailment Risk Action Levels. There would be no additional fiscal impacts to sources related to program fees, but DEQ acknowledges there may be some increased costs

¹⁷ Estimates for the cost of emissions analysis and risk assessments (Attachment C) and pollution control equipment (Attachment D) from the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

¹⁸ Pages 33-43 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

¹⁹ See fees to modify a Toxic Air Contaminant Permit Addendum in Attachment B. ACDP Fees, Part 4. Specific Activity Fees [OAR 240-216-8020 Table 2].

²⁰ See fees to modify a Toxic Air Contaminant Permit Addendum in Attachment B. ACDP Fees, Part 4. Specific Activity Fees [OAR 240-216-8020 Table 2].

associated with expediting the current program requirement timelines; however, there is no way for DEQ to estimate what these costs, if any, would be.

DEQ estimates that this could provide public health benefits for addressing risk on a faster timeline. Descriptions of these benefits may be found in the 2018 fiscal impact statement.²¹

DEQ cannot anticipate how many existing sources this proposed change may affect.

Pollution Prevention [OAR 340-245-0140]

This proposed change would correct an error which currently requires an existing source with risk equal to, or greater than, the Toxics Best Achievable Control Technology Risk Action Level to provide a Pollution Prevention Plan to DEQ. An existing source should only be required to submit a Pollution Prevention Plan as part of its Risk Reduction Plan only when the source risk exceeds (but is not equal to) the TBACT Risk Action Level. This proposed change could have an decrease in costs to sources by reducing the number of existing sources required to provide Pollution Prevention Plans—a source with risk equal to this risk action level would avoid the costs of preparing this type of plan.

DEQ anticipates this change could have moderate to significant decrease in costs to sources, but depends on the number of existing sources requesting risk levels at the TBACT Risk Action Levels. DEQ has only approved one existing source risk assessment that did not exceed the TBACT Risk Action Levels and therefore cannot anticipate how many existing sources this proposed change may affect.

Regulated Air Pollutant Definition: Public Participation & Stationary Source Notification Requirements [OAR 340-200-0020(134)(d)]

This proposed rule change would revise the definition of “Regulated Air Pollutant” or “Regulated Pollutant” to include toxic air contaminants as regulated air pollutants in OAR 340 divisions 209 for Public Participation and 210 Stationary Source Notification Requirements. This change would require a source to provide toxic air contaminant emission estimates for chemicals currently listed under [OAR 340-245-8020 Table 2](#) when submitting a Notice of Intent to Construct for a construction or modification. Because sources are currently required to estimate criteria and hazardous air pollutant emissions for these notifications, DEQ anticipates the additional analysis for any additional toxic air contaminant emission estimates, beyond those pollutants that are also hazardous air pollutants, would have a range of fiscal impacts, from very minor to moderate, depending on the scope of the modification.

DEQ estimates that this change could provide public health benefits by addressing potential risks from toxic air contaminant emissions reported on a Notice of Intent to Construct submittal on a faster timeline than as currently only required to be reported in either the periodic statewide inventory or as in an existing source’s risk assessment. Descriptions of these benefits may be found in the 2018 fiscal impact statement.²² DEQ anticipates this

²¹ Pages 33-43 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

²² Pages 33-43 of the Cleaner Air Oregon [Statement of Fiscal and Economic Impact](#) (2018).

proposed change could affect many sources, as Notice of Intent to Construct submittals occur regularly and at many sources.

Statement of Cost of Compliance

State and federal agencies

The CAO Program regulates emissions of toxic air contaminants from facilities within the state. Of the 2,701 facilities regulated by CAO, DEQ estimated that there were 24 state-owned permitted facilities and 7 federally owned facilities as of August 2019.²³ The rule changes proposed would not create any new requirements or create fiscal impacts that are specific to state or federally owned businesses. While there are no new fees associated with this rulemaking, state or federally owned permitted facilities may experience fiscal impacts as described above.

DEQ

There may be impacts to DEQ due to review of additional requirements and deliverables from facilities affected by these proposed rule changes. However, these impacts are estimated to be relatively small when compared to the overall resources already dedicated by DEQ to oversee all facilities regulated by Cleaner Air Oregon. Furthermore, many of the proposed rule changes that may have a fiscal impact are expected to impact a smaller subset of facilities than are currently subject to CAO rules. It is difficult to predict the effect these changes may have on DEQ's workload; some of the changes may increase workload, while others may result in decreases.

In the longer term, updates to address currently known inefficiencies in the program are intended to further streamline the CAO permitting process. If the proposed rule changes are adopted, DEQ may also realize some increase in efficiency by not having to maintain two separate sets of lists and update processes for air toxics for the two related programs; that is, Cleaner Air Oregon and the State Air Toxics program.

Local governments

As of August 2019, DEQ estimated that there were 69 facilities that were owned or operated by local governments that were permitted.²⁴ The proposed rule changes are not expected to create any new compliance requirements or create fiscal impacts that are specific to businesses operated by local governments. However, while there are no new fees or compliance costs associated with this rulemaking, facilities owned or operated by local governments may experience some limited fiscal impacts as described above for DEQ.

²³ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

²⁴ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

Public

The CAO program was designed to be protective of public health by reducing emissions of toxic air contaminants from facilities where those emissions create unacceptable risks. The proposed rule changes maintain the goal of protecting public health. In most cases, individual proposed changes to the rules would either result in no change or an improvement in public health outcomes. Overall, the rule changes are expected provide an improvement in public health outcomes in the longer term.

Large businesses - businesses with more than 50 employees

DEQ estimated that there were 1,152 existing large businesses with air quality permits as of August 2019.²⁵ The proposed rule changes are not expected to create any new compliance requirements or create fiscal impacts that are specific to large businesses. However, while there are no new fees associated with this rulemaking, large businesses may experience fiscal impacts if the facilities they operate fall into new regulatory categories as described under this proposed rulemaking.

Small businesses – businesses with 50 or fewer employees

DEQ estimated that there were 1,046 small businesses with air quality permits as of August 2019. There were an additional 503 facilities with air quality permits that did not list the number of employees they have, but would presumably fall into businesses with fewer than 50 employees based on types of business (gasoline stations and dry cleaners, for example).²⁶ The proposed rule changes do not create any new compliance requirements or create fiscal impacts that are specific to small businesses. While there are no new fees associated with this rulemaking, small businesses may experience fiscal impacts if the facilities they operate fall into the new regulatory categories under this proposed rulemaking. In some instances if small businesses experience a fiscal impact due to the proposed rule changes, DEQ may be able to provide Small Business Technical Assistance to help offset the additional costs incurred related to new requirements for risk assessments (e.g. accounting for TEUs) or when a higher level risk assessment is required.

ORS 183.336 Cost of Compliance Effect on Small Businesses

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

DEQ estimated that there were 1,046 small businesses in Oregon as of August 2019 that have 50 or fewer employees that have an AQ permit and are subject to the CAO rules. There were 503 additional facilities that did not list number of employees, but would presumably

²⁵ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

²⁶ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

fall into businesses with fewer than 50 employees, based on types of business.²⁷ But only a small fraction of small businesses are expected to experience cost increases from the proposed rule changes. Given that many of the proposed updates are conditional and subject to specific scenarios encountered by individual facilities, it is not possible for DEQ to determine an accurate range or approximation of the total number of small businesses that may be directly impacted by these rules.

b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

The proposed rule changes relating to emissions inventory reporting and requiring a single paper copy of the Toxic Air Contaminant Permit Addendum application may have a minor benefit to all permitted facilities, including all small businesses, by reducing reporting and recordkeeping requirements. The other rule changes may have fiscal impacts from reporting, recordkeeping, and other administrative activities on some small businesses, if they fall into a category that triggers additional compliance requirements, as described above and in the 2018 fiscal impact statement.

DEQ does not have information about how many more small businesses would be required to take action to reduce risks under the proposed rules, and therefore cannot accurately estimate an incremental increase in costs.

c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

The proposed rule changes may have fiscal impacts for projected equipment, supplies, labor on some small businesses, if they fall into a category that triggers additional compliance requirements, as described above and in the 2018 fiscal impact statement.

DEQ does not have information about how many more small businesses would be required to take action to reduce risks under the proposed rules, and therefore cannot accurately estimate an incremental increase in costs.

d. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ notified small businesses about the proposed rule development by email through GovDelivery, announcements on the DEQ website and at Rules Advisory Committee meetings. A small business representative is on the Rules Advisory Committee and Fiscal Advisory Committee as part of this alignment rulemaking process. At the onset of the public comment period, DEQ will notify all businesses by email and through notices in the Secretary of State Bulletin.

²⁷ Estimate of number of permitted facilities in the state as of August 2019 based on the [Hazard Index Fiscal Impact Statement](#) (2019).

Documents relied on for fiscal and economic impact

Document title	Document location
Cleaner Air Oregon Notice of Proposed Rulemaking (2018)	https://www.oregon.gov/deq/Rulemaking%20Docs/cao-pn2notice.pdf
Hazard Index Notice of Proposed Rulemaking (2019)	https://www.oregon.gov/deq/RulemakingDocs/CAOHI2019Notice.pdf

#	ACTIVITY	Permit Type			
		Title V	Standard ACDP	Simple ACDP	General or Basic ACDP
1	Existing Source Call-In Fee	\$10,000	\$10,000	\$1,000	\$500
2	New Source Consulting Fee	\$12,000	\$12,000	\$1,900	\$1,000
3	Submittal Document Modification Fee	\$2,500	\$2,500	\$500	\$250
Risk Assessment Fees					
4	Level 1 Risk Assessment - de minimis (no permit required)	\$1,500	\$1,500	\$1,000	\$800
5	Level 1 Risk Assessment – not de minimis	\$2,000	\$2,000	\$1,500	\$1,100
6	Level 2 Risk Assessment - de minimis (no permit required)	\$3,100	\$3,100	\$2,300	\$2,000
7	Level 2 Risk Assessment – not de minimis	\$3,600	\$3,600	\$2,800	\$2,300
8	Level 3 Risk Assessment - de minimis (no permit required)	\$8,800	\$8,200	\$5,300	\$4,500
9	Level 3 Risk Assessment – not de minimis	\$19,900	\$11,300	\$7,700	\$6,300
10	Level 4 Risk Assessment - de minimis (no permit required)	\$21,400	\$18,500	\$11,700	NA
11	Level 4 Risk Assessment – not de minimis	\$34,600	\$25,800	\$15,500	NA
Risk Above Risk Action Levels					
12	Risk Reduction Plan Fee	\$6,700	\$6,700	\$2,600	\$2,600
13	Air Monitoring Plan Fee (includes risk assessment)	\$25,900	\$25,900	NA	NA
14	Postponement of Risk Reduction Fee	\$4,400	\$4,400	\$4,400	\$2,000
15	TBACT/TLAER Review (per Toxic Emissions Unit and type of toxic air contaminant)	\$3,000	\$3,000	\$1,500	\$1,500
Other Fees					
16	TEU Risk Assessment – no permit mod	\$1,000	\$1,000	\$500	\$500
17	TEU Risk Assessment – permit mod	\$4,000	\$4,000	\$2,000	\$1,000

 OAR 340-216-8030 Table 3 Cleaner Air Oregon Specific Activity Fees					
#	ACTIVITY	Permit Type			
		Title V	Standard ACDP	Simple ACDP	General or Basic ACDP
18	Level 2 Modeling review only for TEU approval	\$1,900	\$1,300	\$800	\$700
19	Level 3 Modeling review only for TEU approval	\$3,800	\$3,800	\$3,500	\$3,500
20	Community Engagement Meeting Fee – high	\$8,000	\$8,000	\$8,000	\$8,000
21	Community Engagement Meeting Fee – medium	\$4,000	\$4,000	\$4,000	\$4,000
22	Community Engagement Meeting Fee - low	\$1,000	\$1,000	\$1,000	\$1,000
23	Source Test Review Fee (plan and data review) - complex	\$6,000	\$6,000	\$6,000	\$6,000
24	Source Test Review Fee (plan and data review) – moderate	\$4,200	\$4,200	\$4,200	\$4,200
25	Source Test Review Fee (plan and data review) - simple	\$1,400	\$1,400	\$1,400	\$1,400

Attachment B. ACDP Fees, Part 4. Specific Activity Fees [OAR 240-216-8020 Table 2]

 OAR 340-216-8020 Table 2 Air Contaminant Discharge Permits		
Part 4. Specific Activity Fees:		
Notice of Intent to Construct Type 2 ¹		\$720.00
Permit Modification	(A) Non-Technical ²	\$432.00
	(B) Basic Technical	\$540.00
	(C) Simple Technical	\$1,800.00
	(D) Moderate Technical	\$9,000.00
	(E) Complex Technical	\$18,000.00
Toxic Air Contaminant Permit Addendum Modification	(A) Non-Technical	\$432.00
	(B) Basic Technical	\$432.00
	(C) Simple Technical	\$1,440.00
	(D) Moderate Technical	\$7,200.00
	(E) Complex Technical	\$14,440.00
Major NSR or Type A State NSR Permit Modification		\$63,000.00
Modeling Review (outside Major NSR or Type A State NSR)		\$9,000.00
Public Hearing at Source's Request		\$3,600.00
State MACT Determination		\$9,000.00
Compliance Order Monitoring ³		\$180.00/month

Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment from the 2018 Cleaner Air Oregon Fiscal Impact Statement

Table 7 Cost to Facilities for Emissions Analysis and Risk Assessment		
Task	Simple	Complex
Emissions inventory	\$0*-\$5,000	\$60,000
Level 1 Assessment – Lookup Table Calculation Using Stack Heights and Exposure Location Distance	\$100	\$5,000
Level 2 Assessment – Screening modeling	\$5,000	\$35,000
Level 3 Assessment – Refined modeling	\$5,000	\$100,000
Level 4 Assessment – Health Risk Assessment	\$5,000	\$500,000

*DEQ is calculating and producing doing the emissions inventories for all of the approximately 2,200 sources that have Basic and General Air Contaminant Discharge Permits.

Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment from the 2018 Cleaner Air Oregon Fiscal Impact Statement

**Table 8
Pollution Control Equipment for Toxic Air Contaminant Emissions**

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{28, 29}		Annual Operating Costs	
			low	high	low	high
Fabric filter (baghouse)	Particulate matter (PM), hazardous air pollutant (HAP) PM	Asphalt batch plants, concrete batch kilns, steel mills, foundries, fertilizer plants, and other industrial processes. Colored art glass manufacturers.	\$360,000 - \$18,500,000		\$180,000 - \$6,200,000	
Electrostatic precipitator (ESP)	PM, HAP PM	Power plants, steel and paper mills, smelters, cement plants, oil refineries	\$320,000 - \$10,000,000		\$100,000 - \$7,600,000	
Enclosure	Fugitive PM or volatile organic compounds (VOCs)	Any process or operation where emissions capture is required, i.e., printing, coating, laminating	\$14,000 - \$420,000		\$400 - \$10,000	
HEPA filter	Chrome emissions	chrome plating	\$13,000 - \$240,000		Application specific	
Wet scrubber (packed towers, spray chambers, Venturi scrubbers)	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid droplets	Asphalt and concrete batch plants; coal-burning power plants; facilities that emit sulfur oxides, hydrogen sulfide, hydrogen chloride,	\$25,000 - \$750,000		\$19,000 - \$830,000	

²⁸ Costs are from examples in the EPA Air Pollution Control Cost Manual, Report No. 452/B-02-001, EPA Air Pollution Control Technology Fact Sheets, and information provided by permitted facilities and regulatory agencies.

²⁹ Costs are estimated based on best available information, but may be higher or lower than shown, depending on facility-specific conditions and business decisions.

**Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment from the 2018
Cleaner Air Oregon Fiscal Impact Statement**

Table 8 Pollution Control Equipment for Toxic Air Contaminant Emissions						
Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs^{28, 29}		Annual Operating Costs	
			low	high	low	high
		ammonia, and other gases that can be absorbed into water and neutralized with the appropriate reagent.				
Wet scrubber with mercury controls (carbon injection or flue gas desulfurization)	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid droplets, mercury	Coal-fired power generation	Low end cost not available	High end cost \$516,803,000	Not available	
Semi-dry scrubber with carbon injection mercury controls	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid droplets, mercury	Coal-fired power generation	Ranges not available, estimated cost: \$470,803,000		Ranges not available, estimated cost: \$74,807,000	
Flue gas desulfurization with limestone injection	mercury	Coal-fired power generation	\$75,000,000-\$247,000,000		\$3,500,000	
Activated carbon injection	mercury	Coal-fired power generation	\$960,000-\$5,000,000		\$1,800,000	

**Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment from the 2018
Cleaner Air Oregon Fiscal Impact Statement**

**Table 8
Pollution Control Equipment for Toxic Air Contaminant Emissions**

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{28, 29}		Annual Operating Costs	
			low	high	low	high
Thermal oxidizer	VOCs, gases, fumes, hazardous organics, odors, PM	Landfills, crematories, inks from graphic arts production and printing, can and coil plants, hazardous waste disposal. semiconductor manufacturing	\$17,000 - \$6,200,000		\$3,500 - \$5,200,000	
Regenerative thermal oxidizer	VOCs	Paint booths, printing, paper mills, municipal waste treatment facilities	\$940,000 - \$7,700,000		\$110,000 - \$550,000	
Catalytic reactor	VOCs, gases	Landfills, oil refineries, printing or paint shops	\$21,000 - \$6,200,000		\$3,900 - \$1,700,000	
Carbon adsorber	Vapor-phase VOCs, hazardous air pollutants (HAPs)	Soil remediation facilities, oil refineries, steel mills, printers, wastewater treatment plants	\$360,000 - \$2,500,000		Not available	
Biofilter	VOCs, odors, hydrogen sulfide (H ₂ S), mercaptans (organic sulfides)	Wastewater treatment plants, wood products facilities, industrial processes	\$360,000 - \$3,600,000		Not available	

**Attachment C. Cost to Facilities for Emissions Analysis and Risk Assessment from the 2018
Cleaner Air Oregon Fiscal Impact Statement**

Table 8 Pollution Control Equipment for Toxic Air Contaminant Emissions						
Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs^{28, 29}		Annual Operating Costs	
			low	high	low	high
Fume suppressants	Chromic acid mist, chromium, cadmium and other plating metals	Chromic acid anodizing and chrome plating operations	Up to \$122,000		Not available	

Advisory committee fiscal review

DEQ appointed a Fiscal Advisory Committee, or FAC, which met on May 3, 2021 to discuss the draft Fiscal Impact Statement prepared by DEQ.

As ORS 183.33 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how DEQ can comply with ORS 183.540 to reduce that impact.

The committee reviewed the draft fiscal and economic impact statement and its findings are stated in the approved minutes dated May 3, 2021, found [here](#).

DEQ staff indicated that many of the proposed updates are anticipated to have an impact on a limited number of facilities based on how the updated requirements apply to facilities completing Cleaner Air Oregon risk assessments. The committee agreed that the proposed rules under Division 245 would have a fiscal impact. In regards to the extent of the fiscal impact, the committee acknowledged that some of the proposed rules for Cleaner Air Oregon have the potential for significant adverse impacts on regulated entities, including small businesses in Oregon.

To address any potential significant impacts to small businesses, DEQ staff presented and discussed with committee members the following recommendations for mitigating costs to small businesses:

- Technical Assistance available to small businesses completing risk assessment process under CAO.
- Tiered implementation of the CAO program could delay/defer regulatory costs for most existing smaller businesses.
- Additional time for compliance with risk levels through extensions and postponement proposal.
- Cost impacts may be reduced through other methods (e.g. pollution prevention, product substitution).

Additional input from the committee includes the following recommendations for mitigating costs to small businesses:

- Providing a tool for small businesses, similar to the Level 1 risk assessment tool, to estimate worst case scenarios so small businesses could determine options for mitigating costs.
- DEQ should conduct an internal analysis of all air regulatory programs to minimize conflicting requirements between these programs (e.g. Regional Haze and Greenhouse Gas Emissions Programs).
- Committee members encouraged DEQ to continue supporting small businesses through small business technical assistance provided by Cleaner Air Oregon.

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel.

Many of the proposed updates are anticipated to affect a small proportion of facilities already subject to Cleaner Air Oregon rules. While the costs associated with pollution control or process equipment, and compliance could be passed through by businesses providing products and services for such development and construction, the possible impact of these potential changes appears to be minimal. These assumptions are based on the original housing cost estimate provided during adoption of Cleaner Air Oregon. Based on the scope of this rulemaking, comparative to the 2018 adoption of Cleaner Air Oregon, DEQ determined the proposed rules would have little to no effect on development costs.

DEQ cannot accurately quantify the impact at this time because the available information does not indicate whether the costs would be passed on to consumers and any such estimate would be speculative.

Federal relationship

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

DEQ adopted the Oregon State Air Toxics Program in 2003. This program was initially developed to achieve additional outcomes beyond federal requirements at the time these rules were adopted. DEQ adopted Cleaner Air Oregon rules in 2018 that are in addition to federal requirements because regulatory gaps existed in the state's air permitting program rules prior to 2018.

The proposed rules would amend and align existing air toxics programs rules for Cleaner Air Oregon and the Oregon State Air Toxics Program. In some cases, the proposed rules will add requirements additional to those in federal requirements through the amendments of these two programs previously adopted in rule.

What alternatives did DEQ consider if any?

DEQ did not consider alternatives because this rulemaking proposes to amend existing rules that were previously adopted and established to address known gaps in federal requirements. The proposed updates are an addition to existing rules. Updates to Cleaner Air Oregon and Oregon State Air Toxics Program rules would align and strengthen DEQ's air toxics progress and allow DEQ to continue to improve its knowledge about toxic air contaminant emissions in Oregon.

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objects, or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledge comprehensive plans

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Natural Resources, Scenic and Historic Areas, and Open Spaces
6	Air, Water and Land Resources Quality
11	Public Facilities and Services
16	Estuarine Resources
19	Ocean Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that the following proposed rules, listed under the rules affected, authorities, supporting documents section above, are existing rules that affect programs or activities that the DEQ State Agency Coordination Program considers a land use program:

- OAR 340-210 – Source Notification Requirements
- OAR 340-216 – Air Contaminant Discharge Permits
- OAR 340-218 – Oregon Title V Operating Permits

DEQ determined that these proposed rules do not affect land use under OAR 340-018-0030 or DEQ’s State Agency Coordination Program. The proposed regulations would be consistent with state land use law because any facility that has received a Cleaner Air Oregon permit addendum

will already have demonstrated land use compliance when they obtained or will obtain their underlying Air Quality permit.

EQC Prior Involvement

DEQ shares general rulemaking information with EQC through the monthly Director's Report. DEQ staff also shared information about this rulemaking with the EQC as an informational item (Item D: Cleaner Air Oregon Program Update) on the EQC agenda in March 2021.

Advisory Committee

Background

DEQ convened the Cleaner Air Oregon/Air Toxics Alignment and Updates advisory committee. The committee met a five times. Due to the COVID-19 pandemic, these meetings were held virtually over Zoom teleconference and not in person. The committee's web page is located at:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaoAT2021.aspx>.

The committee members were:

Rulemaking Name Advisory Committee	
Name	Representing
Jessica Applegate	Eastside Portland Air Coalition <i>Alternate: Katharine Salzmann</i>
Steven Anderson	City of Salem Neighborhood Associations
Lisa Arkin	Beyond Toxics
Dr. George Conway	Conference of Health Officials; Deschutes County <i>Alternate: Eric Mone</i>
Chad Darby	Maul, Foster and Alongi
Dr. Linda George	Portland State University
Kathleen Johnson	Washington County
Dr. Christine Kendrick	City of Portland
Daniel Lee	Cascade Steel Rolling Mills <i>Alternate: Scott Sloan and Brian Lewallen</i>
Sharla Moffett	Oregon Business & Industry - small businesses <i>Alternate: Ellen Porter, LMI Environmental</i>
Mary Peveto	Neighbors for Clean Air
Mark Riskedahl	Northwest Environmental Defense Center, Oregon Environmental Justice Task Force
Dr. Diana Rohlman	Oregon Public Health Association
Kathryn VanNatta	Northwest Pulp and Paper Association <i>Alternate: Toby Smith, Cascade Pacific Pulp</i>
Thomas Wood	Oregon Business & Industry, Oregonians for Fair Air Regulations

Meeting notifications

To notify people about the advisory committee's activities, DEQ:

- Sent GovDelivery bulletins, a free e-mail subscription service, to the following lists:
 - Rulemaking
 - Air Toxics State-wide
 - Cleaner Air Oregon

Committee discussions

In addition to the recommendations described under the Statement of Fiscal and Economic Impact section above, the committee evaluated, discussed, and gave recommendations regarding the potential rule proposals and fiscal impacts during public meetings held on:

- Nov. 10 and 17, 2020;
- Feb. 2 and 5, 2021; and
- May 3, 2021.

Detailed information on the information the committee reviewed and on their discussions and recommendations can be found [here](#).

Agendas and meeting summaries are available on the committee's web page at: <https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaoAT2021.aspx>.

Public Engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing by:

- On June 29, 2021 Filing notice with the Oregon Secretary of State for publication in the July 1, 2021 Oregon Bulletin;
- Posting the Notice, Invitation to Comment and Draft Rules on the web page for this rulemaking, located at <https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaoAT2021.aspx>;
- Emailing approximately 22,722 interested parties on the following DEQ lists through GovDelivery:
 - Rulemaking
 - DEQ Public Notices
 - Air Toxics State-wide
 - Cleaner Air Oregon
- Emailing the following key legislators required under [ORS 183.335](#):
 - Senator Lee Beyer
 - Senator Peter Courtney, Senate President
 - Representative Tina Kotek, Speaker of the House of Representatives
 - Representative Pam Marsh
- Emailing advisory committee members.

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments by email, regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by 4 p.m., on July 30, 2021.

[Rulemaking web page](#)

Submit comment by email

Any person can submit comments by sending an email. Commenters should include “Rulemaking Comment” in the email subject line. Submit emails to: caoat2021@deq.state.or.us.

Note for public university students:

ORS 192.345(29) allows Oregon public university and OHSU students to protect their university email addresses from disclosure under Oregon's public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

By mail

Oregon DEQ
Attn: Tori Heroux
700 NE Multnomah St., Room 600
Portland, OR 97232-4100

At hearing

Tuesday, July 20, 2021 at 5:30 p.m.

Public Hearing

DEQ plans to hold one public hearing. Anyone can attend a hearing by webinar or teleconference.

Date: Tuesday, July 20, 2021
Start time: 5:30 p.m.

Webinar link: [Link](#)

NOTE: If this link does not work, you can type in this web address:

<https://us02web.zoom.us/j/85899222339?pwd=ODR5aHhBSm9OakJFdkFuamxvbDhNZz09>

[Join by phone:](#)

Teleconference phone number: 833-548-0282
Meeting ID: 858 9922 2339
Passcode: 423310

Instructions on how to join webinar or teleconference: [Instructions](#)

DEQ will consider all comments and testimony received before the closing date. DEQ will summarize all comments and respond to comments in the Environmental Quality Commission staff report.

Accessibility Information

You may review copies of all documents referenced in this announcement electronically. To schedule a review of all websites and documents referenced in this announcement, call Tori Heroux, DEQ (971-808-7046).

Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format, or any other arrangements necessary to accommodate a disability. To make these arrangements, contact DEQ, Portland, at 503-229-5696 or call toll-free in Oregon at 1-800-452-4011, ext. 5696; fax to 503-229-6762; or email to deqinfo@deq.state.or.us. Hearing impaired persons may call 711.

Proposed Rules: Division 245

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

June 2021



Cleaner Air Oregon

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Wilkinson

www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



State of Oregon
Department of
Environmental
Quality

This document prepared by:

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Contact:
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DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

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Division 245 Draft Rules – Edits Highlighted

Last revised: June 16, 2021

Key to Identifying Changed Text:

~~Deleted Text~~

New/inserted text

Division 245 CLEANER AIR OREGON

340-245-0005

Purpose and Overview

(1) This statement of purpose and overview is an aid to understanding the rules in OAR 340-245-0010 through 340-245-8050 that follow, and is not for the purpose of regulation or compliance.

(2) Purpose. The purpose of Oregon’s risk-based toxic air contaminant permitting program, known as Cleaner Air Oregon, is to:

(a) Prioritize and protect the health and well-being of all Oregonians with a special focus on sensitive populations such as children;

(b) Analyze public health risk due to toxic air contaminant emissions from industrial and commercial sources based on verified science and data;

(c) Consider similar regulations in other states and jurisdictions and use a science-based, consistent and transparent process for communicating and addressing risks from industrial and commercial emissions of toxic air contaminants, provide regulatory predictability to businesses and the communities they are a part of; and

(d) Reduce exposure to industrial and commercial toxic air contaminant emissions while supporting an environment where businesses and communities can thrive.

(3) Overview.

(a) OAR 340-245-0010, Applicability and Jurisdiction, OAR 340-245-0020, Definitions, and OAR 340-245-0022, Abbreviations and Acronyms, describe which sources the risk-based toxic air contaminant permitting program applies to and specifies definitions, abbreviations and acronyms to be used in the program;

(b) OAR 340-245-0030, Submittal and Payment Deadlines, provides the deadlines by which owners or operators must submit risk assessment compliance information when required by DEQ under this division. That rule generally provides owners or operators more time to submit the more complex assessments;

(c) OAR 340-245-0040, Emissions Inventory, authorizes DEQ to require a source to submit an inventory of all of its toxic air contaminant emissions to be used in a risk assessment and to submit periodic emissions inventory updates;

- (d) OAR 340-245-0050, Risk Assessment Procedures, includes requirements and procedures for the owners and operators of sources to undertake any of the four levels of risk assessment to demonstrate compliance and determine what requirements apply. The first level of risk assessment is a conservative estimate that is likely to overestimate risk. As the levels progress from Level 1 to Level 4, the assessments become more complex but also provide increasingly more site-specific and refined risk estimates. An owner or operator can choose to start with any level of risk assessment;
- (e) OAR 340-245-0060, Toxic Emissions Units, explains how TEUs are analyzed and regulated in the context of assessing and regulating risk from an entire source. This rule includes the criteria for a TEU to be designated exempt or aggregated because it poses very low risk and the requirements for approval of new and modified TEUs;
- (f) OAR 340-245-0100, Toxic Air Contaminant Permit Addenda, includes the procedural requirements for obtaining a permit addendum or a new operating permit under these rules. A Toxic Air Contaminant Permit Addendum will amend the source's Air Contaminant Discharge Permit or Title V Operating Permit until the requirements in the addendum can be incorporated into the source's operating permit, but will remain separate for a source that has a General Air Contaminant Discharge Permit;
- (g) OAR 340-245-0110, Source Risk Limits, explains how risk limits will be set in Toxic Air Contaminant Permit Addenda or in operating permits with conditions required under this division;
- (h) OAR 340-245-0120, Community Engagement, contains requirements for community engagement meetings and other aspects of community engagement;
- (i) OAR 340-245-0130, Risk Reduction Plan Requirements, specifies how an owner or operator of an existing source must develop a plan to reduce risk, if required to do so, because the source risk exceeds the TBACT Level or the Risk Reduction Level. Risk can be reduced using a variety of methods as long as they are enforceable as permit conditions and achieve the required level of risk reduction. Provisions for Voluntary Risk Reduction are included in this rule;
- (j) OAR 340-245-0140, Pollution Prevention, explains how the owner or operator of a source must perform a pollution prevention analysis when required under OAR 340-245-0130;
- (k) OAR 340-245-0150, Postponement of Risk Reduction, specifies how an owner or operator of a source may request postponement of risk reduction due to financial hardship;
- (l) OAR 340-245-0200, Risk Estimates, explains how the owner or operator of a source must perform the calculations required in this division. This rule explains how calculations should be rounded to evaluate compliance with Source Risk Limits;
- (m) OAR 340-245-0210, Modeling and Risk Assessment Work Plan Requirements, contains air quality modeling and work plan requirements for owners or operators of sources that are required to assess risk;
- (n) OAR 340-245-0220, TBACT and TLAER Procedures, explains how the owner or operator of a source must perform, respectively, a Toxics Best Available Control Technology or Toxics Lowest Achievable Emission Rate analysis;
- (o) OAR 340-245-0230, Toxic Air Contaminant Monitoring Requirements, allows an owner or operator of a source to perform air monitoring to determine actual concentrations of toxic air contaminants in the ambient air around a source;

(p) OAR 340-245-~~0300, 340-245-0310, and 340-245-0320~~, ~~Toxicity Reference Values~~, Process for Updating ~~Lists of Regulated Toxic Air Contaminants and Their~~ Risk-Based Concentrations, and ~~340-245-0320~~, Standards and Criteria for Noncancer Risk Action Levels for Existing Sources, describe the ~~list of authoritative sources that publish toxicity information that the EQC considers, upon the recommendation of DEQ, in consultation with OHA, to determine the RBCs,~~ the process of how the RBCs may be updated, and assignment of hazard index values based on health effects;

(q) OAR 340-245-0400, Cleaner Air Oregon Fees, specifies the permitting fees that apply to sources subject to the rules in this division; and

(r) OAR 340-245-80~~100 through 340-245-8050~~, Tables ~~1-3~~, include the established Risk Action Levels, ~~lists of the regulated toxic air contaminants, the values used to develop~~ Risk-Based Concentrations and the Level 1 Risk Assessment ~~Dispersion Factor Tables~~ ~~Tool~~.

(4) The long-term goal of Cleaner Air Oregon is to achieve a 50% reduction in the number of existing sources posing either an excess cancer risk of more than 25 in a million or a Hazard Index of more than 1 by the year 2034.

(5) This program supplements requirements in OAR chapter 340, division 244, Oregon Federal Hazardous Air Pollutant Program, and division 246, Oregon State ~~Air~~-Toxics ~~Air Contaminant~~ Program. This program includes four levels of risk assessment and allows sources to choose any level of assessment to assess risk.

Statutory/Other Authority: - ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, ~~468A.135, 468A.337, 468A.345~~ & Or Laws 2018, ch. 102, §§ ~~3, 7 and 13~~

Statutes/Other Implemented: - ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155, ~~468A.335, 468A.337, 468A.343, 468A.345~~ & Or Laws 2018, ch. 102, § ~~2, 3, 6, 7 and 13~~

History:

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0010

Applicability and Jurisdiction

(1) This division applies in all areas of the state and to all portable and stationary sources, excluding sources located on tribal and federal lands that are not subject to regulation by DEQ.

(2) DEQ may consult with OHA as necessary on the implementation of the rules in this division.

(3) Subject to the requirements in this division and OAR 340-200-0010(3), Lane Regional Air Protection Agency is designated by the EQC to implement the rules in this division within its area of jurisdiction.

(4) This division applies to entire sources as well as to individual TEUs.

(5) The owner or operator of a source subject to this division may also be subject to other air quality rules including but not limited to those listed below, either in relation to its obligations under this division or independent of this division.

(a) OAR chapter 340, division 209, Public Participation;

(b) OAR chapter 340, division 210, Stationary Source Notification Requirements;

- (c) OAR chapter 340, division 212, Stationary Source Testing and Monitoring;
- (d) OAR chapter 340, division 214, Stationary Source Reporting Requirements;
- (e) OAR chapter 340, division 216, Air Contaminant Discharge Permits, including fees;
- (f) OAR chapter 340, division 218, Oregon Title V Operating Permits;
- (g) OAR chapter 340, division 220, Oregon Title V Operating Permit Fees;
- (h) OAR chapter 340, division 224, New Source Review;
- (i) OAR chapter 340, division 226, General Emission Standards;
- (j) OAR chapter 340, division 244, Oregon Federal Hazardous Air Pollutant Program; and
- (k) OAR chapter 340, division 246, Oregon State ~~Air Toxics~~ [Toxic Air Contaminant](#) Program.

(6) Disclaimer. Compliance with this division does not authorize the emission of any toxic air contaminant in violation of any other federal, state, or local law or regulation, or exempt the owner or operator from any other applicable law or regulation.

Statutory/Other Authority: - ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#), [ORS 468A.345](#) & ~~Or Laws 2018, ch. 102, §§ 3 and 13~~

Statutes/Other Implemented: - 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#), [ORS 468A.343](#), [ORS 468A.345](#) & ~~Or Laws 2018, ch. 102, §§ 2, 3, 6, and 13~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0020](#)

Definitions

The definitions in OAR 340-200-0020, 340-204-0010, [340-246-0030](#), [340-247-0020](#) and this rule apply to this division. If the same term is defined in this rule and OAR 340-200-0020 or 340-204-0010, the definition in this rule applies to this division.

- (1) “ABEL” means a computer model developed by EPA that evaluates a corporation's or partnership's ability to afford compliance costs, cleanup costs or civil penalties. ABEL is available upon request from DEQ.
- (2) “Actual toxic air contaminant emission rate” means:
 - (a) For an existing source, the toxic air contaminant emissions rate from the source’s actual production; or
 - (b) For a new or reconstructed source, the toxic air contaminant emissions rate from the reasonably anticipated actual production by the new or reconstructed source.
- (3) “Acute” means evaluated over a 24-hour period or day.
- (4) “Acute exposure location” means an exposure location outside the boundary of a source being modeled for [the maximum](#) daily average concentrations of a toxic air contaminant, and that is:

(a) A chronic exposure location; or

(b) A location where people may spend several hours of one day.

(5) “AERMOD” is the EPA approved steady-state air dispersion model, specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," that is the primary model used for the analysis of ambient concentrations for regulatory compliance. AERMOD uses a fully developed set of meteorological and terrain data. AERMOD stands for American Meteorological Society/Environmental Protection Agency Regulatory Model. AERMOD is available upon request from DEQ.

(6) “AERSCREEN” is the EPA approved screening dispersion model, specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," based on AERMOD. The model uses conservative screening meteorology to produce estimates of "worst-case" concentration estimates that are equal to or greater than the estimates produced by AERMOD. AERSCREEN stands for American Meteorological Society/Environmental Protection Agency Regulatory Screening Model. AERSCREEN is available upon request from DEQ.

(7) “Aggregate TEU Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, that aggregated TEUs may not exceed, based on a calculation of the cumulative risk of all aggregated TEUs.

(8) “Aggregated TEUs” means all of a source’s TEUs that are identified by an owner or operator with total cumulative risk less than the Aggregate TEU Level. A TEU that is identified as one of the aggregated TEUs is referred to in the singular as an aggregated TEU.

(9) “Area of impact” means the geographic area where risk is determined to be above the applicable Risk Action Level, and is determined by AERMOD or other comparable model approved by DEQ.

(10) “Chronic” means evaluated over a one-year period or longer.

(11) “Chronic exposure location” means an exposure location outside the boundary of a source being modeled for annual average concentrations of a toxic air contaminant, and can be either:

(a) A residential exposure location; or

(b) A ~~non-residential~~nonresidential exposure location.

(12) “Community Engagement Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which DEQ will conduct community engagement.

(13) “Construction permit” means a Construction Air Contaminant Discharge Permit issued under OAR chapter 340, division 216, or a Standard Air Contaminant Discharge Permit used for approval of Type 3 or 4 changes under OAR chapter 340, division 210.

(14) “De minimis source” means a source whose excess cancer risk, chronic noncancer risk and acute noncancer risk estimates are each less than or equal to the Source Permit Level in OAR 340-245-8010 Table 1 when calculated based on the source’s capacity, as determined under OAR 340-245-0050(7).

(15) “DEQ notice date” means the date that DEQ sends a notice to an owner or operator that a risk assessment is required.

(16) “Environmental Justice” means equal protection from environmental and health hazards, and meaningful public participation in decisions that affect the environment in which people live, work, learn, practice spirituality, and play. Environmental Justice communities include minority and low-income communities, tribal communities, and other communities traditionally underrepresented in the public process.

(17) “Excess cancer risk” means the probability of developing cancer resulting from exposure to toxic air contaminant emissions from a TEU or an entire source under an applicable exposure scenario, over and above the background rate of cancer. Excess cancer risk is expressed in terms of “X” in a million, and means that approximately “X” number of additional cases of cancer would be expected in a population of one million people subject to the applicable exposure scenario.

(18) “Exempt source” means a source at which all TEUs are exempt TEUs or a source that has no TEUs that emit toxic air contaminants, as determined under OAR 340-245-0050(6).

(19) “Exempt TEU” means a TEU that DEQ has determined is exempt under OAR 340-245-0060(3). An exempt TEU is not required to comply with any other requirements of this division, other than those applicable to qualify as an exempt TEU and OAR 340-245-0060(4)(c)(A).

(20) “Existing source” means a source that:

(a) Commenced construction before November 16, 2018; or

(b) Submitted all necessary applications to DEQ under OAR 340 divisions 210 or 216 before November 16, 2018, and all such applications were deemed complete by DEQ.

(21) “Existing TEU” means a TEU that is not a new or modified TEU.

(22) “Exposure location” means a location where people, including sensitive populations, actually live or normally congregate and will be exposed to a toxic air contaminant present in the air, and thus be the location of an air quality modeling receptor at which toxic air contaminant concentrations and risk are evaluated. Exposure locations are associated with exposure scenarios and identified based on allowed land use zoning, except as allowed under OAR 340-245-0210(1)(a)(F) or when DEQ has sufficient information to determine that an area is being used in a manner contrary to its land use zoning.

(23) “Exposure scenario” means a set of assumptions about how a population is exposed to toxic air contaminants. Included in the assumptions are the type of people exposed (e.g., children or adults), and the frequency and duration of exposure associated with the scenario (e.g., residential or occupational use). Exposure scenarios are associated with exposure locations: [\(e.g., nonresidential child\)](#).

(24) “Fixed capital cost” means the capital needed to purchase and construct all the depreciable components of a source.

(25) “Hazard Index number” or “Hazard Index,” as defined in Oregon Laws 2018, chapter 102, section 2, means a number equal to the sum of the hazard quotients attributable to toxic air contaminants that have noncancer effects on the same target organs or organ systems.

(26) “Hazard quotient,” as defined in Oregon Laws 2018, chapter 102, section 2, means a calculated numerical value that is used to evaluate noncancer health risk from exposure to a single toxic air contaminant. The calculated numerical value is the ratio of the air concentration of a toxic air contaminant

to the noncancer Risk-Based Concentration at which no serious adverse human health effects are expected to occur.

(27) “Immediate Curtailment Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which [DEQ will require immediate risk reduction as provided in OAR 340-245-0130\(7\)](#). ~~an existing source will not be permitted to postpone risk reduction under OAR 340-245-0160.~~

(28) “INDIPAY” means a computer model developed by EPA that evaluates an individual's ability to afford compliance costs, cleanup costs or civil penalties. INDIPAY is available upon request from DEQ.

(29) “Inhalation Unit Risk” means the upper-bound lifetime excess cancer risk estimated to result from continuous exposure to a toxic air contaminant at a concentration of 1 $\mu\text{g}/\text{m}^3$ in air. The interpretation of inhalation unit risk would be as follows: if unit risk = 2×10^{-6} per $\mu\text{g}/\text{m}^3$, then two excess cancer cases (upper bound estimate) are expected to develop per one million people if exposed daily for 70 years to one microgram of the toxic air contaminant per cubic meter of air.

(30) “Multipathway” means consideration of exposure pathways in addition to inhalation of chemicals in air, such as incidental ingestion and dermal contact with toxic air contaminants migrating to soil and water.

(31) “MUNIPAY” means a computer model developed by EPA that evaluates a municipality's or regional utility's ability to afford compliance costs, cleanup costs or civil penalties. MUNIPAY is available upon request from DEQ.

(32) “New or modified TEU” means ~~a TEU at an existing source where one of the following criteria is met:~~

~~(a)~~ [\(a\) A TEU at an existing source where one of the following criteria is met:](#)

[\(A\)](#) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 was not required for the TEU, and construction commenced on or after November 16, 2018;

~~(b)~~ [\(B\)](#) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 is or was required for the TEU, and the owner or operator submitted the application on or after November 16, 2018; or

~~(c)~~ [\(C\)](#) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 was required for the TEU, but the owner or operator did not obtain the approval as required, and construction commenced on or after the following, as applicable:

~~(A)~~ [\(A\)](#)i For Type 1 changes under OAR 340-210-0225, 10 days before November 16, 2018;

~~(B)~~ [\(B\)](#)ii For Type 2 changes under OAR 340-210-0225, 60 days before November 16, 2018;

~~(C)~~ [\(C\)](#)iii For Type 3 changes under OAR 340-210-0225, 120 days before November 16, 2018; and

~~(D)~~ [\(D\)](#)iv For Type 4 changes under OAR 340-210-0225, 240 days before November 16, 2018;

(~~d~~b) With respect to a modification to a TEU, approval to construct or operate refers to approval to construct or operate the modification.

(33) “New source” means a source that:

(a) Is not an existing source; or

(b) Was an existing source that has moved to a new location that is not contiguous or adjacent to its original facility location on or after <enter effective date of rules>, excluding existing portable sources.

(34) “Noncancer risk” means the chance of noncancer harmful effects to human health resulting from exposure to toxic air contaminant emissions from a TEU or an entire source under an applicable exposure scenario. There are two types of noncancer risk, chronic and acute. Noncancer risk is expressed numerically using the Hazard Index. Below a Hazard Index of 1, adverse noncancer health effects are unlikely, and above a Hazard Index of 1, adverse noncancer health effects become more likely.

(35) “Nonresident” means people who regularly spend time at a location but do not reside there. This includes, but is not limited to, children attending schools and daycare facilities and adults at workplaces.

(36) “Nonresidential exposure location” means an exposure location outside the boundary of a source where people may reasonably be present for a few hours several days per week, possibly over a period of several years, and that is zoned for uses that do not allow residential use. A nonresidential exposure location includes ~~non-residential~~nonresidential worker exposure locations and ~~non-residential~~nonresidential child exposure locations.

(37) “Notification area” means the area of impact or the area within a distance of 1.5 kilometers of a source, whichever is greater.

(38) “Operating permit” means a General, Basic, Simple or Standard Air Contaminant Discharge Permit under OAR chapter 340, division 216 or an Oregon Title V Operating Permit under OAR chapter 340, division 218.

(39) “Owner or operator” means any person who owns, leases, operates, controls, or supervises a stationary source.

(40) “Permit Denial Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which DEQ will not approve an operating permit for a new or reconstructed source, as provided in OAR 340-245-0100(5).

(41) “Pollution Prevention” means any practice that reduces, eliminates, or prevents pollution at its source, as described in OAR 340-245-0140.

(42) “Reconstructed,” as defined in Oregon Laws 2018, chapter 102, section 2, means an individual project is constructed at an air contamination source that, once constructed, increases the hourly capacity of any changed equipment to emit, and where the fixed capital cost of new components exceeds 50 percent of the fixed capital cost that would have been required to construct a comparable new source.

(43) “Residential exposure location” means an exposure location outside the boundary of a source where people may reasonably be present for most hours of each day over a period of many years, including individual houses and areas that are zoned to allow residential use either exclusively or in conjunction with other uses.

(44) “Risk” means the chance of harmful effects to human health resulting from exposure to a toxic air contaminant emitted from a TEU or an entire source under an applicable exposure scenario. For the purpose of these rules, risk includes three types of risk: excess cancer risk, chronic noncancer risk, and acute noncancer risk.

(45) “Risk Action Level” as identified under OAR 340-245-8010 Table 1, means the levels of risk posed by a source or a TEU at which particular requirements of these rules will apply, or the owner or operator will be required to take specific action, depending on the risk posed to the area of impact as described in these rules.

(46) “Risk assessment” means a procedure that identifies toxic air contaminant emissions from a source or a TEU and calculates the risk from those emissions. This term specifically refers to the procedures under OAR 340-245-0050(8) through (11) and may include the results of air monitoring as allowed under OAR 340-245-0050(1)(c)(B). The procedures are designated Level 1 through Level 4, respectively, with complexity of a risk assessment increasing as the level numeration increases, (i.e., a Level 1 Risk Assessment is the simplest and a Level 4 Risk Assessment is the most complex).

(47) “Risk Determination Ratio” means the calculated value used to determine compliance with noncancer Risk Action Levels for existing sources as determined under OAR 340-245-0200.

(48) “Risk limit” means a condition or requirement in a permit or permit addendum that serves to limit the risk from a source or part of a source. Such conditions or requirements may include, but are not restricted to, limits on risk from the source or part of a source, limits on emissions of one or more toxic air contaminants, limits on emissions from one or more TEUs, or limits on source operation. ~~A Source Risk Limit established under OAR 340-245-0110 is a risk limit.~~

(49) “Risk-Based Concentration” or “RBC” means the concentration of a toxic air contaminant listed in OAR 340-245-8010 Table ~~4-2~~ that, for the designated exposure scenario, results in an excess cancer risk of one in one million, or a noncancer hazard quotient of one for either chronic exposure or acute daily exposure.

(50) “Risk Reduction Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which the owner or operator of an existing source will be required to have an approved Risk Reduction Plan under OAR 340-245-0130.

(51) “Sensitive Population” means people with biological traits that may magnify the harmful effects of toxic air contaminant exposures that include individuals undergoing rapid rates of physiological change, such as children, pregnant women and their fetuses, and individuals with impaired physiological conditions, such as elderly people with existing diseases such as heart disease or asthma. Other sensitive populations include those with lower levels of protective biological mechanisms due to genetic factors and those with increased exposure rates.

(52) “Significant TEU” means a TEU that is not an exempt TEU and is not an aggregated TEU.

(53) “Source Permit Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, ~~below which a source will be considered a de minimis source.~~

(54) “Source risk” means the cumulative risk from all toxic air contaminants emitted by all significant and aggregated TEUs at a source. ~~TEUs at a source except that the source risk calculation for a de minimis source will include consideration of all of the source’s TEUs, including both significant TEUs and aggregated TEUs.~~

(55) “TBACT Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, below which an existing source will be considered to be in compliance with these rules without having to further reduce its risk, and above which will require the owner or operator of the existing source either to demonstrate that its significant TEUs meet TBACT or to further reduce risk from the source, under OAR 340-245-0050(1)(c).

(56) “TLAER Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, below which a new or reconstructed source will be considered to be in compliance with these rules, and above which will require the owner or operator of the new or reconstructed source to demonstrate that its significant TEUs meet TLAER, under OAR 340-245-0050(2)(b).

~~(57) “Toxic air contaminant” means an air pollutant that has been determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health and is listed in OAR 340-245-8020 Table 2.~~

(58)(57) “Toxic Air Contaminant Permit Addendum” means written authorization that incorporates the requirements under this division into a permit by amending an Air Contaminant Discharge Permit or a Title V Operating Permit, or in the case of a source assigned to a General Air Contaminant Discharge Permit, means written authorization imposing requirements under this division as additional source-specific permit conditions.

~~(59) “Toxicity Reference Value” or “TRV” means the following:~~

~~(a) For carcinogens, the air concentration corresponding to a one in one million excess cancer risk, calculated by dividing one in one million (0.000001) by the inhalation unit risk specific to that toxic air contaminant as established by the authoritative body that establishes the value, and as approved by the EQC; and~~

~~(b) For noncarcinogens, the air concentration above which relevant effects might occur to humans following environmental exposure, and below which is reasonably expected that effects will not occur.~~

(60)(58) “Toxics Best Available Control Technology” or “TBACT” means a toxic air contaminant emission limitation or emission control measure or measures based on the maximum degree of reduction of toxic air contaminants that is feasible, determined using the procedures in OAR 340-245-0220.

~~(61)(59)~~ “Toxics emissions unit” or “TEU” means an emissions unit, or one or more individual emissions producing activities, that emit or have the potential to emit any toxic air contaminant, as designated under OAR 340-245-0060.

~~(62)(60)~~ “Toxics Lowest Achievable Emission Rate” or “TLAER” means that rate of emissions which reflects the most stringent emission limitation which is achieved in practice by a source in the same class or category of sources as the proposed source, determined using the procedures in OAR 340-245-0220.

Statutory/Other Authority:—ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#), [ORS 468A.345](#) & Or Laws 2018, ch. 102, § ~~3, 7 and 13~~

Statutes/Other Implemented:—ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#), [ORS 468A.343](#), [ORS 468A.345](#) & Or Laws 2018, ch. 102, § ~~2, 3, 6, 7 and 13~~

History:

DEQ 11-2020, amend filed 04/29/2020, effective 04/29/2020

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0022](#)

Abbreviations and Acronyms

As used in this division:

- (1) “HI” means Hazard Index.
- (2) “IUR” means Inhalation Unit Risk.
- (3) “m³” means cubic meter.
- (4) “NESHAP” means National Emission Standards for Hazardous Air Pollutants, established by the Environmental Protection Agency under section 112 of the Clean Air Act, 42 U.S.C. §7412.
- (5) “NSPS” means New Source Performance Standards, established by the Environmental Protection Agency under section 111(b) of the Clean Air Act, 42 U.S.C. §7411(b).
- (6) “OHA” means Oregon Health Authority.
- (7) “PTE” means Potential to Emit.
- (8) “RBC” means Risk-Based Concentration.
- (9) “TBACT” means Toxics Best Available Control Technology.
- (10) “TEU” means Toxics Emissions Unit.
- (11) “TLAER” means Toxics Lowest Achievable Emission Rate.
- (12) “TRV” means Toxicity Reference Value.
- (13) “µg” means microgram.
- (14) “µg/m³” means micrograms per cubic meter.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#), [ORS 468A.345](#) & ~~Or Laws 2018, ch. 102, §§ 3 and 13~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#), [ORS 468A.343](#), [ORS 468A.345](#) & ~~Or Laws 2018, ch. 102, §§ 2, 3, 6, and 13~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0030](#)

Submittal and Payment Deadlines

(1) When required to demonstrate compliance with OAR 340-245-0040, 340-245-0050, [340-245-0060](#), or [340-245-0060, 0100](#) the owner or operator of a source must submit to DEQ all information and specific activity fees under OAR 340-216-8030 Table 3 required by, and by the deadlines specified in, subsections (a) through [\(j\)](#), as applicable, except as allowed under section [\(2\)](#). The owner or operator of a new or reconstructed source must also submit the following information but the time deadlines in subsections (a) through [\(h\)](#) do not apply.

(a)(A) An emissions inventory under OAR 340-245-0040 that will be used in the risk assessment must be submitted to DEQ no later than 90 days after the DEQ notice date; and

(B) For an existing source, if the owner or operator is submitting DEQ-approved source test data to supplement the emissions inventory, the updated emissions inventory must be submitted to DEQ no later than 150 days after the DEQ notice date. The owner or operator must also submit a modeling protocol and Level 3 or Level 4 Risk Assessment work plan prior to or concurrent with the submission of source test data, if applicable;

(b) The modeling protocol under OAR 340-245-0210 must be submitted to DEQ no later than 30 days after receiving DEQ approval of the emissions inventory under subsection (a);

(c) The Level 3 or Level 4 Risk Assessment work plan under OAR 340-245-0210 must be submitted to DEQ no later than 60 days after receiving DEQ approval of the updated emissions inventory under subsection (a);

(d) Risk Assessments required under OAR 340-245-0050(8) through (11) must be submitted to DEQ in accordance with the following deadlines:

(i) A Level 1 or Level 2 Risk Assessment under OAR 340-245-0050(8) or (9) must be submitted to DEQ no later than 60 days after DEQ approval of the modeling protocol required under subsection (b);

(eii) A Level 3 Risk Assessment under OAR 340-245-0050(10) must be submitted to DEQ no later than 120 days after DEQ approval of the Level 3 Risk Assessment work plan required under subsection (c);

(iiif) A Level 4 Risk Assessment under OAR 340-245-0050(11) must be submitted to DEQ no later than 150 days after DEQ approval of the Level 4 Risk Assessment work plan required under subsection (c);

(iv) In the case where DEQ has determined, upon review of the approved emissions inventory, modeling protocol, and Risk Assessment work plan (if applicable) required under OAR 340-245-0050(1), that risk from an existing source may exceed the Immediate Curtailment Level, DEQ may reduce the Risk Assessment submittal deadline to a period of no less than 30 days for chronic risk or 15 days for acute risk, unless a shorter deadline is agreed to in writing between DEQ and the source;

(ge) If risk from the source is greater than the Immediate Curtailment Level, a report describing the immediate action taken by the owner or operator to reduce risk to below the Immediate Curtailment Level as required under OAR 340-245-0130(7) must be submitted to DEQ no later than seven days after DEQ approval of a Level 3 Risk Assessment or a Level 4 Risk Assessment under subsection (ed)(ii)-~~ef~~, (iiif), or (iv);

(hf) A Toxic Air Contaminant Monitoring Plan under OAR 340-245-0230 and an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ no later than 30 days after DEQ approval of a Level 3 Risk Assessment or a Level 4 Risk Assessment under subsection (ed)(ii)-~~ef~~, (iiif), or (iv);

(ig) A Risk Reduction Plan under OAR 340-245-0130 and an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ no later than ~~120~~ 30 days after DEQ approval of a Level 3 or a Level 4 Risk Assessment under subsection (ed)(ii)-~~ef~~, (iiif), or (iv); and

(jh) For owners or operators that are not required to submit a Risk Reduction Plan and who do not choose to perform air monitoring, an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ within 30 days after DEQ approval of any level of risk assessment, whichever is applicable.

(2) Upon receipt of a submittal described in section (1), DEQ will review the submittal and if DEQ determines that any additional information, corrections, or updates are required in order to approve the submittal, then DEQ will provide the owner or operator with a written request to provide such information by a date certain.

(3) An owner or operator may request an extension of time from a deadline established in section (1) or section (2) by providing DEQ with a written request no fewer than 15 days prior to the submittal deadline. DEQ may grant an extension based on the following criteria:

(a) The owner or operator has demonstrated progress in completing the submittal; and

(b) A delay is necessary, for good cause shown by the owner or operator, related to obtaining more accurate or new data, performing additional analyses, or addressing changes in operations or other key parameters, any of which are likely to have a substantive impact on the outcomes of the submittal.

(4) If DEQ determines it is not able to approve the owner or operator's submittal, or if the owner or operator does not timely provide additional information or corrections requested by DEQ, then in addition to any other remedies available, DEQ may:

(a) With sufficient factual basis, modify the information provided by the owner or operator, approve it as modified, and the owner or operator must pay the document modification fee in OAR 340-216-8030 Table 3; or

(b) Inform the owner or operator of the deficiency, and provide the owner or operator with a revised deadline to submit the needed information.

(5) Recordkeeping. The owner or operator of a source that provides DEQ with any information related to a risk assessment completed under this rule must retain all of its records related to the risk assessment for five years from the date the information is submitted to DEQ.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, ~~468A.135, ORS 468A.337, ORS 468A.345 & Or Laws 2018, ch. 102, §§ 3 and 13~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ~~ORS 468A.335, ORS 468A.337, ORS 468A.343, ORS 468A.345 & Or Laws 2018, ch. 102, §§ 2, 3, 6, and 13~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0040

Emissions Inventory

(1) Individual emissions ~~inventory~~ inventories for risk assessment. of sources. New sources must submit an emissions inventory as part of the permit application. For the DEQ may also require the owner or operator of any existing permitted or unpermitted source to submit an emissions inventory ~~of~~ for the purpose of assessing risk. These emissions inventories must include all toxic air contaminants emitted by the source listed in OAR 340-~~245-8020~~ 247-8010 Table ~~2~~ 1. The owner or operator must assess risk from the toxic air contaminants in OAR 340-~~245-8040~~ Table 4 and ~~must address uncertainty in a Level 3 or Level 4 Risk Assessment for the toxic air contaminants in OAR 340-245-8020 Table 2 that do not have RBCs~~ 247-8010 Table 2. For existing sources, The owner or operator must submit the emissions inventory electronically to DEQ no later than 90 days after the DEQ notice date unless DEQ allows additional time under OAR 340-245-0030.

(2) Periodic state-wide emissions inventory.

~~(a) Once every three years,~~ (a) DEQ may require the owners and operators of all permitted and unpermitted sources to submit an updated toxic air contaminant emissions inventory of all toxic air contaminants emitted by the source listed in OAR 340-~~245-8020~~247-8010 Table 21. The reporting year will generally correspond with EPA's National ~~Emission~~Emissions Inventory reporting year (2020, 2023, 2026, etc.);

(b) The owner or operator must submit its updated emissions inventory electronically to DEQ no later than 60 days after the date that DEQ sends a written request by electronic mail or regular U.S. mail, to the owner or operator, unless DEQ allows additional time under OAR 340-245-0030; and

~~(e)(3) Emissions inventory revision.~~ DEQ may also require the owner or operator of a source that has previously submitted a toxic air contaminant emissions inventory under section (1) or (2) to submit an updated emissions inventory if DEQ discovers ~~or learns~~ additional information that indicates that the source's emissions have changed since it completed its most recent emissions inventory.

~~(3) Emissions inventory requirements.~~

(a) When required to submit an emissions inventory, the owner or operator must submit:

(A) A list of TEUs that emit toxic air contaminants. The owner or operator must include exempt TEUs but does not have to calculate toxic air contaminant emissions from the exempt TEUs. The list of TEUs that emit toxic air contaminants should not be limited to what is listed in a source's operating permit but should include all operations at the source that emit toxic air contaminants;

(B) A list of ~~production, fuel and material usage rates that are~~ all activities used to calculate toxic air contaminant emissions, such as production rates, fuel consumption, and material usage, for each TEU for the following:

(i) For ~~any~~ an emissions inventory, ~~the actual required under section (1),~~ production activities or and usage, as applicable, based on the following:

~~(I) For existing sources, actual annual and maximum daily production activities or and usage, as applicable, in the calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, the reasonably anticipated actual production or usage;~~

~~(ii) For an emissions inventory required under section (1), (II) For all sources, potential annual and maximum daily production or usage based on the following:~~

~~(I) Annual production and activities and usage, as applicable, that are used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on a requested PTE or risk limit; or~~

~~(II) Potential (III) For all sources, potential annual and maximum daily production activities or and usage, as applicable, based on capacity that is used to prove the source is de minimis if the owner or operator chooses to be permitted as a de minimis source;~~

~~(iii) For an emissions inventory required under section (1), potential (2), the actual production activities or and usage, as applicable, for the projected maximum day. The owner or operator must use knowledge of process to calculate in the maximum daily calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, the reasonably anticipated actual production and process rates; and usage, as applicable.~~

(C) Material balance information using Safety Data Sheets (formerly Material Safety Data Sheets) and Technical Data Sheets, as applicable, for ~~VOC-containing~~ materials used in any process; and

(D) Operating schedule (hours/day, days/year, seasonal variability) for the source, including schedules for each TEU, if different, for the calendar year preceding the year DEQ's written request is made and the year based on a requested PTE or risk limit;

(b) Owners or operators of sources with Title V, Standard and Simple Air Contaminant Discharge Permits, and unpermitted sources when DEQ so requires, must also submit:

(A) A list of all toxic air contaminants emitted by the source; ~~and~~

(B) The amount of each toxic air contaminant listed in OAR 340-247-8010 Table 1 emitted from each TEU, reported as both maximum mass emitted ~~per 24 hour period for each toxic air contaminant that has an acute RBC, day~~ and ~~as mass emitted per year for each toxic air contaminant that has an annual RBC or has no RBC~~, with the emission factors used or material balance information, as appropriate, for the following:

~~(i) For any emissions inventory, actual emissions for the calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, emissions based on the reasonably anticipated actual production or usage; and~~

~~(ii)~~ (i) For an emissions inventory required under section (1), emissions based on the following, and including startup and shutdown emissions for sources required to do so under OAR 340-214-0310:

(I) ~~Requested PTE or risk limit~~ For an existing source, actual emissions used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on actual emissions;

(II) For all sources, requested PTE or risk limit used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on a requested PTE or risk limit; or

~~(H) Capacity~~ (III) For all sources, capacity that is used to prove the source is de minimis if the owner or operator chooses to be permitted as a de minimis source;

~~(iii)~~ (i) For an emissions inventory required under section (1), maximum daily production. The owner or operator must use knowledge of process to calculate the maximum daily emissions; and

~~(C)(iii)~~ For an emissions inventory required under section (2), the actual emissions for the calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, emissions based on the reasonably anticipated actual production or usage; and

(C) All supplementary materials required to verify the calculated emissions as submitted in an emissions inventory under this rule, including but not limited to:

(i) Detailed process flow diagrams for all emissions producing activities, including expected points of all fugitive and non-fugitive emissions and air pollution control devices;

(ii) The name of each resource used to obtain toxic air contaminant emission factors ~~or methodologies used to calculate emissions~~ (e.g., AP-42-~~or~~, WebFIRE, California Air Toxic Emission Factors, or source test data, ~~continuous~~);

(iii) Methodologies used to calculate emissions, including all formulas and assumptions along with the supporting technical documentation (e.g., environmental data sheets, safety data sheets, or engineering estimates);

(iv) Continuous emissions monitoring data, ~~etc.~~, that meets data sufficiency requirements as required under the Continuous Monitoring Manual in OAR 340-200-0035;

~~(v) Technical documentation related to air pollution control device operation and efficiency (e.g., manufacturer or source test data); and~~

(vi) Source test data sufficient to verify emission factors (e.g., source test reports).

(5) Review of toxic air contaminant emissions inventory reports. DEQ shall use the procedures in OAR 340-245-0030 to review any emissions inventory in determining its completeness, consider extensions requests, and request additional information, if needed.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 & Or Laws 2018, ch. 102, § 3

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 & Or Laws 2018, ch. 102, §§ 2 and 3

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0050

Risk Assessment Procedures

(1) Existing source.

(a) When notified in writing by DEQ, at DEQ's discretion, the owner or operator of an existing source with an operating permit must either demonstrate that it is an exempt source by following the procedure in section (6) or:

(A) Assess risk from the source using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11);

(B) Assess risk from the source using the emissions inventory submitted under OAR 340-245-0040(1); and

(C) Follow the applicable calculation procedures under OAR 340-245-0200.

~~(b) If the~~The owner or operator ~~of an existing source proposes to modify the source in a way~~proposing an action listed in OAR 240-224-0010(1) or (2) that would require compliance under OAR chapter 340, division 224, "New Source Review," ~~excluding actions described in~~ must submit an emissions inventory under OAR 340-224-0010(2)(b) and (d)(B)-245-0040(1) for the proposed modifications or operational changes;~~that require compliance only as Type B State New Source Review, then~~

~~(A) The emissions inventory must be approved by DEQ~~ the owner or operator must perform a risk assessment before the New Source Review application can be deemed complete under OAR 340-224-0030(2); and demonstrate compliance under this division and must include its compliance demonstration under this division with its application submitted under

(B) The emissions inventory- submittal deadline for existing sources in OAR ~~chapter 340, division 224-245-0030(1)(a)(A) does not apply.~~

(c) The owner or operator must demonstrate compliance with paragraph (A), (B), (C) or (D), and also comply with paragraph (E), if applicable.

(A) The owner or operator must demonstrate that the source is a de minimis source by following the procedure in section (7), or demonstrate that the risk from the source is less than or equal to the TBACT Level. The owner or operator of a source whose risk is less than or equal to the TBACT Level must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 with Source Risk Limits or an application that modifies the existing permit in a manner that ensures that the risk from the source will be less than or equal to the TBACT Level.

(B) Toxic air contaminant monitoring.

(i) Before the owner or operator of a source may begin air monitoring, the owner or operator must complete and submit to DEQ a Level 3 or Level 4 Risk Assessment and comply with the applicable requirements of OAR 340-245-0230.

(ii) An owner or operator may not delay submission of an application for an Air Contaminant Permit Addendum and subsequent implementation of the approved Risk Reduction Plan prepared under OAR 340-245-0130 if a Level 3 or 4 Risk Assessment shows that:

(I) Calculated excess cancer risk exceeds 200 in 1 million;

(II) Calculated noncancer risk exceeds a Hazard Index of 12 if all toxic air contaminants emitted have been assigned a noncancer TBACT Risk Action Level of a Hazard Index of 3;

(III) Calculated noncancer risk exceeds a Hazard Index of 20 if all toxic air contaminants emitted have been assigned a noncancer TBACT Risk Action Level of a Hazard Index of 5; or

(IV) Calculated noncancer Risk Determination Ratio exceeds 4 if air toxic contaminants emitted include a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5.

(iii) If the Level 3 or Level 4 Risk Assessment calculates risk from the source that does not cause any exceedances of the criteria in subparagraph (ii), then DEQ shall issue a Toxics Air Contaminant Permit Addendum addressing ~~only~~ toxic air contaminant monitoring requirements, including a reporting and compliance schedule for implementing the Toxic Air Contaminant Monitoring Plan required under OAR 340-245-0230;

(iv) Upon completion and DEQ approval of toxic air contaminant monitoring in compliance with OAR 340-245-0230, the owner or operator must use the toxic air contaminant monitoring results, in association with other applicable, relevant data to determine compliance requirements under paragraph (c)(A), (C), or (D) and apply for a Toxic Air Contaminant Permit Addendum modification under OAR 340-245-0100;

(C) TBACT compliance. If the risk from the source is greater than the TBACT Level and less than or equal to the Risk Reduction Level, and all significant TEUs meet TBACT under OAR 340-245-0220, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes Source Risk Limits that ensure the risk from the source will be less than or equal to the Risk Reduction Level; or

(D) Risk Reduction Plan. The owner or operator may demonstrate compliance with this paragraph under either subparagraph (i), (ii), or (iii), whichever is applicable:

(i) If the risk from the source is greater than the TBACT Level and the owner or operator can make physical, operational or process changes to reduce the risk to less than or equal to the TBACT Level, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 and Source Risk Limits that ensure that the risk from the source will be less than or equal to the TBACT Level;

(ii) If the risk from the source is greater than the TBACT Level and less than or equal to the Risk Reduction Level, but not all significant TEUs meet TBACT under OAR 340-245-0220, then the owner or operator must either reduce risk below the TBACT Level under subparagraph (i) or apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 to meet TBACT on all significant TEUs and Source Risk Limits that ensure that the risk from the source will be less than or equal to the Risk Reduction Level; or

(iii) If the risk from the source is greater than the Risk Reduction Level, ~~then~~ the owner or operator must [meet the requirements in subparagraph \(ii\) and](#) apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 with additional risk reduction measures and Source Risk Limits that ensure that the risk from the source will be less than or equal to the Risk Reduction Level~~;~~.

(E) If the risk from the source is greater than the Immediate Curtailment Level, ~~then~~ the owner or operator must take immediate action to reduce risk to below the Immediate Curtailment Level~~;~~ [under OAR 340-245-0130\(7\)](#).

(2) New or reconstructed source.

(a)(A) The owner or operator of a proposed new or reconstructed source that is required to obtain a Simple or Standard Air Contaminant Discharge Permit, and that is not an exempt source, [as determined by the procedure in section \(6\)](#), must also perform a risk assessment, and if applicable, apply for a Toxic Air Contaminant Permit Addendum concurrently with an application for a permit under OAR chapter 340, division 216, before a permit is issued. If DEQ approves the applications, then DEQ will incorporate the toxic air contaminant permit conditions directly into the new Simple or Standard Air Contaminant Discharge Permit and will not issue a separate Toxic Air Contaminant Permit Addendum.

(B) DEQ may require the owner or operator of a proposed new or reconstructed source that is required to obtain a Basic or a General Air Contaminant Discharge Permit to perform a risk assessment and demonstrate compliance with this division, and if applicable, apply for a Toxic Air Contaminant Permit Addendum concurrently with an application for a permit under OAR chapter 340, division 216.

(i) If DEQ approves the applications for a source that will have a Basic Air Contaminant Discharge Permit, then DEQ will incorporate the toxic air contaminant permit conditions directly into the new operating permit.

(ii) If DEQ approves the applications for a source that will be assigned to a General Air Contaminant Discharge Permit, then DEQ will issue a Toxic Air Contaminant Permit Addendum as a source-specific addendum to the new operating permit that will not be incorporated into the operating permit.

(C) Any owner or operator of a proposed new or reconstructed source that is required to perform a risk assessment must:

(i) Assess risk from the source using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11);

(ii) Assess risk from the source using the emissions inventory submitted under OAR 340-245-0040(1); and

(iii) Follow the applicable calculation procedures under OAR 340-245-0200.

(b) The owner or operator of a new or reconstructed source must demonstrate compliance with either paragraph (A) or (B).

(A) The owner or operator must demonstrate that the source is a de minimis source by following the procedure in section (7), or demonstrate that the risk from the source is less than or equal to the TLAER Level. The owner or operator of a source whose risk is less than or equal to the TLAER Level must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 or an operating permit with Source Risk Limits that ensure that the risk from the source will be less than or equal to the TLAER Level; or

(B) TLAER compliance. If the risk from the new or reconstructed source is greater than the TLAER Level and less than or equal to the Permit Denial Level, and all significant TEUs meet TLAER under OAR 340-245-0220, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 or an operating permit that includes Source Risk Limits that ensure the risk from the source will be less than or equal to the Permit Denial Level.

(3) Other sources. When notified in writing by DEQ, the owner or operator of a source that is not subject to sections (1) or (2) must perform a risk assessment using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11). DEQ may notify such a source after determining through an investigation or file review that the source may emit toxic air contaminants in quantities that may cause the source's risk to exceed the Source Permit Level.

(4) A risk assessment for a source must include all TEUs at the source, as of the date that the owner or operator submits an application under OAR 340-245-0100 for a Toxic Air Contaminant Permit Addendum, except for the following:

(a) Exempt TEUs; [and](#)

(b) Gas combustion TEUs, as provided under section (5); ~~and~~

~~(c) Aggregated TEUs, except when the owner or operator is requesting approval as a de minimis source under section (7).~~

(5) Gas combustion exemption. This exemption applies to TEUs that solely combust natural gas, propane, liquefied petroleum gas, and, when approved by DEQ in response to a written request by an owner or operator, pretreated landfill gas and pretreated digester gas or biogas. Risk from toxic air contaminants emitted from such combustion must be calculated and reported in the risk assessment, but the risk from such toxic air contaminants may be treated as follows:

(a) At each exposure location, risk must be reported as two values:

(A) The risk from toxic air contaminants emitted from such combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas and pretreated digester gas or biogas-; and

(B) The risk from all other toxic air contaminant emissions;

(b) At each exposure location, the risk from toxic air contaminants emitted solely from the combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas and pretreated digester gas or biogas may be excluded from the total risk for the purpose of determining compliance with Risk Action Levels and may be omitted from any requirements determined under a Risk Reduction Plan under OAR 340-245-0130 if good air pollution control practices are followed [to ensure proper combustion](#); and

(c) Notwithstanding subsections (a) and (b), an owner or operator must include in its risk assessment any toxic air contaminants that are emitted from materials that are contacted by the flame or combustion gases from the combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas or pretreated digester gas or biogas. Materials that may emit toxic air contaminants include but are not limited to VOCs combusted in thermal oxidizers and materials dried in direct-contact dryers.

(6) Exempt Source Determination.

(a) To be approved as an exempt source, no later than 30 days after the date that DEQ sends a notice under subsection (1)(a), or with submittal of an application for a new or reconstructed source under subsection (2)(a), the owner or operator must submit information to DEQ that demonstrates that all TEUs at the source are exempt TEUs [as provided in OAR 340-245-0060\(3\)](#); and

(b) Upon receipt of a submittal from an owner or operator under subsection (a), DEQ will:

(A) Review the submissions and, if approved, write a memo to the DEQ file for the source summarizing the assessment that will be:

(i) Incorporated into the review report of a permitted source upon permit issuance or renewal; or

(ii) Maintained in the file and tracked in a DEQ database.

(B) Follow the Category I public notice procedure in OAR chapter 340, division 209, prior to approving or denying the request to be considered an exempt source; and

(C) Keep records of exempt sources in a database for the emissions inventory and future communication if RBCs change or other information about risk is received such that toxic air contaminant emissions must be reevaluated.

(7) De minimis Source Determination.

(a) To be approved as a de minimis source, the owner or operator must assess risk at the capacity of ~~each TEU, including~~ [all significant and](#) aggregated TEUs, using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11). The owner or operator must submit to DEQ the following, [as applicable](#):

(A) Information that demonstrates ~~that~~ the source does not exceed the Source Permit Level ~~if the owner or operator is not required to operate and maintain~~ [when operating without](#) control devices ~~to remain a de minimis source~~;

(B) Information that demonstrates ~~that the existing~~ source does not exceed the Source Permit Level if the owner or operator is required to operate and maintain control devices to remain a de minimis source; and the existing or proposed operating permit includes necessary conditions to operate and maintain the control devices; or

(C) An application for a Toxic Air Contaminant Permit Addendum that demonstrates that the source does not exceed the Source Permit Level if the owner or operator is required to operate and maintain control devices to remain a de minimis source, and the ~~source is a new source existing~~ or ~~the existing~~ proposed operating permit does not include necessary conditions to operate and maintain the control devices.

(b) Upon receipt of a submittal from an owner or operator under subsection (a), DEQ will:

(A) Review the submissions and, if approved, either:

(i) Write a memo to the DEQ file for the source summarizing the assessment that will be:

(I) Incorporated into the review report of a permitted source upon permit issuance or renewal; or

(II) Maintained in the file and tracked in a DEQ database for sources that meet the criteria in paragraph (a)(A) or (B); or

(ii) Issue a Toxic Air Contaminant Permit Addendum or operating permit, for sources that meet the criteria in paragraph (a)(C);

(B) Follow the Category I public notice procedure in OAR chapter 340, division 209, prior to approving or denying the request to be considered a de minimis source; and

(C) Keep records of de minimis sources in a database for the emissions inventory and future communication if RBCs change or other information about risk is received such that toxic air contaminant emissions must be reevaluated.

(8) Level 1 Risk Assessment. To complete a Level 1 Risk Assessment, the owner or operator must comply with OAR 340-245-0210(1) and then assess risk by using the Level 1 Risk Assessment ~~Tool~~ Dispersion Factor Tables -in OAR 340-245-801 ~~50 Table 5-Tables 3A through 3D~~ to determine toxic air contaminant concentrations at approved exposure locations.

(a) The owner or operator must follow the directions for using the Level 1 Risk Assessment ~~Tool~~ Dispersion Factor Tables described in OAR 340-245-0200(2);

(b) For sources with multiple stacks, stacks must either be considered individually using OAR 340-245-801 ~~50 Tables 5A-3A and 5B-3B~~ with risk calculated as the summation of individual stack risk, or the stacks combined into a single stack in a manner approved by DEQ and risk calculated for that single stack;

(c) A Level 1 Risk Assessment ~~will~~ may not be ~~approved if the~~ approved if DEQ determines that the actual source is located near elevated modeling parameters, such as terrain that DEQ determines could features, exposure location distances less than 50m, unusual stack or building configurations, or other factors may invalidate the assumptions used to develop the Level 1 Risk Assessment ~~Tool~~ Dispersion Factor Tables in OAR 340-245-8010 Table 3; and

(d) If DEQ concludes that the source complies with this division based on a Level 1 Risk Assessment, then DEQ will follow the Category II public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(9) Level 2 Risk Assessment. To complete a Level 2 Risk Assessment, the owner or operator must comply with OAR 340-245-0210(1) and then assess risk by submitting a modeling protocol, conducting modeling, and performing a risk assessment. The owner or operator must use AERSCREEN or comparable screening model approved by DEQ to determine air concentrations at approved exposure locations. If DEQ concludes that the source complies with this division based on a Level 2 Risk Assessment, then DEQ will follow the Category II public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(10) Level 3 Risk Assessment. To complete a Level 3 Risk Assessment, the owner or operator must comply with OAR 340-245-0210 and then assess risk by submitting a modeling protocol and a risk assessment work plan, conducting modeling, and performing a risk assessment. The owner or operator must use AERMOD or comparable model approved by DEQ to determine air concentrations at approved exposure locations. If DEQ concludes that the source complies with this division based on a Level 3 Risk Assessment, then DEQ will follow the Category III public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(11) Level 4 Risk Assessment. To complete a Level 4 Risk Assessment, the owner or operator must comply with OAR 340-245-0210 and then assess risk by submitting a modeling protocol and a risk assessment work plan, conducting modeling, and performing a risk assessment. The owner or operator must use AERMOD or comparable model approved by DEQ to determine air concentrations at approved exposure locations. The risk assessment must include toxicity and bioaccumulation assessments, and may include proposed modifications to default exposure assumptions as specified in OAR 340-245-0210. If DEQ concludes that the source complies with this division based on a Level 4 Risk Assessment, then DEQ will follow the Category III public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(12) DEQ may require the owner or operator of a source to conduct and submit an additional multipathway risk evaluation for any level of risk assessment if DEQ determines that airborne deposition of chemicals could be important for scenarios not included in the default multipathway adjustment factor assumptions used in the original risk assessment for the source.

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) & Or Laws 2018, ch. 102, ~~§ 3 and 7~~

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) & Or Laws 2018, ch. 102, ~~§ 2, 3, and 7~~

History:

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0060](#)

Toxic Emissions Units

(1) TEU Designation. An owner or operator must designate TEUs in the same manner as the owner or operator designated emissions units listed in a source's operating or construction permit, if they are designated, unless the owner or operator requests a different designation in writing and DEQ approves that request in writing. The request for a new or a different TEU designation must be compatible with the following:

- (a) TEUs may not be designated in such a way as to avoid the requirements of this division;
- (b) An individual emissions-producing activity that exhausts through multiple stacks or openings must be designated as an individual TEU;
- (c) Where multiple emissions-producing activities exhaust through a common opening, exhaust stack or emissions control device, ~~each~~all of these emissions producing ~~activity~~activities may be considered a single TEU or may be considered separate TEUs; ~~and~~
- (d) The list of TEUs should not be limited to what is listed in a source's operating or construction permit but should include all processes and activities that emit toxic air contaminants; ~~and~~
- (e) DEQ may require the owner or operator to designate TEUs differently than as listed in the source's operating or construction permit, if DEQ determines such listing is appropriate to meet the purposes of this division.

(2) Aggregated TEUs.

(a) An owner or operator must designate the same TEUs as aggregated TEUs for all of the different types of risk: excess cancer risk, chronic noncancer risk and acute noncancer risk; ~~and~~

(b) ~~After an~~An owner or operator ~~has designated the source's~~may choose to assign risk from aggregated TEUs based on either:

(A) The applicable Aggregate TEU Level in a modeling protocol OAR 340-245-8010 Table 1; or

(B) The modeled risk from the approved risk assessment work plan submitted in writing to DEQ, the

(c) An owner or operator must request approval to change ~~its~~any aggregated TEU designation; ~~and~~ after the source's aggregated TEUs have been designated in a risk assessment approved by DEQ.

(ed) An owner or operator may request approval to construct a new aggregated TEU or modify an existing aggregated TEU, following the procedures in section (4) if the total risk from the aggregated TEUs, including the new or modified TEU, remains less than or equal to the applicable Aggregate TEU Level in OAR 340-245-8010 Table 1.

(3) Exempt TEUs. A TEU is an exempt TEU if:

~~(a) (A) The TEU is listed in it meets the definition of Categorically Insignificant Activity in OAR 340-200-0020, excluding criteria in subsection (a), of that definition, and except that a maintenance and repair shop that is defined as categorically insignificant under OAR 340-200-0020 will not be considered an exempt TEU if DEQ makes a finding that a particular maintenance and repair shop emits an amount of toxic air contaminants that may create a risk to human health; or (b):~~

(Ba) The owner or operator of the TEU has demonstrated ~~to DEQ's satisfaction~~ that the TEU is not likely to emit toxic air contaminants ~~in mhan trace amounts~~ and DEQ approves such demonstration. The demonstration may include any information the owner or operator considers relevant, including but not limited to:

~~(i) (A)~~ The chemical make-up of the materials handled or processed in the TEU; as provided by Environmental, Safety, or Product Data Sheets, or equivalent documents; and

(B) Whether or not the type of handling or processing of materials in the TEU, including whether or not the handling or processing is likely to alter the chemical make-up of the materials; and the chemical make-up or likely chemical make-up of the materials emitted by the TEU; and.

~~(ii) Any toxic air contaminant present in materials emitted are only trace contaminants that are not intentionally present in the materials handled, processed or produced in the TEU, and are present in such small amounts that they would typically not be listed in a Safety Data Sheet, product data sheet or equivalent document.~~

(b) The TEU is one of the following regulated pollutant emitting activities, principally supporting the source or the major industrial group:

(A) Evaporative and tailpipe emissions from on-site motor vehicle operation;

(B) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified does not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as an exempt TEU with the remainder not designated as an exempt TEU. The following equipment may never be included as part of the exempt TEU:

(i) Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour; and

(ii) Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour.

(C) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment brought on site for six months or less for maintenance, construction or similar purposes, such as but not limited to generators, pumps, hot water pressure washers and space heaters, provided that any such equipment that performs the same function as the permanent equipment, must be operated within the source's existing PSEL;

(D) Office activities;

(E) Food service activities;

(F) Janitorial activities;

(G) Personal care activities;

(H) Groundskeeping activities including, but not limited to, building painting and road and parking lot maintenance;

(I) On-site laundry activities;

(J) On-site recreation facilities;

(K) Instrument calibration;

(L) Automotive storage garages;

(M) Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems;

(N) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities;

(O) Temporary construction activities;

(P) Warehouse activities;

(Q) Accidental fires and fire suppression;

(R) Air vents from air compressors;

(S) Air purification systems;

(T) Continuous emissions monitoring vent lines;

(U) Demineralized water tanks;

(V) Pre-treatment of municipal water, including use of deionized water purification systems;

(W) Electrical charging stations;

(X) Fire brigade training only using fire suppression materials that do not contain toxic air contaminants;

(Y) Instrument air dryers and distribution;

(Z) Fully enclosed process raw water filtration systems;

(AA) Electric motors;

(BB) Pressurized tanks containing gaseous compounds that do not contain toxic air contaminants;

(CC) Vacuum sheet stacker vents;

(DD) Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities;

(EE) Log ponds;

(FF) Stormwater settling basins;

(GG) Paved roads and paved parking lots within an urban growth boundary;

(HH) Hazardous air pollutant emissions in fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils;

(II) Health, safety, and emergency response activities;

(JJ) Non-diesel, compression ignition emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency, provided that the aggregate horsepower rating of all stationary emergency generator and pump engines is not more than 3,000 horsepower. If the aggregate horsepower rating of all stationary emergency generator and pump engines is more than 3,000 horsepower, then no emergency generators and pumps at the source may be considered categorically insignificant;

(KK) Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems;

(LL) Non-contact steam condensate flash tanks;

(MM) Non-contact steam vents on condensate receivers, deaerators and similar equipment;

(NN) Boiler blowdown tanks; and

(OO) Ash piles maintained in a wetted condition and associated handling systems and activities.

(4) New or modified TEU requirements.

(a) The owner or operator of a source that has not been notified in writing by DEQ that they are required to submit a risk assessment and that proposes to construct a new or modified TEU must comply with OAR 340-210-0205 through 340-210-0250 before beginning construction of the new or modified TEU;

(b) The owner or operator of a source that has ~~submitted~~ been notified in writing by DEQ that they are required to submit a ~~Toxic Air Contaminant Permit Addendum application~~ risk assessment but has not yet been issued a Toxic Air Contaminant Permit Addendum or an operating permit in compliance with this division and that proposes to construct a new or modified TEU must do the following before beginning construction of the new or modified TEU:

(A) Comply with OAR 340-210-0205 through 340-210-0250; and

(B) Revise and update any materials submitted to date under OAR 340-245-0050 to include the new or modified TEU by a date certain. ~~Submit an updated Toxic Air Contaminant Permit Addendum application; if applicable.; and~~

(c) The owner or operator of a source that previously has been issued a Toxic Air Contaminant Permit Addendum or an operating permit in compliance with this division and that proposes to construct a new or modified TEU must follow the applicable procedures in paragraphs (c)(A) through (C) and must pay to DEQ all applicable specific activity fees under OAR 340-216-~~8020~~ Table 2 Part 4 and OAR 340-216-8030 Table 3.

(A) New or modified exempt TEUs. If the proposed new or modified exempt TEU is subject to National Emission Standards for Hazardous Air Pollutants or New Source Performance Standards requirements,

then the owner or operator must request approval of a new or modified exempt TEU under this rule and under OAR 340-210-0205 through 340-210-0250;

(B) New or modified aggregated TEUs.

(i) The owner or operator must request approval of a new or modified TEU to be an aggregated TEU by demonstrating that the risk from the aggregated TEUs, including the new or modified TEU, will be less than or equal to the Aggregate TEU Level. The owner or operator may use any risk assessment procedure, Level 1 through Level 4, under OAR 340-245-0050(8) through (11) ~~for the TEU.~~

~~The owner or operator must receive DEQ approval of the modeling protocol and the risk assessment work plan under OAR 340-245-0210 before performing the risk assessment, if applicable.~~

~~(i) If the owner or operator can demonstrate compliance using a Level 1 Risk Assessment~~ (ii) If the current aggregated TEUs are permitted at the modeled risk levels as specified in OAR 340-245-

~~0050(8)0060(2)(b)(B), the owner or operator may begin construction or modification of the TEU 10 days after DEQ receives add the approval request or on the date that DEQ approves the proposed construction in writing, whichever is sooner, unless DEQ notifies the owner or operator in writing no later than 10 days after DEQ receives the request that the proposed construction or modification is not approvable as an aggregated TEU; or~~

~~(ii) If the owner or operator uses a Level 2, Level 3 or Level 4 Risk Assessment under OAR 340-245-0050(9) through 340-245-0050(11) to demonstrate that risk from the new or modified TEU may be approved as an aggregated TEU, then to prior results from the latest risk assessment for the source rather than updating the entire risk assessment for the source.~~

~~(iii) The owner or operator may not begin construction must request approval of thea new or modified aggregated TEU by submitting an application to modify its Toxic Air Contaminant Permit Addendum or operating permit as required under OAR 340-245-0100(8).~~

~~(iv) iii The owner or operator of a proposed new or modified aggregate TEU may not begin construction until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU;~~

(C) New or modified significant TEUs.

(i) The owner or operator must request approval of a new or modified significant TEU by submitting an application to modify its Toxic Air Contaminant Permit Addendum or operating permit that includes the following:

(I) Information necessary to assess the risk from the new or modified significant TEU using any risk assessment procedure, Level 1 through Level 4, under OAR 340-245-0050(8) through (11). The owner or operator may add the risk from the new or modified TEU to prior results from the latest risk assessment for the source rather than updating the entire risk assessment for the source. ~~The owner or operator must receive DEQ approval of the modeling protocol and the risk assessment work plan under OAR 340-245-0210 before performing the risk assessment, if applicable; and~~

(II) Information necessary to verify that the new or modified significant TEU meets TLAER, if the source risk is greater than the TLAER Level for a new or reconstructed source, or meets TBACT, if the source risk is greater than the TBACT Level for an existing source; ~~using procedures under OAR 340-245-0220;~~

(ii) The owner or operator of a proposed new or modified significant TEU may not begin construction of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU;

(iii) If a source that was previously determined to be an exempt source under OAR 340-245-0050(6) or a de minimis source under OAR 340-245-0050(7) will no longer be an exempt ~~source~~ or a de minimis [source](#) after the new or modified significant TEU is constructed, the owner or operator must follow the procedures in this section and apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100. Such an owner or operator may not begin construction of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU; and

(iv) In conjunction with seeking authorization for the construction of a new or modified significant TEU, if the owner or operator makes simultaneous changes to existing TEUs other than the new or modified significant TEU for the purpose of reducing source risk, then the owner or operator may not begin operation of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or operating permit that approves all such changes to the other TEUs;

(d) DEQ will not approve an application for a Toxic Air Contaminant Permit Addendum required under this rule for a new or modified TEU if:

(A) The TEU does not comply with this rule; or

(B) The source does not comply with OAR 340-245-0050, if required.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0100](#)

Toxic Air Contaminant Permit Addenda

(1) Purpose and Intent.

(a) A Toxic Air Contaminant Permit Addendum ~~and~~[or](#) conditions included in an operating permit to comply with this division are used to:

(A) Authorize the owner or operator of a source to construct or modify TEUs that discharge toxic air contaminants;

(B) Authorize the owner or operator of a source to discharge toxic air contaminants subject to enforceable permit requirements, limitations, and conditions, including to:

(i) Establish enforceable risk limits for the purpose of limiting the risk from toxic air contaminants from a source;

(ii) Approve, modify and implement a Risk Reduction Plan and require the owner or operator of a source to implement the ongoing requirements; and

(iii) Approve, modify and implement a Voluntary Risk Reduction Plan and require the owner or operator of a source to implement the ongoing requirements;

(C) Approve, modify and implement a Toxic Air Contaminant Monitoring Plan; and

(D) Approve postponement of risk reduction;

(b) A Toxic Air Contaminant Permit Addendum:

(A) For the owner or operator of a source with a General Air Contaminant Discharge Permit, is issued as a source-specific addendum to the operating permit and will not be incorporated into the operating permit;

(B) For the owner or operator of a source with an operating permit other than a General Air Contaminant Discharge Permit:

(i) Is issued to the owner or operator as an addendum to the operating permit and will be incorporated into the operating permit at the time of a permit modification or renewal that subjects all permit conditions to the Category II or Category III public notice procedure in OAR chapter 340, division 209; or

(ii) Will not be issued when the toxic air contaminant permit conditions are incorporated directly into an operating permit after such changes were subject to a public notice period under OAR chapter 340, division 209.

(C) May not be issued to an owner or operator before the source has obtained an operating permit; and

(D) May not be issued in lieu of an otherwise required operating or construction permit.

(2) A Toxic Air Contaminant Permit Addendum amends a source's operating permit, but if the terms of such addendum and the operating permit contain any limit or restriction applicable to the same emissions or processes, then the owner or operator must comply with the more stringent limit or restriction.

(3) Application Requirements. An owner or operator requesting a new or modified Toxic Air Contaminant Permit Addendum must submit an application that includes all of the information specified in subsections (3)(a) through (f) as well as the relevant information required under OAR 340-245-0050. The owner or operator must submit all required information by the submittal deadlines in OAR 340-245-0030, certified by a responsible official that the information submitted is true, accurate, and complete. The owner or operator must submit to DEQ ~~at least two~~ one paper ~~copies~~ copy and one electronic copy of the application.

(a) Identifying information, including the name of the person that owns or operates the source, the owner's or operator's mailing address, the source address, and a description of the nature of business being operated, the name, phone number and email address of the primary contact at the source who is responsible for compliance with the permit, the permit number for an existing source, and the SIC or NAICS code of the source;

(b) The name of a person authorized to receive requests from DEQ for additional data and information;

~~(c) A description of the source's production processes and a flow chart of each process;~~

~~(d) A plot plan showing the location and height of air contaminant emissions locations at the source. The plot plan must also indicate the nearest residential and commercial properties;~~

~~(e) The type and quantity of all fuel used by the source;~~

~~(c)~~ For owners or operators of sources with Basic or General Air Contaminant Discharge Permits, an emissions inventory required under OAR 340-245-0040(3)(a);

~~(d)~~ For owners or operators of sources with Title V, Standard, or Simple Air Contaminant Discharge Permits, an emissions inventory required under OAR 340-245-0040(3)(a) and (b);

~~(h) Estimated efficiency of air pollution control devices in place at the source under present or anticipated operating conditions;~~

~~(i)~~ Where the operation or maintenance of air pollution control devices and emission reduction processes can be adjusted or varied from the highest reasonable efficiency and effectiveness, information necessary for DEQ to establish operational and maintenance requirements under OAR 340-226-0120(1) and (2);

~~(f)~~ The final DEQ-approved modeling protocol required under OAR 340-245-0210;

~~(g)~~ The final DEQ-approved Level 3 or Level 4 Risk Assessment work plan required under OAR 340-245-0210, if applicable;

~~(h)~~ The final DEQ-approved risk assessment required under OAR 340-245-0050;

~~(m)~~ Information sufficient to demonstrate that a TEU meets TBACT or TLAER under OAR 340-245-0220, if applicable;

~~(n)~~ For sources whose risk is greater than or equal to the TBACT Level before any additional risk reduction measures are considered, a pollution prevention analysis that meets the requirements of OAR 340-245-0140;

~~(k)~~ The final DEQ-approved Risk Reduction Plan under OAR 340-245-0130, if applicable;

~~(p)~~ The final DEQ-approved postponement of risk reduction under OAR 340-245-0150, if applicable;

~~(m)~~ The final DEQ-approved Toxic Air Contaminant Monitoring Plan under OAR 340-245-0230, if applicable; and

~~(n)~~ Any other information requested by DEQ.

(4) Application review and processing.

(a) DEQ shall use the procedures in OAR 340-245-0030 to review an application submitted under this rule to determine its completeness, consider extension requests, and request additional information, if needed;

(b) If DEQ determines that a Toxic Air Contaminant Permit Addendum is not required during ~~preliminary~~ review of an application, or at any time during application processing, DEQ will notify the applicant in writing;

~~(e) After DEQ considers an application complete, DEQ may hold a public meeting to inform the community about the application and receive feedback;~~

~~(d) When DEQ has determined it is prepared to approve~~ (c) When DEQ has approved an application for a Toxic Air Contaminant Permit Addendum or operating permit, DEQ will prepare a review report and either draft Toxic Air Contaminant Permit Addendum or a draft operating permit with conditions that comply with this division;

(ed) Prior to initiating any public notice procedure required under OAR 340-245-0050, DEQ will provide a copy of the draft Toxic Air Contaminant Permit Addendum or operating permit to the owner or operator and will provide the owner or operator 14 days to review and provide feedback to DEQ. DEQ may grant an extension for review of the draft permit addendum or operating permit for good cause shown by the owner or operator. Following consideration of comments from the owner or operator, DEQ may revise the draft Toxic Air Contaminant Permit Addendum or operating permit before placing it on public notice; and

(fe) Public notice requirements for issuance of a Toxic Air Contaminant Permit Addendum or operating permit with conditions required under this division.

(A) The minimum public notice procedures for issuance are described in the applicable sections of OAR 340-245-0050. DEQ may enhance the public notice procedures at its discretion;

(B) When required to provide public notice, DEQ will make available to the public the draft Toxic Air Contaminant Permit Addendum or operating permit and a review report that sets forth the legal and factual basis for the permit conditions, including references to the applicable regulatory provisions, the source's most recent risk assessment results, and the level of risk assessment that the source used to perform the risk assessment; and

(C) Prior to determining whether to issue, revise, or deny a Toxic Air Contaminant Permit Addendum or an operating permit with conditions required under this division, DEQ must consider public comments it receives under the applicable public notice procedures that are relevant to the draft permit addendum or operating permit and within the scope of DEQ's authority.

(5) DEQ may not issue a Toxic Air Contaminant Permit Addendum or an operating permit for a source if:

(a) The owner or operator of a proposed new or reconstructed source does not comply with OAR 340-245-0050, 340-245-0060 and this rule, as applicable;

(b) DEQ determines that the emissions from a proposed new or reconstructed source would result in risk at any exposure location that will exceed a Permit Denial Level; or

(c) DEQ determines that the emissions from an existing source would result in risk at any exposure location that will exceed the Immediate Curtailment Risk Action Level.

(6) Content of a Toxic Air Contaminant Permit Addendum or Operating Permit Conditions. A Toxic Air Contaminant Permit Addendum or an operating permit with conditions required under this division must:

~~(a) Identify the name and location of the source and its owner or operator;~~

(a) Identify the name of the person that owns or operates the source, the owner's or operator's mailing address, the source address, and a description of the nature of business being operated, the name, phone number and email address of the primary contact at the source who is responsible for compliance with the permit, the permit number for an existing source, and the SIC or NAICS code of the source;

(b) Include a list of all TEUs that are subject to a Toxic Air Contaminant Permit Addendum or operating permit conditions required under this division, including all exempt TEUs and aggregated TEUs;

(c) Include permit conditions that contain Source Risk Limits to implement the requirements specified in OAR 340-245-0110;

(d) Establish or revise any operating limits or conditions necessary under this division, including annual or short-term toxic air contaminant emission limits, conditions to limit risk from TEUs or the entire source, and operational limits for toxic air contaminants, including limits or levels that are equipment specific, process specific, TEU-specific, or that apply to the entire source;

(e) Include testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with all limits or requirements in the Toxic Air Contaminant Permit Addendum or the operating permit conditions required under this division, as necessary;

~~(f) Include a requirement to obtain applicable construction approval under OAR division 210 or 216;~~

~~(g) Include complaint line information by providing an email address or phone number for the source's owner or operator, or its representative;~~

~~(h)~~ (f) At the discretion and option of the owner or operator, include a description of the owner's or operator's plans to continue its community engagement activities after DEQ has completed its notification requirements;

~~(i)~~ (g) Include a compliance schedule, as necessary, to ensure compliance or progress toward compliance with the requirements in this division;

~~(j)~~ (h) Include other limits and requirements, as necessary, to ensure compliance with this division; and

~~(k)~~ (i) Include a condition that requires the owner or operator to provide an annual report to DEQ.

(7) Reporting Requirements. The owner or operator must submit a report at least annually to DEQ to demonstrate compliance with all conditions required under this division that are included in a Toxic Air Contaminant Addendum or an operating permit. The report must include:

(a) Twice-annual progress reports required under a Risk Reduction Plan [under OAR 340-245-0130](#);

(b) Periodic TBACT or TLAER update reports; [required under OAR 340-245-0220\(5\)](#);

(c) ~~Whether~~ [Verification](#) there has not been a change in zoning within 1.5 kilometers of the source and, if so, whether that change increases the source risk;

(d) Documentation showing that, for any area that the source demonstrated in its risk assessment was not used in a manner allowed by the land use zoning applicable to the area [as allowed under OAR 340-245-0210](#), the area continues to not be used in the manner allowed by the land use zoning applicable to the area; and

(e) Any other information required to be reported by a condition in the Toxic Air Contaminant Permit Addendum or an operating permit.

(8) Procedures to Modify Toxic Air Contaminant Permit Conditions. If the Toxic Air Contaminant Permit Addendum has not been incorporated into the operating permit, the following procedures must be followed for modifications to existing Toxic Air Contaminant Permit Addenda. Otherwise, the owner or operator must apply for an operating permit modification under OAR 340 division 216 or 218 using the procedures in this division for the following modifications:

(a) Modifications initiated by the owner or operator. An owner or operator must submit an application for modification before making any change described in paragraphs (a)(A) through (J) and that would result

in a violation of a condition of the Toxic Air Contaminant Permit Addendum or an operating permit condition required under this division;

(A) Construct or modify a TEU that is:

(i) Exempt under OAR 340-245-0060(4)(c)(A);

(ii) ~~De minimis~~ Aggregate under OAR 340-245-0060(4)(c)(B)(~~ii~~); or

(iii) Significant under OAR 340-245-0060(4)(c)(C);

(B) Modify an established Source Risk Limit or any risk limits or conditions necessary under this division;

(C) Request an extension to a compliance date. The owner or operator must submit the application for extension at least 90 days before the compliance date specified in the current Toxic Air Contaminant Permit Addendum or operating permit. Criteria for granting any extension include the following:

(i) The owner or operator has a clear plan towards meeting the Source Risk Limit;

(ii) The owner or operator has made demonstrated progress towards meeting the requirements that are the subject of the extension request; and

(iii) The owner or operator has submitted documentation proving that the delay is due to reasonably unforeseeable events beyond their control;

(D) Modify any physical feature of the source that was used as a modeling parameter in the risk assessment and that affects the results of the risk assessment, such as but not limited to fence lines, building heights, stack heights, or relocation of a TEU or stack by more than 10 meters;

(E) Terminate postponement of risk reductions;

(F) Modify zoning or land use. The owner or operator must submit an application for modification under this division and revise the risk assessment because submitted under OAR 340-245-0050 no later than 60 days after the following:

(i) The zoning in the area around the facility has changed in a way that could increase risk;

~~(G) Modify the risk assessment because land use~~

(ii) Land use has changed in a way that could increase risk in areas where land uses have been excluded from alternative land use was previously approved for use in the risk assessment under OAR 340-245-0210(1)(a)(F);

~~(HG)~~ Modify air monitoring requirements; and

~~(H)~~ Revise or update the approved risk assessment. An owner or operator must promptly submit a corrected risk assessment upon becoming aware of the need for corrections or additional information. This requirement is in addition to, and not in lieu of, a DEQ decision to commence an enforcement action against such owner or operator for such violation, as DEQ determines appropriate under the circumstances;

(b) Modifications required by DEQ. When notified in writing by DEQ, the owner or operator must update or correct its previous risk assessment and submit an application for a modification if:

(A) DEQ determines through an investigation or file review that a previous risk assessment contains errors or omissions that, when corrected, could increase the risk;

(B) An RBC in OAR 340-245-80140 Table 24 has been added or lowered that would substantially impact risk, implementation, or effectiveness of the Risk Reduction Plan;

(C) Risk assessment procedures change that would substantially impact risk, implementation, or effectiveness of the Risk Reduction Plan; and

(D) Results of toxic air contaminant monitoring done by the owner or operator show higher risk than any risk determined by the risk assessment;

(c) The owner or operator must submit a complete application for modification, and pay the applicable modification fees in subsection (g). If DEQ has provided notice to the owner or operator under subsection

(b), then the owner or operator must submit the necessary information required under section (3) to DEQ 90 days after the date that DEQ sends such written notice;

(d) DEQ shall use the procedures in OAR 340-245-0030 to review a modification application submitted under this rule to determine its completeness, consider extension requests, and request additional information, if needed;

(e) When updating or correcting a risk assessment, the owner or operator must consult with DEQ and must follow the applicable risk assessment requirements in OAR 340-245-0050;

(f) When DEQ receives an application to modify a Toxic Air Contaminant Permit Addendum or operating permit, DEQ will use the following public notice procedures:

(A) Category III public notice procedures in OAR chapter 340, division 209 if the change will:

(i) Increase source risk;

when an existing or new facility's source risk is above the TBACT or TLAER Risk Action Level prior to the modification, except when the source risk increase is from the addition of an aggregated TEU;

(ii) Increase source risk above a Risk Action Level that requires additional requirements under this division;

(iii) Establish a Risk Reduction Plan for termination of postponement of risk reduction;

(iv) Extend any compliance dates in a compliance schedule established in the permit; or

(v) Significantly change proposed control methods in a Risk Reduction Plan;

(B) Category I public notice procedures in OAR chapter 340, division 209 for non-technical modifications and basic technical modifications ~~that do not increase risk~~; or

(C) Category II public notice procedures in OAR chapter 340, division 209 for all other types of permit changes not described in paragraphs (A) and (B);

(g) The fee for a modification is:

(A) The Complex Technical Modification fee under OAR 340-216-8020 Table Part 4 for modifications under paragraph (f)(A);

(B) The Basic Technical Modification fee or the Non-Technical Permit Modification fee under OAR 340-216-8020 Table 2 Part 4 for modifications under paragraph (f)(B); or

(C) The Moderate Technical Modification fee under OAR 340-216-8020 Table 2 Part 4 for modifications under paragraph (f)(C).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#), [ORS 468A.345](#) & ~~Or Laws 2018, ch. 102, §§ 3 and 13~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#), [ORS 468A.345](#) & Or Laws 2018, ch. 102, ~~§§ 2, 3, 13 and 14~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0110

Source Risk Limits

(1) The purpose of a Source Risk Limit is to limit the chronic and acute risk from a source that emits toxic air contaminants. DEQ will establish Source Risk Limits based on the results of the risk assessment performed under OAR 340-245-0050. DEQ will establish Source Risk Limits separately for each of the following risk categories: chronic excess cancer risk, chronic noncancer risk and acute noncancer risk.

(a) Source Risk Limits that are based on chronic risk apply on a rolling 12 consecutive month basis and limit the source's chronic risk or annual PTE, as applicable;

(b) Source Risk Limits that are based on acute risk apply on a daily basis and limit the source's acute risk or daily PTE, as applicable; and

(c) DEQ may establish multiple chronic or acute noncancer Source Risk Limits for an individual source on a case-by-case basis to account for risk to different target organs or organ systems.

(2) Establishing Source Risk Limits. For new, reconstructed, and existing sources whose risk is greater than the Source Permit Level, DEQ may set Source Risk Limits based on either:

(a) The level modeled in the risk assessment required under OAR 340-245-0050 using the emissions inventory submitted under OAR 340-245-0040(1); or

(b) For existing sources, a level other than the modeled level that reflects a reasonable estimate of risk from the source taking into account projected operations and other factors, including but not limited to:

(A) Applicable State and Federal limitations;

(B) Established PTE;

(C) Past operations; and

(D) Recent trends in emission rates.

(3) An owner or operator may propose the type of risk limit that will be included in the source's Toxic Air Contaminant Permit Addendum or operating permit, such as a limit on emissions or source operation, or a limit on risk.

(a) Source Risk Limits will generally be based on conditions imposed on emissions, operational parameters, production [activities](#), fuel or raw material usage, as necessary, to maintain risk below the Source Risk Limits; or

(b) Source Risk Limits may be expressed in terms of risk, such as X per million for excess cancer risk or Hazard Index of Y, where X and Y indicate a numerical value.

(4) If a compliance schedule to reduce risk is included in the Toxic Air Contaminant Permit Addendum or operating permit for an existing source, the owner or operator must comply with all the requirements in the compliance schedule and maintain proposed risk below the Immediate Curtailment Level, if applicable.

(5) Determining Compliance with Source Risk Limits.

(a) Frequency. The owner or operator must maintain compliance with the Source Risk Limit on the frequency specified in the Toxic Air Contaminant Permit Addendum or operating permit as follows:

(A) For excess cancer risk, using the annual actual toxic air contaminant emission rates emitted by the source that have cancer RBCs determined on a 12-rolling month basis, compliance must be maintained monthly, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit;

(B) For chronic noncancer risk, total or separated for each target organ or organ system, using the annual actual toxic air contaminant emission rates emitted by the source that contribute to each chronic noncancer risk determined on a 12-rolling month basis, compliance must be maintained monthly, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit; and

(C) For acute noncancer risk, total or separated for each target organ or organ system, using the maximum daily actual toxic air contaminant emission rates emitted by the source that contribute to each acute noncancer risk determined for the preceding day, compliance must be maintained daily, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit;

(b) Compliance records maintenance method.

(A) If the Source Risk Limit is based on emissions, production [activities](#), or other limits on source operation, the owner or operator must monitor emissions, production [activities](#), or other limits on source operation, using one or more of the following methods:

(i) Continuous emissions monitors;

(ii) Material balance calculations;

(iii) Emissions calculations using approved emission factors and process information;

(iv) Production [activity](#) or process parameter monitoring; and

(v) Other methods approved by DEQ;

(B) If the Source Risk Limit is based on risk, the owner or operator must calculate ongoing risk in a manner specified in the source's Toxic Air Contaminant Permit Addendum or operating permit.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

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[340-245-0120](#)

Community Engagement

(1) The purpose of community engagement is to inform the community and provide a mechanism for input to DEQ's work with sources that are called into the program. The requirements of this rule are intended to ensure that consideration of environmental justice is appropriately emphasized throughout implementation of this division.

(2) Notification. When ~~public notice~~ [DEQ holds a public meeting under subsection \(3\)\(a\)](#) ~~is required under this division~~, DEQ will, at a minimum, notify persons with an address in the notification area. DEQ will provide a 30 day notice of any public meeting [held under subsection \(3\)\(a\)](#) by sending an email through GovDelivery or mailing written notice via U.S. mail to such persons. DEQ may enhance the public notice procedures at its discretion. [DEQ may determine notice requirements for any additional public meetings held under subsection \(3\)\(c\)](#).

(3) Public meetings.

(a) DEQ may hold one or more public meetings [to gather community input prior to drafting proposed permit conditions](#) for new, reconstructed, modified and existing sources if the owner or operator requests Source Risk Limits greater than any of the Community Engagement Levels except as allowed by OAR 340-245-0130(6). DEQ, in consultation with persons who live or spend time within the notification area, may determine that another forum for communication, as listed in section (4), in lieu of or in addition to a public meeting, is appropriate;

(b) If DEQ does not hold a public meeting, [as specified in subsection \(a\)](#), DEQ will provide written notice via U.S. mail to all persons with an address in the notification area that the owner or operator has requested Source Risk Limits greater than any of the Community Engagement Levels except as allowed by OAR 340-245-0130(6);

(c) DEQ may, [at its discretion](#), also hold one or more public meetings for any other reporting, monitoring or permitting action associated with activities under this division [with advanced notice](#);

(d) In planning and holding public meetings, DEQ will consider:

(A) A location that is Americans with Disabilities Act compliant, is convenient for community members to attend and can be accessed by public transportation, if available;

(B) The timing of the meeting, scheduling in a manner that is convenient to the majority of attendees;

(C) Whether translation services ~~and childcare~~ are necessary, and may provide such services; ~~if needed;~~
~~and~~

(D) Whether childcare is necessary, and when feasible, may work with providers to render such services;

~~(DE)~~ Best practices for public and community meetings as identified in resources published by the State of Oregon Environmental Justice Task Force and OHA;

(e) When DEQ determines to hold a public meeting under subsection (3)(a) ~~this division~~ regarding a source, then the owner or operator must pay the applicable community engagement fee specified in OAR 340-216-8030 Table 3, and at least one representative of the owner or operator must appear at the public meeting.

(4) Other forums for communication. Other forums for communication may include any or all of the following:

(a) Notifying the community of information and reports submitted by an applicant required by this division by sending an email through GovDelivery or mailing written notice via U.S. mail;

(b) Posting all information and reports submitted by an applicant on the DEQ website;

(c) Attending community forums or other local meetings when relevant or requested by the community. The representative of the owner or operator is not required to attend this type of meeting;

(d) Electronic meeting forums such as webinars or conference calls; and

(e) Other activities as determined necessary by DEQ.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, ORS 468A.337, ORS 468A.343 ~~& Or Laws 2018, ch. 102, §§ 3 and 6~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343 ~~& Or Laws 2018, ch. 102, §§ 2, 3 and 6~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0130

Risk Reduction ~~Plan~~ Requirements

(1) A Risk Reduction Plan for an existing source must do the following within the specified period of time under OAR 340-245-0030, as applicable:

(a) Reduce risk to less than or equal to the TBACT Level;

(b) Require the owner or operator to meet TBACT on all significant TEUs;

(c) Reduce risk to less than or equal to the Risk Reduction Level; or

(d) Reduce risk to less than or equal to the Community Engagement Level if the owner or operator voluntarily agrees to do so.

(2) Risk Reduction Plan Requirements. The owner or operator that is requesting approval of a Risk Reduction Plan must submit to DEQ the following:

(a) Two air contaminant emissions inventories:

(A) The emissions inventory for the source submitted under OAR 340-245-0040(1) before implementation of the proposed Risk Reduction Plan measures; and

(B) A projected emissions inventory for the source submitted under OAR 340-245-0040(1) and OAR 340-245-0040(3)(b)(B)(ii)(I) after implementation of the proposed Risk Reduction Plan measures;

(b) The results of a risk assessment performed under OAR 340-245-0050(10) or (11) including the risk calculations before and after full implementation of the Risk Reduction Plan using the emissions inventories required in subsection (a);

(c) An analysis of pollution prevention measures under OAR 340-245-0140, and a description of those measures that the owner or operator has undertaken and included as part of its Toxic Air Contaminant Permit Addendum application;

(d) Identification of each TEU for which an action will be taken to reduce risk, how the risk will be reduced, and for TEUs that are required to meet TBACT:

(A) A demonstration that all significant TEUs at the source meet TBACT under OAR 340-245-0220; ~~and~~ [or](#)

(B) The TBACT analysis under OAR 340-245-0220 that demonstrates that all significant TEUs at the source will meet TBACT when the plan is fully implemented;

(e) A schedule for implementing the proposed Risk Reduction Plan measures within the time frames allowed under section (4), if not sooner. The schedule must specify:

(A) The dates by which the source will implement the proposed Risk Reduction Plan measures;

(B) The dates for submittal of periodic reports showing progress toward completion of the proposed Risk Reduction Plan measures. Progress reports should include achievement of significant milestones, including but not limited to dates of equipment delivery and construction progress; and

(C) The dates for submittal of applications for permits to construct or modify, which must be no later than 90 days after DEQ approval of the Risk Reduction Plan, or other time period approved by DEQ;

(f) The proposed Source Risk Limits.

(3) The owner or operator may request a postponement of risk reduction [for excess cancer and chronic noncancer risk](#) under OAR 340-245-0150.

(4) Risk Reduction Plan implementation deadlines.

(a) Chronic risk. The owner or operator of a source that has either or both an excess cancer or chronic noncancer source risk that is greater than the TBACT Level must ~~implement~~ [complete implementation of](#) the Risk Reduction Plan within two years from the effective date of the Toxic Air Contaminant Permit Addendum or the operating permit with conditions in compliance with this division, or at an earlier time as required by DEQ in such addendum or operating permit;

(A) Except as provided in paragraph (B), the owner or operator may apply for a permit modification as specified under OAR 340-245-0100(8) to request additional time to ~~implement~~ [complete implementation](#)

of risk reductions measures. If the owner or operator, in such application, shows good cause for the modification based on unreasonable hardship to the source, then DEQ may allow the owner or operator not more than two additional years beyond the timeline established in subsection (4)(a):

~~(i) Not more than two additional years beyond the initial two years to implement the required risk reduction measures and achieve required risk reductions if the initial excess cancer or chronic noncancer source risk is greater than the TBACT Level but less than the Risk Reduction Level; or~~

~~(ii) Not more than three additional years beyond the initial two years to implement the required risk reduction measures and achieve required risk reductions if the initial excess cancer or chronic noncancer source risk is greater than the Risk Reduction Level;~~

(B) DEQ may not grant a request under paragraph (A) to an owner or operator that has previously received approval for a postponement of risk reduction under OAR 340-245-0150;

(b) Acute risk. The owner or operator of a source that has acute risk that is greater than the TBACT Level must ~~implement~~complete implementation of the Risk Reduction Plan on the following timeline:

(A) Within one month from the effective date of the Toxic Air Contaminant Permit Addendum or the operating permit with conditions in compliance with this division; or

(B) If the owner or operator requests additional time in its Toxic Air Contaminant Permit Addendum application and shows good cause based on unreasonable hardship to the source and an evaluation of health factors, including but not limited to severity of acute health effect, degree of scientific certainty, and averaging time of the acute TRV used to develop the RBC, then DEQ may allow the owner or operator up to and not more than 12 months to ~~implement~~complete implementation of the Risk Reduction Plan.

(5) Reporting Requirements.

(a) The owner or operator of a source that has been issued a Toxic Air Contaminant Permit Addendum or operating permit that includes a Risk Reduction Plan must submit twice-annual progress reports to DEQ describing the source's progress in reducing toxic air contaminant emissions and risk by implementing the Risk Reduction Plan. The progress reports are due to DEQ on or before February 15 and July 31 of each year that the Risk Reduction Plan is in effect, or other dates specified in the Toxic Air Contaminant Permit Addendum or operating permit. The progress reports must include all information required by the Toxic Air Contaminant Permit Addendum or operating permit, including but not limited to:

(A) The increments of progress achieved in implementing the risk reduction measures specified in the Risk Reduction Plan;

(B) A schedule indicating dates for future increments of progress;

(C) A description of any increases or decreases in emissions of toxic air contaminants that have occurred at the source since approval of the Risk Reduction Plan; and

(D) An estimate of when all Risk Reduction Plan elements will be completed;

(b) The owner or operator must submit a Risk Reduction Plan completion report to DEQ no later than 60 days after completing all Risk Reduction Plan requirements. The report must include:

(A) The final increments of progress achieved in fully implementing the risk reduction measures specified in the Risk Reduction Plan and the date the final increments of progress were achieved;

(B) A summary of the actions taken to implement the Risk Reduction Plan;

(C) The results of the demonstration of the effectiveness of the Risk Reduction Plan measures, including verification of the modeling parameters for all of the TEUs for which risk was reduced; and

(D) The remaining source risk after completion of all risk reduction measures.

(6) Voluntary Risk Reductions. DEQ will not conduct community engagement public meetings, as described in OAR 340-245-0120(3), for the owner or operator of an existing source whose risk is less than or equal to the TBACT Level and that agrees to voluntarily reduce risk to below the Community Engagement Level in compliance with the following requirements:-

(a) Voluntary Risk Reduction Plan. An owner or operator must submit for DEQ approval a Voluntary Risk Reduction Plan that follows the requirements and procedures in this rule for submittal of a Risk Reduction Plan to reduce risk to below the Community Engagement Level;

(b) The owner or operator must ~~fully implement~~complete implementation of the Voluntary Risk Reduction Plan within the following timelines:

(A) Chronic risk.

(i) Two years from the effective date of the Toxic Air Contaminant Permit Addendum, or at an earlier time as required by DEQ- ~~for excess cancer and noncancer chronic risk; and-~~

(ii) If additional time is needed to implement the risk reduction measures, the owner or operator must apply for a permit modification as specified under OAR 340-245-0100(8). ~~If the owner or operator shows good cause for the modification based on unreasonable hardship to the source then~~ ~~(e)~~ DEQ may allow the owner or operator not more than two additional years beyond the initial two years to complete implementation of ~~implement~~ the ~~required~~-voluntary risk reduction measures ~~and achieve the voluntary risk reductions;- and~~

(B) Acute risk.

(i) One month from the effective date of the Toxic Air Contaminant Permit Addendum for acute risk; and-

(ii) If additional time is needed to implement the risk reduction measures, the owner or operator must apply for a permit modification as specified under OAR 340-245-0100(8). If the owner or operator shows good cause based on unreasonable hardship to the source and an evaluation of health factors, including but not limited to severity of acute health effect, degree of scientific certainty, and averaging time of the acute TRV used to develop the RBC, then DEQ may allow the owner or operator up to and not more than 12 months to complete implementation of the voluntary risk reduction measures; and

~~(d)~~ (c) If the owner or operator does not ~~implement~~ complete implementation of the Voluntary Risk Reduction Plan within the approved time, DEQ ~~may~~ shall initiate the community engagement requirements under OAR 340-245-0120.

(7) Immediate Curtailment Risk Reduction Plan. If the results of the DEQ approved Level 3 or Level 4 Risk Assessment, submitted under OAR 340-245-0050, demonstrate source risk is greater than the Immediate Curtailment Level in OAR 340-245-8010 Table 1, the owner or operator must:

(a) Submit to DEQ, by the deadline provided in OAR 340-245-0030(1)(e), an Immediate Curtailment Risk Reduction Plan that describes the actions the source will take to immediately reduce risk below the Immediate Curtailment Level. The Immediate Curtailment Risk Reduction Plan must include:

(A) Specific actions to immediately reduce risk from Significant TEUs, which may include:

(i) Production activity reductions or process modifications;

(ii) Material substitution or product reformulation;

(iii) Additional operations and maintenance; and

(iv) Improvements to, or installation of, pollution control devices;

(B) The amount of risk reduction anticipated from the actions included under paragraph (A) and all supporting estimation methods and calculations; and

(C) Monitoring procedures to ensure the anticipated reduction amounts in paragraph (B) are achieved;

(b) Fully implement the Immediate Curtailment Risk Reduction Plan within ten days of DEQ approval of the plan.

(8) If the owner or operator submits an incomplete Immediate Curtailment Risk Reduction Plan or if DEQ determines that the Immediate Curtailment Risk Reduction Plan is inadequate, then in addition to any other remedies available to DEQ, including authority pursuant to ORS 468.115, if applicable, DEQ may modify the Immediate Curtailment Risk Reduction Plan and order the owner or operator to comply with such plan. The owner or operator must fully implement the modified Immediate Curtailment Risk Reduction Plan within 10 days of receipt.

(9) The owner or operator must comply with the Immediate Curtailment Risk Reduction Plan until:

(a) DEQ issues a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 with an approved Risk Reduction Plan; and

(b) The owner or operator implements the approved Risk Reduction Plan.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 ~~& Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 ~~& Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0140

Pollution Prevention

(1) The owner or operator of a source whose risk is greater than ~~or equal to~~ the TBACT Level, before any additional risk reduction measures are considered, is required to do an analysis of pollution prevention measures as provided in this rule.

(2) The owner or operator must evaluate pollution prevention measures that are likely to reduce or eliminate emissions of toxic air contaminants. If the owner or operator chooses to implement any such measures, the owner or operator must include that information in the Toxic Air Contaminant Permit Addendum application.

(3) An analysis of pollution prevention measures must include the following:

(a) A detailed review of source data, including TEU and process level data related to the toxic air contaminants of concern emitted by the source, including:

(A) A process flow diagram depicting all production steps, showing all chemical and material inputs and all processes through which material passes to form a product, and showing the point at which toxic air contaminants enter the system and leave the production unit, with identification of the inputs and outputs relevant to generation of toxic air contaminants; and

(B) Materials accounting which quantifies the total chemical inputs and outputs of a particular toxic air contaminant from each process, and ultimately, source-wide usage and emissions;

(b) The identification of pollution prevention options that includes measures focused on the toxic air contaminants, by-products (outputs, not inputs) and processes that have been mapped and quantified. The categories of toxic air contaminant pollution prevention options include, but are not limited to, the following:

(A) Chemical input alternatives evaluated for hazard characteristics, technical performance, cost and availability, and exposure;

(B) Product reformulation;

(C) Production process redesign or modification;

(D) Production process modernization;

(E) Improved operations and maintenance;

(F) In-process recycling; and

(G) Inventory management controls;

(c) The technical screening and feasibility evaluation of toxic air contaminant pollution prevention options include, but are not limited to, the following:

(A) Performance needs for the application, process or product that contains the toxic air contaminant for which the pollution prevention option is being sought;

(B) Identification of the option as favorable with respect to performance by other industries;

(C) Availability as “off-the-shelf” technology with demonstrated successful use;

(D) Compatibility of the option with existing process technology;

(E) Effects on product quality and compliance with customer specifications; and

(F) Long term viability of the option;

(d) The economic feasibility evaluation of toxic air contaminant pollution prevention options to determine all of the costs and savings associated with implementing the option, include, [but are not limited to](#), the following:

(A) Direct costs or savings (e.g., capital investment, operations and maintenance, annual chemical costs vs. per unit cost);

(B) Indirect costs or savings (e.g., reduced worker health and safety costs, compliance cost reductions, and lower waste and by-product management costs);

(C) Effects on future liability (e.g., liability insurance premium reductions);

(D) Non-monetized costs or benefits (e.g., improved company public image and community relations); and

(E) New revenue sources associated with this option (e.g., will there be new markets for modified products).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135, ORS 468A.337](#) & ~~Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335, ORS 468A.337](#) & ~~Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

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[340-245-0150](#)

Postponement of Risk Reduction

(1) Postponement of risk reduction is only available for existing sources [for excess cancer and noncancer chronic risk](#), and cannot be approved if risk is over the Immediate Curtailment Level. An owner or operator may request postponement of risk reduction for one five year period. After that five year period, the owner or operator must reduce risk in accordance with OAR 340-245-0130.

(2) An owner or operator of an existing source requesting postponement of the requirement to reduce risk for one or more significant TEUs must submit a request to DEQ that includes the following:

(a) Information proving inability to pay; [as described in section \(4\)](#);

(b) The TEUs for which the postponement is being requested;

(c) An analysis of:

(A) All risk reduction measures that the owner or operator is required to undertake to reduce risk; and

(B) The cost to install, operate and maintain each risk reduction measure identified in paragraph (A) for which a postponement is being requested;

(d) A description of any other interim risk reduction measures, including a pollution prevention analysis under OAR 340-245-0140, that will be taken to reduce risk in lieu of implementing each risk reduction measure identified in paragraph (c)(A) for which a postponement is being requested and when those interim risk reduction measures will be implemented; and

(e) The number of employees at the source.

(3) An owner or operator must include a postponement request in the source's Toxic Air Contaminant Permit Addendum application under OAR 340-245-0100.

(4) The owner or operator making a request to postpone risk reduction:

(a) Must use the applicable U.S. Environmental Protection Agency's ABEL, INDIPAY or MUNIPAY computer model, or a substantially equivalent analysis approved by DEQ, to evaluate financial condition or ability to pay the full cost of reducing risk or meeting TBACT in accordance with EPA standards for determining ability to pay. The models' standard input values are presumed to apply unless the owner or operator can demonstrate that the standard values do not reflect the owner's or operator's actual circumstances. DEQ may generally determine that the owner or operator is able to pay if the model results show that the owner or operator has a 70% probability of being able to absorb the cost of meeting TBACT or implementing other physical, operational or process changes that could be made to reduce risk; and

(b) Is required to provide DEQ, on a confidential basis if the information meets the requirements of OAR 340-214-0130, audited financial information about the source. The information must include federal tax returns for the most recent three years, the most current year's audited financial statement, a signed auditor's statement provided by a certified public accountant, the source's latest income statement and balance sheet, and other information regarding the owner's or operator's financial condition on a form required by DEQ. The information will be held as confidential to the extent consistent with the Oregon Public Records Law, ORS 192.311 through 192.478.

(5) Negotiation and consultation.

(a) DEQ may negotiate alternatives to the postponement with the owner or operator, and may consider such alternatives in the final determination regarding whether to approve the postponement; and

(b) DEQ will consult with OHA, local elected officials, local [Indian Tribal](#) governing bodies, and relevant state and federal agencies that have jurisdiction in the notification area before making a final determination regarding the postponement.

(6) DEQ may grant a request for postponement of risk reduction in full or in part and impose any conditions, implementation of reasonable alternative measures, and implementation schedules that DEQ determines are appropriate based on the following:

(a) Evaluating the following at exposure locations where risk will exceed an applicable Risk Action Level:

(A) The presence of sensitive populations, including people with low income, members of a minority group, and residents under five years old; and

(B) The total population that lives within the notification area of the source;

(b) Considering both the potential economic harm to the owner or operator of the source of requiring that the owner or operator make the identified risk reductions against the burden of risk to the exposed population if the risk reductions are postponed.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, ~~468A.135, ORS 468A.337 & Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ~~ORS 468A.335, ORS 468A.337 & Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0200

Risk Estimates

(1) When a risk assessment is required under this division, the risk assessment must consider the toxic air contaminants and the Risk-Based Concentrations listed in OAR 340-245-80~~140~~ Table ~~42~~ to assess excess cancer and noncancer risk.

(2) Directions for using the Level 1 Risk Assessment ~~Tool~~ Dispersion Factor Tables.

(a) An owner or operator that chooses to perform a Level 1 Risk Assessment under OAR 340-245-0050, must calculate a separate sum of risk ~~ratios~~ for each of the following categories: excess cancer risk, chronic noncancer risk, and acute noncancer risk for the applicable exposure ~~locations~~ scenarios;

(b) When making this calculation, the owner or operator must use the emissions inventory submitted under OAR 340-245-0040(1) for:

(A) Excess cancer risk and chronic noncancer risk, the average annual emission rates; and

(B) Acute noncancer risk, the maximum daily emission rates.

(c) The owner or operator must perform each of the following calculations in paragraphs (A) and (B), except as allowed in paragraph (C):

(A) For excess cancer risk and chronic noncancer risk:

(i) For each TEU with emissions from a stack, vent, duct, or equivalent opening, use the stack height and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-80~~150~~ Table ~~35~~A. If the TEU is a volume fugitive source that is not emitted from a stack, vent, duct, or equivalent opening, use the area and height of the building and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-80~~150~~ Table ~~35~~C;

(ii) For each TEU and each toxic air contaminant emitted from the TEU, multiply the annual emission rate by the dispersion factor identified under subparagraph (i) to calculate an air concentration at the nearest exposure location;

(iii) For each TEU, divide the air concentration of each toxic air contaminant calculated under subparagraph (ii) by the appropriate RBC of that toxic air contaminant under OAR 340-245-80~~140~~ Table ~~42~~;

(iv) For each TEU, add up the risk from each toxic air contaminant calculated under subparagraph (iii); and

(v) For all TEUs, add up all of the risks calculated under subparagraph (iv) to obtain the total excess cancer risk in one million or the total chronic noncancer Hazard Index for the entire source. For chronic noncancer risk, Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ;

(vi) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-245-~~8030~~8010, Table ~~32~~ and OAR 240-245-80140, Table ~~4,2~~, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule.

(B) For acute noncancer risk:

(i) For each TEU with emissions from a stack, vent, duct, or equivalent opening, use the stack height and distance to the nearest exposure location to identify the appropriate dispersion factor under OAR 340-245-80150 Table ~~35B~~. If the TEU is a volume fugitive source that is not emitted from a stack, vent, duct, or equivalent opening, use the area and height of the building and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-80150 Table ~~35D~~;

(ii) For each TEU and each toxic air contaminant emitted from the TEU, multiply the maximum daily emission rate by the dispersion factor identified under subparagraph (i) to calculate an air concentration at the nearest exposure location;

(iii) For each TEU, divide the air concentration of each toxic air contaminant calculated under subparagraph (ii) by the acute RBC for that toxic air contaminant under OAR 340-245-80140 Table ~~4;2~~

(iv) For each TEU, add up the risk from each toxic air contaminant calculated under subparagraph (iii); and

(v) For all TEUs, add up all of the risks calculated under subparagraph (iv) to obtain the total acute noncancer Hazard Index for the entire source. Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ;

(vi) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-~~245-8030~~247-8010, Table ~~32~~ and OAR 340-245-80140, Table ~~42~~, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule.

(C) Instead of using stack height and distance or area and height of the building and distance to the nearest exposure locations to obtain the appropriate dispersion factor under OAR 340-245-80150 Table ~~35~~, the owner or operator may instead use, as a default, the most conservative dispersion factor;

(i) For ~~stack emissions~~ emissions from a stack, vent, duct, or equivalent opening, use the dispersion factor associated with a stack height of five meters and an exposure location distance of 50 meters, which is listed in the upper-left corner of OAR 340-245-80150 Table ~~35A~~ and ~~3B~~;

(ii) For volume fugitive emissions that are not emitted from a stack, vent, duct, or equivalent opening, use the dispersion factor associated with an area of less than or equal to 3,000 square feet, a building height of less than or equal to 20 feet, and an exposure location distance of 50 meters, which is listed in the upper-left corner of OAR 340-245-80150 Table 35C and 3D; and

(iii) Using these default dispersion factors will result in protective calculations of risk. If the risks calculated using these default dispersion factors are less than or equal to the applicable Risk Action Levels, the owner or operator may choose to use the risks calculated in this manner to show compliance with the Source Risk Limits. However, if the actual source characteristics such as terrain features, exposure location distances less than 50m, unusual stack or building configurations, or other factors, invalidate the assumptions used to develop the Level 1 Risk Assessment Dispersion Factor Tables, DEQ at its discretion, may disapprove the Level 1 assessment, as described in OAR 340-245-0050 (8)(c).

(3) Sum of Risk ~~Ratios~~ calculation procedure for Level 2, Level 3 and Level 4 Risk Assessments.

(a) An owner or operator that chooses to perform a Level 2, Level 3 or Level 4 Risk Assessment under OAR 340-245-0050, must calculate a separate sum of ~~risk ratio~~ risks for each of the following risk categories: excess cancer risk, chronic noncancer risk, and acute noncancer risk for the applicable exposure locations;

(b) When making this calculation, the owner or operator must use the following modeled ambient concentrations for each toxic air contaminant at all exposure locations:

(A) For excess cancer risk and chronic noncancer risk, the annual average concentrations must be used; and

(B) For acute noncancer risk, the maximum daily concentrations must be used;

(c) The owner or operator must perform the following calculations for each of the risk categories listed in subsection (a) and using the concentrations in subsection (b):

(A) For each TEU, divide the modeled concentration of each toxic air contaminant by the appropriate RBC of that toxic air contaminant under OAR 340-245-80140 Table 4,2 ensuring that the concentration is expressed in micrograms per cubic meter;

(B) For each TEU, add up the risk from each toxic air contaminant calculated under paragraph (A); and

(C) For all TEUs at each exposure location, add up all of the risks calculated under paragraph (B) to obtain the total excess cancer risk in one million, the total chronic noncancer Hazard Index, or the total acute noncancer Hazard Index for the entire source. For noncancer risk, Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ.

(D) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-~~245-8030~~247-8010, Table 32 and OAR 340-245-80140, Table 4,2, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule

(4) Significant figures and rounding. When a risk is calculated for comparison to a Risk Action Level or Source Risk Limit:

(a) The final risk calculation must be rounded off as follows:

(A) For comparison to the Aggregate TEU Level, Risk Determination Ratio, and the Source Permit Level, round off to one decimal place; and

(B) For comparison to other Risk Action Levels or Source Risk Limits, round off to a whole number;

(b) Round up if the last figure to be rounded off is 5 or greater, otherwise round down.

(c) Use of rounded numbers in making final risk calculations is not allowed. Only the final risk number may be rounded as described in this section.

(5) Calculating a Risk Determination Ratio. The formula for calculating a Risk Determination Ratio is:

Combined Noncancer Risk for HI3 chemicals =

(Concentration of HI3 chemical #1 / Risk-Based Concentration for chemical #1) + (Concentration of HI3 chemical #2 / Risk-Based Concentration for chemical #2) + continue for all HI3 chemicals emitted

Combined Noncancer Risk for HI5 chemicals =

(Concentration of HI5 chemical #1 / Risk-Based Concentration for chemical #1) + (Concentration of HI5 chemical #2 / Risk-Based Concentration for chemical #2) + continue for all HI5 chemicals emitted

Risk Determination Ratio = (Combined Risk for HI3 chemicals / 3) + (Combined Risk for HI5 chemicals / 5)

HI3 = Toxic air contaminants assigned noncancer TBACT Risk Action Level of 3 (OAR 340-~~245-8030~~247-8010, Table 32 and OAR 340-245-80140, Table 42).

HI5 = Toxic air contaminants assigned noncancer TBACT Risk Action Level of 5 (OAR 340-~~245~~247-80-803010, Table 32 and OAR 340-245-80140, Table 42).

Concentration = monitored or modeled concentrations of toxic air contaminant at exposure location for use in risk assessment.

RBC = risk-based concentrations in OAR 340-245-80140 Table 24.

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 & Or Laws 2018, ch. 102, § ~~3~~ and 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 & Or Laws 2018, ch. 102, § ~~2, 3, and~~ 7

History:

DEQ 11-2020, amend filed 04/29/2020, effective 04/29/2020

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DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0210

Modeling and Risk Assessment Work Plan Requirements

The owner or operator of a source must follow the applicable procedures in this rule when required to perform a risk assessment under OAR 340-245-0050 or 340-245-0060.

(1) Modeling Requirements. All modeled estimates of ambient concentrations required under this division must be based on the applicable air quality models and other requirements as specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," or a substantially equivalent model or requirement approved by DEQ. Any change or substitution from models and procedures specified in 40 CFR part 51, Appendix W must be approved by DEQ in advance and incorporated in the modeling protocol. AERSCREEN and AERMOD are examples of approved air quality models.

(a) When choosing to perform a Level 1 Risk Assessment or modeling for a Level 2, Level 3 or Level 4 Risk Assessment, the owner or operator of a source must first submit a modeling protocol that must be approved by DEQ as required in OAR 340-245-0030. The necessary information to perform any modeling will depend on the risk assessment level and the model being used, if any, and may include but is not limited to:

(A) ~~Emissions~~ Toxic air contaminant emission rates based on the emissions inventory submitted under OAR 340-245-0040(1);

(B) Stack parameter and building data, including stack height above ground, stack orientation and configuration, exit diameter, exit velocity, and exit temperature, for all existing and proposed emission points from the source, and dimension data of buildings;

(C) Meteorological and topographical data;

(D) Information about the dispersion models and modeling parameters used;

(E) Exposure locations where ambient concentrations will be modeled;

(F) For determining exposure locations where ambient concentrations will be modeled, an owner or operator may provide documentation to demonstrate an area is not being used in the manner allowed by the land use zoning at the time the modeling is to be performed, and may request that the land use zoning classification of these areas be excluded in determining chronic exposure locations. If DEQ approves an exclusion under this paragraph, then:

(i) The owner or operator must model the approved locations based on their actual use;

(ii) The owner or operator must annually submit to DEQ documentation showing the areas subject to the excluded land use zoning classification continue to not be used in the manner allowed by the land use zoning applicable to the area; and

(iii) If the annual documentation provided under subparagraph (ii) shows the area is being used in the manner allowed by the land use zoning and results in potential exposure to toxic air contaminants from the source, the owner or operator must update the risk assessment based on the change in use and apply for a Toxic Air Contaminant Permit Addendum modification under OAR 340-245-0100(8) or for an operating permit modification under OAR 340 division 216 or 218 using the procedures in this division, if applicable;

(G) Use of other exposure locations where DEQ determines, based on documented evidence, that an area is not being used in the manner allowed by the land use zoning at the time the modeling is to be performed, such area should be considered an exposure location based on its actual use; and

(H) Other information that may be necessary to estimate air quality concentrations and risk at exposure locations;

(b) For the purpose of any risk assessment undertaken by DEQ, the owner or operator of any permitted or unpermitted source must submit the information in subsection (a) within 30 days of the written request from DEQ. DEQ shall use the procedures in OAR 340-245-0030 to review the information in determining its completeness, consider extensions requests, and request additional information, if needed.

(2) Risk assessment work plan requirements. When choosing to conduct a Level 3 or Level 4 Risk Assessment, the owner or operator of a source must submit a risk assessment work plan that must be approved by DEQ as required in OAR 340-245-0030. The work plan must be developed in consultation with DEQ and include but is not limited to:

(a) A problem formulation step ending with development of a conceptual site model identifying TEUs and exposure locations;

(b) An exposure assessment that models or measures toxic air contaminant concentrations at exposure locations;

(c) A risk characterization presenting a quantitative calculation of excess cancer, chronic noncancer and acute noncancer health risks associated with human exposure to toxic air contaminant emissions from the source;

(d) A quantitative or qualitative uncertainty evaluation of appropriate elements of the risk assessment;

(e) A Level 4 Risk Assessment must also include a toxicity assessment evaluating the carcinogenic effects, noncarcinogenic chronic effects, and noncarcinogenic acute effects of toxic air contaminants to which human populations may be exposed, and determining persistence and bioaccumulation potential. Sources may not consider Toxicity Reference Values other than those listed in OAR 340-~~245-8030~~247-8010 Table ~~32~~; and

(f) In a Level 4 Risk Assessment, the owner or operator may propose modifications to default exposure assumptions, including but not limited to:

(A) Exposure times, frequencies, and durations;

(B) Relative bioavailability of chemicals; and

(C) Multipathway considerations for persistent, and bioaccumulative and toxic chemicals.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 ~~& Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 ~~& Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

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340-245-0220

TBACT and TLAER Procedures

(1) If required to meet TBACT or TLAER on any significant TEU, the owner or operator of a source must perform a TBACT or TLAER analysis.

(a) The owner or operator of an existing source must conduct a case-by-case TBACT analysis under section (3), except as provided in section (2);

(b) The owner or operator of a new or reconstructed source must conduct a case-by-case TLAER analysis under section (4);

(c) The owner or operator must submit the TBACT or TLAER analysis to DEQ for approval, and the owner or operator must pay the case-by-case TBACT or TLAER fee, as applicable, specified in OAR 340-216-8030 Table 3 and OAR 340-245-0400;

(d) A TEU is determined to meet TBACT if DEQ approves the TBACT analysis for the TEU and the owner or operator has implemented all operational or source modifications required to meet TBACT, or will implement them on an enforceable compliance schedule included in its Toxic Air Contaminant Permit Addendum or operating permit; and

(e) A TEU is determined to meet TLAER if DEQ approves the TLAER analysis for the TEU and the owner or operator has implemented all operational or source modifications required to meet TLAER upon beginning operation of the new or reconstructed source.

(2) Presumptive TBACT. For an existing TEU, compliance with emission control requirements, work practices or limitations established by a major source NESHAP adopted by the EPA after 1993 and before April 10, 2018 is deemed to be TBACT, provided that:

(a) The emission control requirements, work practices or limitations result in an actual reduction to the emissions of the hazardous air pollutants regulated under the NESHAP; and

(b) There are no other toxic air contaminants emitted by the source that:

(A) Are not controlled by the emission control requirements, work practices or limitations established by a major source NESHAP; and

(B) Materially contribute to public health risks;

(c) TEUs that are subject to and comply with OAR 340-244-9000 through 340-244-9090, Colored Art Glass Manufacturing rules, or OAR 340-245-9000 through 340-245-9080, Colored Art Glass Manufacturing rules, meet TBACT and a case-by-case determination is not required for such TEUs.

(3) Case-by-Case TBACT determination. The owner or operator of the TEU must submit a proposed case-by-case TBACT analysis to DEQ for review and approval.

(a) TBACT must be a toxic air contaminant emissions limitation or emissions control measure based on the maximum degree of reduction of toxic air contaminants that is feasible considering:

(A) What has been achieved in practice for:

(i) Sources in the same class as the source to which the toxic air contaminant emissions limitation or control measure will apply, as classified under ORS 468A.050; or

(ii) Processes or emissions similar to the processes or emissions of the source;

(B) Energy, health, and environmental impacts not related to air quality; and

(C) Economic impacts and cost-effectiveness, including the costs of changing existing processes or equipment or adding equipment or controls to existing processes and equipment;

(b) TBACT may be based on a design standard, equipment standard, work practice standard or other operational standard, or a combination thereof; and

(c) In assessing the cost-effectiveness of any measure for purposes of determining TBACT for a source, DEQ will assess only the economic impacts and benefits associated with controlling toxic air contaminants.

(4) Case-by-Case TLAER determination. The owner or operator of the TEU must submit a proposed case-by-case TLAER analysis to DEQ for review and approval.

(a) DEQ will review a case-by-case TLAER analysis and ensure that it is a toxic air contaminant emissions limitation or emissions control measure that is the maximum degree of reduction technically feasible without regard to energy impacts, health and environmental impacts, or economic impacts; and

(b) TLAER is not considered achievable if the cost of control is so great that a new source could not be built or operated because it was rendered economically infeasible. If some other facility in the same or a comparable industry uses that control technology, then such use constitutes evidence that the cost to the industry of that control is not prohibitive.

(5) Periodic TBACT or TLAER Reviews. If the owner or operator is required to meet TBACT or TLAER, the owner or operator must perform and submit periodic TBACT or TLAER reviews in a TBACT or TLAER update report as follows:

(a) For all significant TEUs for which the most recent TBACT or TLAER determination concluded that no toxic air contaminant emission limits or additional control measure was required, submit a TBACT or TLAER review to DEQ with each permit renewal;

(b) For all significant TEUs that currently meet TBACT or TLAER through toxic air contaminant emission limits or control measures, submit a TBACT or TLAER review when notified by DEQ. If DEQ learns of new technologies, devices or practices that could reduce toxic air contaminant emissions or improve on control measures, DEQ will notify the owner or operator in writing that a TBACT or TLAER review is required and may specify a submittal deadline in the notification;

(c) The TBACT or TLAER update reports must include the following:

(A) A review identifying all new or improved emissions control measures, if any, that can apply to any of the significant TEUs at the source, whether they are currently controlled or not; and

(B) For each new or improved emissions control measure identified, a statement whether or not the owner or operator intends to apply the control measure;

(i) If the owner or operator intends to apply the control measure, then the owner or operator must provide an estimated date by which the control measure will be applied; or

(ii) If the owner or operator does not intend to apply the control method, then the owner or operator must provide justification for not applying it, including at a minimum, a review following the procedures of OAR 340-245-0220(3) or (4);

(d) When a new or improved emissions control measure is identified under subsection (c), DEQ must review the control measure and any justification provided by the owner or operator for not applying the

control measure, and will make a preliminary determination with regard to whether or not the owner or operator must apply the control measure

(A) If DEQ's preliminary determination is that the owner or operator must apply the control measure, DEQ shall provide the owner or operator with notice and opportunity to provide input on a final determination. In making the final determination, DEQ shall take into consideration the following:

- (i) The remaining service life of any existing emission control system that would be replaced;
- (ii) The relative effectiveness of the new or improved control measure to reduce the source risk as compared to the risk using the existing control measure;
- (iii) The cost of installation and operation of the new or improved control measure, including the cost of removing any existing control measure; and
- (iv) Any other factors that DEQ finds are relevant;

(B) If DEQ's final determination is that the owner or operator must apply the control measure, then DEQ may:

- (i) After consultation with the owner or operator, determine the date by which the owner or operator must apply the control measure; and
- (ii) Determine a new Source Risk Limit based on information on the amount of toxic air contaminants removed by the control measure and issue a modified Toxic Air Contaminant Permit Addendum or operating permit.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, § 3~~

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) ~~& Or Laws 2018, ch. 102, §§ 2 and 3~~

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0230

Toxic Air Contaminant Monitoring Requirements

(1) An owner or operator of a source that chooses to perform toxic air contaminant monitoring under OAR 340-245-0050 must submit an application for a Toxic Air Contaminant Permit Addendum and a Toxic Air Contaminant Monitoring Plan, developed in consultation with and approved by DEQ in a Toxic Air Contaminant Permit Addendum, before beginning toxic air contaminant monitoring. Toxic air contaminant monitoring must be conducted for a period of not less than 12 months with at least 12 months of valid data with greater than 75 percent data completeness per quarter.

(2) Public involvement requirements. DEQ shall work with the owner or operator to develop public information concerning an approved Toxic Air Contaminant Monitoring Plan and the timeline for the approved Toxic Air Contaminant Monitoring Plan.

(3) Toxic air contaminant monitoring requirements. The owner or operator must submit a Toxic Air Contaminant Monitoring Plan in accordance with OAR 340-245-0030 that includes but is not limited to:

- (a) Identification of all toxic air contaminants that will be monitored;

- (b) A description of all proposed monitoring locations;
 - (c) A description of the monitoring and analysis protocols for each toxic air contaminant to be monitored, including at a minimum:
 - (A) The monitoring equipment and methods to be used for each toxic air contaminant;
 - (B) The sampling methods, including sample handling and custody storage requirements;
 - (C) The frequency of sampling at each monitoring location; the duration of each sample (i.e., the length of time in hours that each sample runs), and time of year;
 - (D) Analytical methods and the analytical method detection limits and reporting limits to be used for each toxic air contaminant;
 - (E) Quality assurance and quality control measures to be taken and who will be performing these measures; and
 - (F) Descriptions of security measures to protect the monitoring equipment;
 - (d) A description of how to determine and account for the ambient concentration of each toxic air contaminant being monitored that results from all causes other than the source under consideration, including natural and unknown causes;
 - (e) A description of how and where meteorological monitoring will be performed and the meteorology equipment used; and
 - (f) A description of how the data will be reduced and how often the results will be reported to DEQ.
- (4) Reporting Requirements. The owner or operator of a source that has been issued a Toxic Air Contaminant Permit Addendum or operating permit that includes air monitoring requirements must report to DEQ the following information:
- (a) Monthly monitoring result reports, no more than 30 days after all monitoring data becomes available for the month to which the data applies. The reports must include but is not limited to:
 - (A) Ambient toxic air contaminant concentrations, all daily risks and all monthly average risks from all monitoring locations specified in the Air Monitoring Plan;
 - (B) Meteorological data summary;
 - (C) Daily production data; and
 - (D) A description of any excess emissions or upset conditions that may have affected the ambient toxic air contaminant concentrations monitored, including conditions outside the property boundary that may affect ambient air (i.e., forest fires, house fires, train derailments, accidental spills, etc.);
 - (b) An air monitoring final report, no more than 60 calendar days after completing all Toxic Air Contaminant Monitoring Plan requirements that also includes a description of any process changes that have occurred during the air monitoring period that may affect the results of the monitoring.
- (5) Air monitoring results.

(a) Upon completion of the air monitoring, the owner or operator must submit to DEQ an assessment of risk based on the air monitoring data and other relevant information;

(b) For all toxic air contaminants that are not monitored, or for which monitoring results were inconclusive, the owner or operator must use the modeled concentrations of those toxic air contaminants and add the risk from the modeled concentrations to the risk from the monitored concentrations to arrive at a total risk from the source; and

(c) Upon receipt of air monitoring data and assessment of risk under subsections (a) and (b), DEQ will review the submittal and approve or deny it in accordance with the procedures OAR 340-245-0100(4).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) & [Or Laws 2018, ch. 102, § 3](#)

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) & [Or Laws 2018, ch. 102, §§ 2 and 3](#)

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0300

Toxicity Reference Values

~~(1) This rule lists sources of toxicity information that OHA and DEQ consider authoritative in terms of their scientific rigor and methods for producing toxicity information. OHA and DEQ will recommend adoption and use of Toxicity Reference Values from the toxicity information published by the following authoritative sources:~~

~~(a) DEQ Ambient Benchmark Concentrations specified in OAR chapter 340, division 246;~~

~~(b) DEQ and OHA Short-term Guideline Concentrations;~~

~~(c) EPA Integrated Risk Information System (IRIS) or Office of Superfund Remediation and Technology Innovation (OSRTI);~~

~~(d) United States Agency for Toxic Substances and Disease Registry (ATSDR); and~~

~~(e) California's Office of Environmental Health Hazard Assessment (OEHHA).~~

~~(2) DEQ will calculate Toxicity Reference Values using one in one million as the target excess cancer risk level or a hazard quotient of one for noncancer Toxicity Reference Values.~~

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155 & [Or Laws 2018, ch. 102, § 3](#)

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035 & [Or Laws 2018, ch. 102, §§ 2 and 3](#)

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0310](#)

Process for Updating ~~Lists of Regulated Toxic Air Contaminants and Their Risk-Based Concentrations~~ [for Toxic Air Contaminants](#)

(1) Purpose.

~~(a) As risk assessment and toxicological sciences advance, it is important to have rules for Cleaner Air Oregon that allow for that health risk-based standards for air quality regulation to continue to reflect the latest practices and science. The list of toxic air contaminants that are regulated and their RBCs represent one area where regulations will need regular updating to accommodate advancing science and practices; to ensure that impacts to public health from industrial air emissions are minimized.~~

~~(b) These rules include two lists of toxic air contaminants:~~

(A) OAR 340-245-8020 Table 2 contains toxic air contaminants that are for emissions reporting. The primary purpose of OAR 340-245-8020 Table 2 is to inform prioritization of RBC development and maintain a current and broad understanding of statewide toxic air contaminant emissions as industries and industrial practices change over time. The toxic air contaminants listed OAR 340-245-8020 Table 2 must be addressed in the uncertainty evaluation in a Level 3 or Level 4 Risk Assessment for the toxic air contaminants in OAR 340-245-8020 Table 2 that do not have RBCs; and

(B) OAR 340-245-8030 Table 3 contains toxic air contaminants for which TRVs are readily available and OAR 340-245-8040 Table 4 contains RBCs for regulation as part of air permitting. The purpose of OAR 340-245-8030 Table 3 and OAR 340-245-8040 Table 4 is to ensure that impacts to public health from industrial air emissions are minimized.

(2) OAR 340-245-8020 Table 2, Toxic Air Contaminant Reporting List.

(a) The Toxic Air Contaminant Reporting List is comprised of California Air Resources Board's Toxic Air Contaminant Identification List Appendix A-1, Washington's Table of ASIL, SQER and de minimis emission values, Oregon's Toxics Focus list, and EPA's Hazardous Air Pollutants list;

(b) Every three years starting from November 16, 2018, DEQ, in consultation with OHA, [\(2\) Process for updating risk-based concentrations.](#)

[\(a\) DEQ](#) will review the four lists in subsection (a) for changes and may propose to update the Toxic Air Contaminant Reporting List in OAR 340-245-8020 Table 2 to capture changes in any of those four lists over the intervening three years;

(c) During the reviews of the Toxic Air Contaminant Reporting List, DEQ may also propose to add or remove toxic air contaminants based on information gathered from past reporting, industry types in Oregon that are not in California or Washington, or OHA's and DEQ's knowledge of toxic air contaminants that may be of potential public health concern in Oregon; and

(d) Owners or operators of sources must report emissions of any newly listed toxic air contaminant during the next periodic state-wide emissions inventory required in OAR 340-245-0040 following the new listing, or earlier upon request by DEQ.

(3) OAR 340-245-8030 Table 3, Toxicity Reference Values and OAR 340-245-8040 Table 4, Risk Based Concentrations.

(a) The list of Risk Based Concentrations is comprised of all toxic air contaminants from the Toxic Air Contaminants Reporting List for which OHA and DEQ were able to establish RBCs;

(b) Every three years starting from November 16, 2018, or as necessary, DEQ, in consultation with OHA, will review the toxic air contaminants and Toxicity Reference Values published by the authoritative sources listed in OAR 340-245-0300 for changes over the intervening three years. DEQ will propose to:

(A) Revise Toxicity Reference Values and associated Risk Based Concentrations for toxic air contaminants listed in OAR 340-245-8030 Table 3 and OAR 340-245-8040 Table 4, as applicable, if Toxicity Reference Values have been revised by authoritative sources listed in OAR 340-245-0300;

(B) Add toxic air contaminants to OAR 340-245-8030 Table 3 and 340-245-8040 Table 4, as applicable, if Toxicity Reference Values have been generated by authoritative sources listed in OAR 340-245-0300 for toxic air contaminants on the Toxic Air Contaminant Reporting List in OAR 340-245-8020 Table 2 from which RBCs can be set; or

(C) Remove or revise toxic air contaminants from OAR 340-245-8030 Table 3 and 340-245-8040 Table 4, as applicable, if some or all authoritative sources listed in OAR 340-245-0300 have rescinded Toxicity Reference Values for that toxic air contaminant without providing a replacement;

(e) DEQ will propose updates to OAR 340-245-8030 Table 3 and 340-245-8040 Table 4, as applicable, through [the public](#) rulemaking process.

(4) Interested parties may submit petitions to DEQ to update the lists of regulated toxic air contaminants to add or remove toxic air contaminants from OAR 340-245-8020 Table 2, revise a TRV in OAR 340-245-98030 Table 3, or revise an RBC in OAR 340-245-8040 Table 4.

(a) All petitions must be made in writing and must be received by DEQ at least 18 months before the applicable triennial review described in section (2) or (3);

~~(b) A request to add a toxic air contaminant to the Toxic Air Contaminant Reporting List in OAR 340-0245-8020 Table 2 must include evidence that:~~

~~(A) The chemical is emitted in the state of Oregon at a rate of at least 1 pound per year; and~~

~~(B) The chemical is toxic;~~

~~(c) A request to remove a toxic air contaminant from the Toxic Air Contaminant Reporting List in OAR 340-245-8020 Table 2, the TRV list in OAR 340-245-8030 Table 3, or the RBC list in OAR 340-245-8040 Table 4 must demonstrate that all authoritative sources listed in OAR 340-245-0300 either do not have or have rescinded Toxicity Reference Values for that toxic air contaminant without providing a replacement;~~

~~(d)(A) A request to revise a Toxicity Reference Value in OAR 340-245-8030 Table 3 or an RBC in OAR 340-245-8040 Table 4 must include either:~~

~~(i) Inhalation Toxicity Reference Values established by a federal agency or by another state; or~~

~~(ii) Publicly available and peer reviewed, [to revise, add, or remove risk-based concentrations for toxic air contaminants whenever changes are proposed to their toxicity information for the toxic air contaminant that demonstrates a quantitative dose-response relationship in human or animal studies from which Toxicity Reference Values could be calculated;](#)[reference values in OAR 340-247-80120 Table 2.](#)~~

~~(B) If the request applies to a toxic air contaminant for which toxicity information is available from one or more of the authoritative sources listed in OAR 340-245-0300, then only petitions to select a Toxicity Reference Value from one of those authoritative sources will be considered; and~~

~~(C) If a toxic air contaminant being requested for review has no available toxicity information as described in paragraph (A) and is emitted at a rate of at least one pound per year in the state of Oregon, then DEQ will put the toxic air contaminant on a formal “Wait List”, to be held there until toxicity information for that toxic air contaminant becomes available;~~

~~(e) If DEQ, after consultation with OHA, determines that revisions are warranted as a result of a petition~~

~~b) As needed, DEQ will propose revisions to TRVs or RBCs or additions or removals of toxic air contaminants to the Toxic Air Contaminant Reporting List in OAR 340-245-8020 Table 2, the TRV list in OAR 340-245-8030 Table 3 or the RBC list in OAR 340-245-8040 Table 4, through the [a public](#) rulemaking process; and~~

~~(f) If DEQ receives a request, [to revise a TRV or RBC or add or remove a toxic air contaminant from the Toxic Air Contaminant Reporting List in OAR 340-245-8020 Table 2, the TRV list in OAR 340-245-8030 Table 3 or the RBC list in OAR 340-245-8040 Table 4 and the request is received less than 18 months before the applicable triennial review described in section \(2\) or \(3\), the request will be reviewed during the triennial review in section \(3\).](#)[risk-based concentrations if new information indicates the need to adjust exposure factors or other adjustment factors for individual toxic air contaminants or groups of toxic air contaminants.](#)~~

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, [468A.135](#), [ORS 468A.337](#) & [Or Laws 2018, ch. 102, § 3](#)

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, [ORS 468A.335](#), [ORS 468A.337](#) & [Or Laws 2018, ch. 102, §§ 2 and 3](#)

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0320](#)

Standards and Criteria for Noncancer Risk Action Levels for Existing Contamination Sources

(1) The noncancer Risk Action Levels for existing sources are identified in OAR 340-245-8010, Table 1.

(2) The toxic air contaminants for which an adjusted noncancer Risk Action Level will apply are identified in OAR 340-247-80130, Table 23, and OAR 340-245-80140, Table 42 in the column named “Noncancer TBACT RAL.”

(3) An adjusted Risk Action Level will be applied to existing sources that emit one or more toxic air contaminants identified in OAR 340-2475-80130, Table 23, or OAR 340-245-80140, Table 24, with a noncancer TBACT RAL of a Hazard Index of 3. For sources that emit a mixture of toxic air contaminants with noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5, the Risk Determination Ratio calculation expresses the degree to which the applicable Risk Action Level may be adjusted for each source.

Statutory/Other Authority: ORS 468.020 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: Or Laws 2018, ch. 102, §7

History:

DEQ 8-2020, adopt filed 04/24/2020, effective 04/24/2020

340-245-0400

Cleaner Air Oregon Fees

(1) Any owner or operator that has been issued or applies for an Oregon Title V Operating Permit under OAR chapter 340, division 218 must submit the annual CAO base fees to DEQ as specified in OAR 340-220-0050(4).

(2) Any owner or operator that has been issued or applies for a Basic, General, Simple or Standard Air Contaminant Discharge Permit under OAR chapter 340, division 216 must submit the annual CAO base fee to DEQ as specified in OAR 340-216-8020 Table 2 Part 3.

(3) When notified in writing by DEQ, the owner or operator of an existing source that must perform a risk assessment is required to pay the applicable existing source call-in fee in OAR 340-216-8030 Table 3 within 30 days of receiving DEQ notification.

(4) Owners or operators of new or reconstructed sources must pay the applicable new source consulting fee and the applicable specific activity fees in OAR 340-216-8030 Table 3 with the permit application.

(5) Any owner or operator required to apply for a Toxic Air Contaminant Permit Addendum must also submit the applicable Cleaner Air Oregon Specific Activity Fees specified in OAR 340-216-8030 Table 3 to DEQ in accordance with OAR 340-245-0030.

(a) The fees in OAR 340-216-8030 Table 3 are additive in most cases;

(b) A TBACT/TLAER Review fee will be due to DEQ per TEU. When reviewing multiple similar TEUs, DEQ may elect to waive additional TEU review fees for multiple similar TEU reviews if the TEUs have similar emissions and emission rates;

(c) If one TEU requires two different [air](#) pollution control devices because it emits different types of toxic air contaminants (e.g., particulate matter and volatile organic compounds), then two TBACT/TLAER Review fees will be due and payable to DEQ;

(d) The individual TEU fees can be additive or charged individually, depending on the situation. If an owner or operator is constructing or modifying multiple, identical TEUs, then one TEU Risk Assessment fee may be charged. If the TEUs were not identical, then multiple TEU Risk Assessment fees will be due and payable to DEQ;

(e) A community engagement fee of high, medium, or low for each meeting, will be due to DEQ based on DEQ's determination of the complexity and nature of the needed outreach and engagement activities; and

(f) A source test fee is required when an owner or operator submits a source test report for DEQ review under this division.

(A) The complex source test review fee is for multiple TEUs and multiple toxic air contaminant test methods;

(B) The moderate source test review fee is for a single TEU and multiple toxic air contaminant test methods; and

(C) The simple source test review fee is for a single TEU and a single toxic air contaminant test method.

Statutory/Other Authority: ORS 468.020, 468.065, [468A.135](#), 468A.315 & Or Laws 2018, ch. 102, § 13

Statutes/Other Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155, 468A.315 & Or Laws 2018, ch. 102, §§ 13 and 14

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-8010](#)

Table 1 - Risk Action Levels

Table 1 - Risk Action Levels

[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, [468A.135](#), 468A.155 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035 & Or Laws 2018, ch. 102, § 7

History:

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

~~[340-245-8020](#)~~

~~Table 2 - Toxic Air Contaminant Reporting List~~

~~Table 2 - Toxic Air Contaminant Reporting List~~

~~[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]~~

~~[340-245-8030](#)~~

~~Table 3 - Toxicity Reference Values~~

~~Table 3 - Toxicity Reference Values~~

~~[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]~~

~~**Statutory/Other Authority:** ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155 & Or Laws 2018, ch. 102, § 7~~

~~**Statutes/Other Implemented:** ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035 & Or Laws 2018, ch. 102, § 7~~

~~**History:**~~

~~DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020~~

~~DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018~~

[340-245-80140](#)

Table 24 - Risk-Based Concentrations

Table 24 - Risk-Based Concentrations

[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, [468A.135](#), 468A.155 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035 & Or Laws 2018, ch. 102, § 7

History:

DEQ 15-2020, minor correction filed 05/12/2020, effective 05/12/2020

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-80150](#)

Table 35 - Level 1 Risk Assessment ~~Pool~~ Dispersion Factors

Table 35 - Level 1 Risk Assessment ~~Pool~~ Dispersion Factors

[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, [468A.135](#) & 468A.155

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015 & 468A.035

History:

DEQ 3-2019, minor correction filed 01/23/2019, effective 01/23/2019

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

Other Air Quality Divisions – Draft Rules

Division 200 GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0020

General Air Quality Definitions

As used in OAR 340 divisions 200 through 268, unless specifically defined otherwise:

- (1) "Act" or "FCAA" means the Federal Clean Air Act, 42 U.S.C.A. § 7401 to 7671q.
- (2) "Activity" means any process, operation, action, or reaction (e.g., chemical) at a source that emits a regulated pollutant.
- (3) "Actual emissions" means the mass emissions of a regulated pollutant from an emissions source during a specified time period as set forth in OAR 340 divisions 214, 220 and 222.
- (4) "Adjacent", as used in the definitions of major source and source and in OAR 340-216-0070, means interdependent facilities that are nearby to each other.
- (5) "Affected source" means a source that includes one or more affected units that are subject to emission reduction requirements or limitations under Title IV of the FCAA.
- (6) "Affected states" means all states:
 - (a) Whose air quality may be affected by a proposed permit, permit modification, or permit renewal and that are contiguous to Oregon; or
 - (b) That are within 50 miles of the permitted source.
- (7) "Aggregate insignificant emissions" means the annual actual emissions of any regulated pollutant from one or more designated activities at a source that are less than or equal to the lowest applicable level specified in this section. The total emissions from each designated activity and the aggregate emissions from all designated activities must be less than or equal to the lowest applicable level specified:
 - (a) One ton for total reduced sulfur, hydrogen sulfide, sulfuric acid mist, any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA, and each criteria pollutant, except lead;
 - (b) 120 pounds for lead;
 - (c) 600 pounds for fluorides;
 - (d) 500 pounds for PM10 in a PM10 nonattainment area;
 - (e) 500 pounds for direct PM2.5 in a PM2.5 nonattainment area;
 - (f) The lesser of the amount established in 40 C.F.R. 68.130 or 1,000 pounds;
 - (g) An aggregate of 5,000 pounds for all hazardous air pollutants;
 - (h) 2,756 tons CO₂e for greenhouse gases.

(8) "Air contaminant" means a dust, fume, gas, mist, odor, smoke, vapor, pollen, soot, carbon, acid, particulate matter, regulated pollutant, or any combination thereof.

(9) "Air Contaminant Discharge Permit" or "ACDP" means written authorization issued, renewed, amended, or revised by DEQ, under OAR 340 division 216.

(10) "Alternative method" means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to DEQ's satisfaction to, in specific cases, produce results adequate for determination of compliance. The alternative method must comply with the intent of the rules, is at least equivalent in objectivity and reliability to the uniform recognized procedures, and is demonstrated to be reproducible, selective, sensitive, accurate, and applicable to the program. An alternative method used to meet an applicable federal requirement for which a reference method is specified must be approved by EPA unless EPA has delegated authority for the approval to DEQ.

(11) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

(12) "Applicable requirement" means all of the following as they apply to emissions units in an Oregon Title V Operating Permit program source or ACDP program source, including requirements that have been promulgated or approved by the EPA through rule making at the time of issuance but have future-effective compliance dates:

(a) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by the EPA through rulemaking under Title I of the FCAA that implements the relevant requirements of the FCAA, including any revisions to that plan promulgated in 40 C.F.R. part 52;

(b) Any standard or other requirement adopted under OAR 340-200-0040 of the State of Oregon Clean Air Act Implementation Plan that is more stringent than the federal standard or requirement which has not yet been approved by the EPA, and other state-only enforceable air pollution control requirements;

(c) Any term or condition in an ACDP, OAR 340 division 216, including any term or condition of any preconstruction permits issued under OAR 340 division 224, New Source Review, until or unless DEQ revokes or modifies the term or condition by a permit modification;

(d) Any term or condition in a Notice of Construction and Approval of Plans, OAR 340-210-0205 through 340-210-0240, until or unless DEQ revokes or modifies the term or condition by a Notice of Construction and Approval of Plans or a permit modification;

(e) Any term or condition in a Notice of Approval, OAR 340-218-0190, issued before July 1, 2001, until or unless DEQ revokes or modifies the term or condition by a Notice of Approval or a permit modification;

(f) Any term or condition of a PSD permit issued by the EPA until or unless the EPA revokes or modifies the term or condition by a permit modification;

(g) Any standard or other requirement under section 111 of the FCAA, including section 111(d);

(h) Any standard or other requirement under section 112 of the FCAA, including any requirement concerning accident prevention under section 112(r)(7) of the FCAA;

(i) Any standard or other requirement of the acid rain program under Title IV of the FCAA or the regulations promulgated thereunder;

(j) Any requirements established under section 504(b) or section 114(a)(3) of the FCAA;

- (k) Any standard or other requirement under section 126(a)(1) and(c) of the FCAA;
- (l) Any standard or other requirement governing solid waste incineration, under section 129 of the FCAA;
- (m) Any standard or other requirement for consumer and commercial products, under section 183(e) of the FCAA;
- (n) Any standard or other requirement for tank vessels, under section 183(f) of the FCAA;
- (o) Any standard or other requirement of the program to control air pollution from outer continental shelf sources, under section 328 of the FCAA;
- (p) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the Administrator has determined that such requirements need not be contained in an Oregon Title V Operating Permit; and
- (q) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the FCAA, but only as it would apply to temporary sources permitted under section 504(e) of the FCAA.
- (13) "Attainment area" or "unclassified area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment areas or unclassified areas may also be referred to as sustainment or maintenance areas as designated in OAR 340 division 204. Any particular location may be part of an attainment area or unclassified area for one regulated pollutant while also being in a different type of designated area for another regulated pollutant.
- (14) "Attainment pollutant" means a pollutant for which an area is designated an attainment or unclassified area.
- (15) "Baseline emission rate" means the actual emission rate during a baseline period as determined under OAR 340 division 222.
- (16) "Baseline period" means the period used to determine the baseline emission rate for each regulated pollutant under OAR 340 division 222.
- (17) "Best Available Control Technology" or "BACT" means an emission limitation, including, but not limited to, a visible emission standard, based on the maximum degree of reduction of each air contaminant subject to regulation under the FCAA which would be emitted from any proposed major source or major modification which, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such air contaminant. In no event may the application of BACT result in emissions of any air contaminant that would exceed the emissions allowed by any applicable new source performance standard or any standard for hazardous air pollutant. If an emission limitation is not feasible, a design, equipment, work practice, or operational standard, or combination thereof, may be required. Such standard must, to the degree possible, set forth the emission reduction achievable and provide for compliance by prescribing appropriate permit conditions.
- (18) "Biomass" means non-fossilized and biodegradable organic material originating from plants, animals, and microorganisms, including products, byproducts, residues and waste from agriculture, forestry, and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic matter.

(19) "Capacity" means the maximum regulated pollutant emissions from a stationary source under its physical and operational design.

(20) "Capture efficiency" means the amount of regulated pollutant collected and routed to an air pollution control device divided by the amount of total emissions generated by the process being controlled.

(21) "Capture system" means the equipment, including but not limited to hoods, ducts, fans, and booths, used to contain, capture and transport a regulated pollutant to a control device.

(22) "Carbon dioxide equivalent" or "CO₂e" means an amount of a greenhouse gas or gases expressed as the equivalent amount of carbon dioxide, and is computed by multiplying the mass of each of the greenhouse gases by the global warming potential published for each gas at 40 C.F.R. part 98, subpart A, Table A-1-Global Warming Potentials, and adding the resulting value for each greenhouse gas to compute the total equivalent amount of carbon dioxide.

(23) "Categorically insignificant activity" means any of the following listed regulated pollutant emitting activities principally supporting the source or the major industrial group. Categorically insignificant activities must comply with all applicable requirements.

(a) Constituents of a chemical mixture present at less than 1 percent by weight of any chemical or compound regulated under divisions 200 through 268 excluding divisions 248 and 262 of this chapter, or less than 0.1 percent by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year;

(b) Evaporative and tailpipe emissions from on-site motor vehicle operation;

(c) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified as categorically insignificant do not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as categorically insignificant with the remainder not categorically insignificant. The following equipment may never be included as categorically insignificant:

(A) Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour;

(B) Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour.

(d) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment brought on site for six months or less for maintenance, construction or similar purposes, such as but not limited to generators, pumps, hot water pressure washers and space heaters, provided that any such equipment that performs the same function as the permanent equipment, must be operated within the source's existing PSEL;

(e) Office activities;

(f) Food service activities;

(g) Janitorial activities;

(h) Personal care activities;

(i) Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance;

- (j) On-site laundry activities;
- (k) On-site recreation facilities;
- (l) Instrument calibration;
- (m) Maintenance and repair shop;
- (n) Automotive repair shops or storage garages;
- (o) Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;
- (p) Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems;
- (q) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities;
- (r) Temporary construction activities;
- (s) Warehouse activities;
- (t) Accidental fires;
- (u) Air vents from air compressors;
- (v) Air purification systems;
- (w) Continuous emissions monitoring vent lines;
- (x) Demineralized water tanks;
- (y) Pre-treatment of municipal water, including use of deionized water purification systems;
- (z) Electrical charging stations;
- (aa) Fire brigade training;
- (bb) Instrument air dryers and distribution;
- (cc) Process raw water filtration systems;
- (dd) Pharmaceutical packaging;
- (ee) Fire suppression;
- (ff) Blueprint making;
- (gg) Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking;
- (hh) Electric motors;
- (ii) Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids;

- (jj) On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles;
- (kk) Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment;
- (ll) Pressurized tanks containing gaseous compounds;
- (mm) Vacuum sheet stacker vents;
- (nn) Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities;
- (oo) Log ponds;
- (pp) Stormwater settling basins;
- (qq) Fire suppression and training;
- (rr) Paved roads and paved parking lots within an urban growth boundary;
- (ss) Hazardous air pollutant emissions in fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils;
- (tt) Health, safety, and emergency response activities;
- (uu) Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency, provided that the aggregate horsepower rating of all stationary emergency generator and pump engines is not more than 3,000 horsepower. If the aggregate horsepower rating of all stationary emergency generator and pump engines is more than 3,000 horsepower, then no emergency generators and pumps at the source may be considered categorically insignificant;
- (vv) Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems;
- (ww) Non-contact steam condensate flash tanks;
- (xx) Non-contact steam vents on condensate receivers, deaerators and similar equipment;
- (yy) Boiler blowdown tanks;
- (zz) Industrial cooling towers that do not use chromium-based water treatment chemicals;
- (aaa) Ash piles maintained in a wetted condition and associated handling systems and activities;
- (bbb) Uncontrolled oil/water separators in effluent treatment systems, excluding systems with a throughput of more than 400,000 gallons per year of effluent located at the following sources:
 - (A) Petroleum refineries;
 - (B) Sources that perform petroleum refining and re-refining of lubricating oils and greases including asphalt production by distillation and the reprocessing of oils and/or solvents for fuels; or
 - (C) Bulk gasoline plants, bulk gasoline terminals, and pipeline facilities;
- (ccc) Combustion source flame safety purging on startup;

(ddd) Broke beaters, pulp and repulping tanks, stock chests and pulp handling equipment, excluding thickening equipment and repulpers;

(eee) Stock cleaning and pressurized pulp washing, excluding open stock washing systems; and

(fff) White water storage tanks.

(24) "Certifying individual" means the responsible person or official authorized by the owner or operator of a source who certifies the accuracy of the emission statement.

(25) "Class I area" or "PSD Class I area" means any Federal, State or Indian reservation land which is classified or reclassified as a Class I area under OAR 340-204-0050 and 340-204-0060.

(26) "Class II area" or "PSD Class II area" means any land which is classified or reclassified as a Class II area under OAR 340-204-0050 and 340-204-0060.

(27) "Class III area" or "PSD Class III area" means any land which is reclassified as a Class III area under OAR 340-204-0060.

(28) "Commence" or "commencement" means that the owner or operator has obtained all necessary preconstruction approvals required by the FCAA and either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction of the source to be completed in a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed in a reasonable time.

(29) "Commission" or "EQC" means Environmental Quality Commission.

(30) "Constant process rate" means the average variation in process rate for the calendar year is not greater than plus or minus ten percent of the average process rate.

(31) "Construction":

(a) Except as provided in subsection (b) means any physical change including, but not limited to, fabrication, erection, installation, demolition, or modification of a source or part of a source;

(b) As used in OAR 340 division 224 means any physical change including, but not limited to, fabrication, erection, installation, demolition, or modification of an emissions unit, or change in the method of operation of a source which would result in a change in actual emissions.

(32) "Continuous compliance determination method" means a method, specified by the applicable standard or an applicable permit condition, which:

(a) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and

(b) Provides data either in units of the standard or correlated directly with the compliance limit.

(33) "Continuous monitoring systems" means sampling and analysis, in a timed sequence, using techniques which will adequately reflect actual emissions or concentrations on a continuing basis as specified in the DEQ Continuous Monitoring Manual, found in OAR 340-200-0035, and includes continuous emission monitoring systems, continuous opacity monitoring system (COMS) and continuous parameter monitoring systems.

(34) "Control device" means equipment, other than inherent process equipment that is used to destroy or remove a regulated pollutant prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices, such as carbon beds, condensers, scrubbers, such as wet collection and gas absorption devices, selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems, such as water, steam, ammonia, sorbent or limestone injection, and combustion devices independent of the particular process being conducted at an emissions unit, e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters. For purposes of OAR 340-212-0200 through 340-212-0280, a control device does not include passive control measures that act to prevent regulated pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of regulated pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular regulated pollutant-specific emissions unit, then that definition will be binding for purposes of OAR 340-212-0200 through 340-212-0280.

(35) "Control efficiency" means the product of the capture and removal efficiencies.

(36) "Criteria pollutant" means any of the following regulated pollutants: nitrogen oxides, volatile organic compounds, particulate matter, PM10, PM2.5, sulfur dioxide, carbon monoxide, and lead.

(37) "Data" means the results of any type of monitoring or method, including the results of instrumental or non-instrumental monitoring, emission calculations, manual sampling procedures, recordkeeping procedures, or any other form of information collection procedure used in connection with any type of monitoring or method.

(38) "Day" means a 24-hour period beginning at 12:00 a.m. midnight or a 24-hour period as specified in a permit.

(39) "De minimis emission level" means the level for the regulated pollutants listed below:

- (a) Greenhouse Gases (CO₂e) = 2,756 tons per year.
- (b) CO = 1 ton per year.
- (c) NO_x = 1 ton per year.
- (d) SO₂ = 1 ton per year.
- (e) VOC = 1 ton per year.
- (f) PM = 1 ton per year.
- (g) PM₁₀ (except Medford AQMA) = 1 ton per year.
- (h) PM₁₀ (Medford AQMA) = 0.5 ton per year and 5.0 pounds/day.
- (i) Direct PM_{2.5} = 1 ton per year.
- (j) Lead = 0.1 ton per year.
- (k) Fluorides = 0.3 ton per year.
- (l) Sulfuric Acid Mist = 0.7 ton per year.

- (m) Hydrogen Sulfide = 1 ton per year.
- (n) Total Reduced Sulfur (including hydrogen sulfide) = 1 ton per year.
- (o) Reduced Sulfur = 1 ton per year.
- (p) Municipal waste combustor organics (dioxin and furans) = 0.0000005 ton per year.
- (q) Municipal waste combustor metals = 1 ton per year.
- (r) Municipal waste combustor acid gases = 1 ton per year.
- (s) Municipal solid waste landfill gases (measured as nonmethane organic compounds) = 1 ton per year
- (t) Single HAP = 1 ton per year
- (u) Combined HAP (aggregate) = 1 ton per year
- (40) "Department" or "DEQ":
 - (a) Means Department of Environmental Quality; except
 - (b) As used in OAR 340 divisions 218 and 220 means Department of Environmental Quality, or in the case of Lane County, LRAPA.
- (41) "DEQ method [#]" means the sampling method and protocols for measuring a regulated pollutant as described in the DEQ Source Sampling Manual, found in OAR 340-200-0035.
- (42) "Designated area" means an area that has been designated as an attainment, unclassified, sustainment, nonattainment, reattainment, or maintenance area under OAR 340 division 204 or applicable provisions of the FCAA.
- (43) "Destruction efficiency" means removal efficiency.
- (44) "Device" means any machine, equipment, raw material, product, or byproduct at a source that produces or emits a regulated pollutant.
- (45) "Direct PM2.5" has the meaning provided in the definition of PM2.5.
- (46) "Director" means the Director of DEQ or the Director's designee.
- (47) "Draft permit" means the version of an Oregon Title V Operating Permit for which DEQ or LRAPA offers public participation under OAR 340-218-0210 or the EPA and affected State review under 340-218-0230.
- (48) "Dry standard cubic foot" means the amount of gas that would occupy a volume of one cubic foot, if the gas were free of uncombined water at standard conditions.
- (49) "Effective date of the program" means the date that the EPA approves the Oregon Title V Operating Permit program submitted by DEQ on a full or interim basis. In case of a partial approval, the "effective date of the program" for each portion of the program is the date of the EPA approval of that portion.
- (50) "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(51) "Emission" means a release into the atmosphere of any regulated pollutant or any air contaminant.

(52) "Emission estimate adjustment factor" or "EEAF" means an adjustment applied to an emission factor to account for the relative inaccuracy of the emission factor.

(53) "Emission factor" means an estimate of the rate at which a regulated pollutant is released into the atmosphere, as the result of some activity, divided by the rate of that activity (e.g., production or process rate).

(54) "Emission limitation" or "Emission standard" or "Emission limitation or standard" means:

(a) Except as provided in subsection (b), a requirement established by a state, local government, or the EPA which limits the quantity, rate, or concentration of emissions of regulated pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

(b) As used in OAR 340-212-0200 through 340-212-0280, any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the FCAA. An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate or concentration of emissions, e.g., pounds of SO₂ per hour, pounds of SO₂ per million British thermal units of fuel input, kilograms of VOC per liter of applied coating solids, or parts per million by volume of SO₂, or as the relationship of uncontrolled to controlled emissions, e.g., percentage capture and destruction efficiency of VOC or percentage reduction of SO₂. An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement. For purposes of 340-212-0200 through 340-212-0280, an emission limitation or standard does not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, operate and maintain sources using good air pollution control practices, develop and maintain a malfunction abatement plan, keep records, submit reports, or conduct monitoring.

(55) "Emission Reduction credit banking" means to presently reserve, subject to requirements of OAR 340 division 268, Emission Reduction Credits, emission reductions for use by the reserver or assignee for future compliance with air pollution reduction requirements.

(56) "Emission reporting form" means a paper or electronic form developed by DEQ that must be completed by the permittee to report calculated emissions, actual emissions, or permitted emissions for interim emission fee assessment purposes.

(57) "Emissions unit" means any part or activity of a source that emits or has the potential to emit any regulated pollutant.

(a) A part of a source is any machine, equipment, raw material, product, or byproduct that produces or emits regulated pollutants. An activity is any process, operation, action, or reaction, e.g., chemical, at a stationary source that emits regulated pollutants. Except as described in subsection (d), parts and activities may be grouped for purposes of defining an emissions unit if the following conditions are met:

(A) The group used to define the emissions unit may not include discrete parts or activities to which a distinct emissions standard applies or for which different compliance demonstration requirements apply; and

(B) The emissions from the emissions unit are quantifiable.

(b) Emissions units may be defined on a regulated pollutant by regulated pollutant basis where applicable.

(c) The term emissions unit is not meant to alter or affect the definition of the term "unit" under Title IV of the FCAA.

(d) Parts and activities cannot be grouped for determining emissions increases from an emissions unit under OAR 340 divisions 210 and 224, or for determining the applicability of any New Source Performance Standard.

(58) "EPA" or "Administrator" means the Administrator of the United States Environmental Protection Agency or the Administrator's designee.

(59) "EPA Method 9" means the method for Visual Determination of the Opacity of Emissions From Stationary Sources described in 40 C.F.R. part 60, Appendix A-4.

(60) "Equivalent method" means any method of sampling and analyzing for a regulated pollutant that has been demonstrated to DEQ's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions. An equivalent method used to meet an applicable federal requirement for which a reference method is specified must be approved by EPA unless EPA has delegated authority for the approval to DEQ.

(61) "Event" means excess emissions that arise from the same condition and occur during a single calendar day or continue into subsequent calendar days.

(62) "Exceedance" means a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions, or opacity, are greater than the applicable emission limitation or standard, or less than the applicable standard in the case of a percent reduction requirement, consistent with any averaging period specified for averaging the results of the monitoring.

(63) "Excess emissions" means emissions in excess of a permit or permit attachment limit, in excess of a risk limit under OAR chapter 340, division 245, or in violation of any applicable air quality rule.

(64) "Excursion" means a departure from an indicator range established for monitoring under OAR 340-212-0200 through 340-212-0280 and 340-218-0050(3)(a), consistent with any averaging period specified for averaging the results of the monitoring.

(65) "Federal Land Manager" means with respect to any lands in the United States, the Secretary of the federal department with authority over such lands.

(66) "Federal Major Source" means any source listed in subsections (a) or (d) below:

(a) A source with potential to emit:

(A) 100 tons per year or more of any individual regulated pollutant, excluding greenhouse gases and hazardous air pollutants listed in OAR 340 division 244 if in a source category listed in subsection (c), or

(B) 250 tons per year or more of any individual regulated pollutant, excluding greenhouse gases and hazardous air pollutants listed in OAR 340 division 244, if not in a source category listed in subsection (c).

(b) Calculations for determining a source's potential to emit for purposes of subsections (a) and (d) must include the following:

(A) Fugitive emissions and insignificant activity emissions; and

(B) Increases or decreases due to a new or modified source.

(c) Source categories:

- (A) Fossil fuel-fired steam electric plants of more than 250 million BTU/hour heat input;
 - (B) Coal cleaning plants with thermal dryers;
 - (C) Kraft pulp mills;
 - (D) Portland cement plants;
 - (E) Primary zinc smelters;
 - (F) Iron and steel mill plants;
 - (G) Primary aluminum ore reduction plants;
 - (H) Primary copper smelters;
 - (I) Municipal incinerators capable of charging more than 50 tons of refuse per day;
 - (J) Hydrofluoric acid plants;
 - (K) Sulfuric acid plants;
 - (L) Nitric acid plants;
 - (M) Petroleum refineries;
 - (N) Lime plants;
 - (O) Phosphate rock processing plants;
 - (P) Coke oven batteries;
 - (Q) Sulfur recovery plants;
 - (R) Carbon black plants, furnace process;
 - (S) Primary lead smelters;
 - (T) Fuel conversion plants;
 - (U) Sintering plants;
 - (V) Secondary metal production plants;
 - (W) Chemical process plants, excluding ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
 - (X) Fossil fuel fired boilers, or combinations thereof, totaling more than 250 million BTU per hour heat input;
 - (Y) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - (Z) Taconite ore processing plants;
 - (AA) Glass fiber processing plants;
 - (BB) Charcoal production plants.
- (d) A major stationary source as defined in part D of Title I of the FCAA, including:

(A) For ozone nonattainment areas, sources with the potential to emit 100 tons per year or more of VOCs or oxides of nitrogen in areas classified as "marginal" or "moderate," 50 tons per year or more in areas classified as "serious," 25 tons per year or more in areas classified as "severe," and 10 tons per year or more in areas classified as "extreme"; except that the references in this paragraph to 100, 50, 25, and 10 tons per year of nitrogen oxides do not apply with respect to any source for which the Administrator has made a finding, under section 182(f)(1) or (2) of the FCAA, that requirements under section 182(f) of the FCAA do not apply;

(B) For ozone transport regions established under section 184 of the FCAA, sources with the potential to emit 50 tons per year or more of VOCs;

(C) For carbon monoxide nonattainment areas that are classified as "serious" and in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the Administrator, sources with the potential to emit 50 tons per year or more of carbon monoxide.

(D) For PM10 nonattainment areas classified as "serious," sources with the potential to emit 70 tons per year or more of PM10.

(67) "Final permit" means the version of an Oregon Title V Operating Permit issued by DEQ or LRAPA that has completed all review procedures required by OAR 340-218-0120 through 340-218-0240.

(68) "Form" means a paper or electronic form developed by DEQ.

(69) "Fuel burning equipment" means equipment, other than internal combustion engines, the principal purpose of which is to produce heat or power by indirect heat transfer.

(70) "Fugitive emissions":

(a) Except as used in subsection (b), means emissions of any air contaminant which escape to the atmosphere from any point or area that is not identifiable as a stack, vent, duct, or equivalent opening.

(b) As used to define a major Oregon Title V Operating Permit program source, means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(71) "General permit":

(a) Except as provided in subsection (b), means an Oregon Air Contaminant Discharge Permit established under OAR 340-216-0060;

(b) As used in OAR 340 division 218 means an Oregon Title V Operating Permit established under OAR 340-218-0090.

(72) "Generic PSEL" means the levels for the regulated pollutants listed below:

(a) Greenhouse Gases (CO₂e) = 74,000 tons per year

(b) CO = 99 tons per year

(c) NO_x = 39 tons per year

(d) SO₂ = 39 tons per year

(e) VOC = 39 tons per year

(f) PM = 24 tons per year

(g) PM₁₀ (except Medford AQMA) = 14 tons per year

- (h) PM10 (Medford AQMA) = 4.5 tons per year and 49 pounds per day
 - (i) PM2.5 = 9 tons per year
 - (j) Lead = 0.5 tons per year
 - (k) Fluorides = 2 tons per year
 - (l) Sulfuric Acid Mist = 6 tons per year
 - (m) Hydrogen Sulfide = 9 tons per year
 - (n) Total Reduced Sulfur (including hydrogen sulfide) = 9 tons per year
 - (o) Reduced Sulfur = 9 tons per year
 - (p) Municipal waste combustor organics (Dioxin and furans) = 0.0000030 tons per year
 - (q) Municipal waste combustor metals = 14 tons per year
 - (r) Municipal waste combustor acid gases = 39 tons per year
 - (s) Municipal solid waste landfill gases (measured as nonmethane organic compounds) = 49 tons per year
 - (t) Single HAP = 9 tons per year
 - (u) Combined HAPs (aggregate) = 24 tons per year
- (73)(a) "Greenhouse gases" or "GHGs" means the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Each gas is also individually a greenhouse gas.
- (b) The definition of greenhouse gases in subsection (a) of this section does not include, for purposes of division 216, 218, and 224, carbon dioxide emissions from the combustion or decomposition of biomass except to the extent required by federal law.
- (74) "Growth allowance" means an allocation of some part of an airshed's capacity to accommodate future proposed sources and modifications of sources.
- (75) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.
- (76) "Hazardous Air Pollutant" or "HAP" means an air contaminant listed by the EPA under section 112(b) of the FCAA or determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health or the environment.
- (77) "Immediately" means as soon as possible but in no case more than one hour after a source knew or should have known of an excess emission period.
- (78) "Indian governing body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.
- (79) "Indian reservation" means any federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.
- (80) "Inherent process equipment" means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must

be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of OAR 340-212-0200 through 340-212-0280, inherent process equipment is not considered a control device.

(81) "Insignificant activity" means an activity or emission that DEQ has designated as categorically insignificant, or that meets the criteria of aggregate insignificant emissions.

(82) "Insignificant change" means an off-permit change defined under OAR 340-218-0140(2)(a) to either a significant or an insignificant activity which:

(a) Does not result in a re-designation from an insignificant to a significant activity;

(b) Does not invoke an applicable requirement not included in the permit; and

(c) Does not result in emission of regulated pollutants not regulated by the source's permit.

(83) "Internal combustion engine" means stationary gas turbines and reciprocating internal combustion engines.

(84) "Late payment" means a fee payment which is postmarked after the due date.

(85) "Liquefied petroleum gas" has the meaning given by the American Society for Testing and Materials in ASTM D1835-82, "Standard Specification for Liquid Petroleum Gases."

(86) "Lowest Achievable Emission Rate" or "LAER" means that rate of emissions which reflects: the most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable; or the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent. The application of this term cannot permit a proposed new or modified source to emit any air contaminant in excess of the amount allowable under applicable New Source Performance Standards (NSPS) or standards for hazardous air pollutants.

(87) "Maintenance area" means any area that was formerly nonattainment for a criteria pollutant but has since met the ambient air quality standard, and EPA has approved a maintenance plan to comply with the standards under 40 C.F.R. 51.110. Maintenance areas are designated by the EQC according to division 204.

(88) "Maintenance pollutant" means a regulated pollutant for which a maintenance area was formerly designated a nonattainment area.

(89) "Major Modification" means any physical change or change in the method of operation of a source that results in satisfying the requirements of OAR 340-224-0025.

(90) "Major New Source Review" or "Major NSR" means the new source review process and requirements under OAR 340-224-0010 through 340-224-0070 and 340-224-0500 through 340-224-0540 based on the location and regulated pollutants emitted.

(91) "Major source":

(a) Except as provided in subsection (b) of this section, means a source that emits, or has the potential to emit, any regulated air pollutant at a Significant Emission Rate. The fugitive emissions and insignificant activity emissions of a stationary source are considered in determining whether it is a major source. Potential to emit calculations must include emission increases due to a new or modified source and may include emission decreases.

(b) As used in OAR 340 division 210, Stationary Source Notification Requirements, OAR 340 division 218, Oregon Title V Operating Permits, OAR 340 division 220, Oregon Title V Operating Permit Fees, 340-216-0066, Standard ACDPs, and OAR 340 division 236, Emission Standards for Specific Industries, means any stationary source or any group of stationary sources that are located on one or more contiguous or adjacent properties and are under common control of the same person or persons under common control belonging to a single major industrial grouping or supporting the major industrial group and that is described in paragraphs (A), (B), or (C). For the purposes of this subsection, a stationary source or group of stationary sources is considered part of a single industrial grouping if all of the regulated pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same major group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual (U.S. Office of Management and Budget, 1987) or support the major industrial group.

(A) A major source of hazardous air pollutants, which means:

(i) For hazardous air pollutants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, 10 tons per year or more of any hazardous air pollutants that has been listed under OAR 340-244-0040; 25 tons per year or more of any combination of such hazardous air pollutants, or such lesser quantity as the Administrator may establish by rule. Emissions from any oil or gas exploration or production well, along with its associated equipment, and emissions from any pipeline compressor or pump station will not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources; or

(ii) For radionuclides, "major source" will have the meaning specified by the Administrator by rule.

(B) A major stationary source of regulated pollutants, as defined in section 302 of the FCAA, that directly emits or has the potential to emit 100 tons per year or more of any regulated pollutant, except greenhouse gases, including any major source of fugitive emissions of any such regulated pollutant. The fugitive emissions of a stationary source are not considered in determining whether it is a major stationary source for the purposes of section 302(j) of the FCAA, unless the source belongs to one of the following categories of stationary sources:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cement plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than 50 tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or nitric acid plants;

(x) Petroleum refineries;

(xi) Lime plants;

(xii) Phosphate rock processing plants;

- (xiii) Coke oven batteries;
- (xiv) Sulfur recovery plants;
- (xv) Carbon black plants (furnace process);
- (xvi) Primary lead smelters;
- (xvii) Fuel conversion plants;
- (xviii) Sintering plants;
- (xix) Secondary metal production plants;
- (xx) Chemical process plants, excluding ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (xxi) Fossil-fuel boilers, or combination thereof, totaling more than 250 million British thermal units per hour heat input;
- (xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (xxiii) Taconite ore processing plants;
- (xxiv) Glass fiber processing plants;
- (xxv) Charcoal production plants;
- (xxvi) Fossil-fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or
- (xxvii) Any other stationary source category, that as of August 7, 1980 is being regulated under section 111 or 112 of the FCAA.

(C) From July 1, 2011 through November 6, 2014, a major stationary source of regulated pollutants, as defined by Section 302 of the FCAA, that directly emits or has the potential to emit 100 tons per year or more of greenhouse gases and directly emits or has the potential to emit 100,000 tons per year or more CO₂e, including fugitive emissions.

(92) "Material balance" means a procedure for determining emissions based on the difference in the amount of material added to a process and the amount consumed and/or recovered from a process.

(93) "Modification," except as used in the terms "major modification" "permit modification" and "Title I modification," means any physical change to, or change in the method of operation of, a source or part of a source that results in an increase in the source or part of the source's potential to emit any regulated pollutant on an hourly basis. Modifications do not include the following:

- (a) Increases in hours of operation or production rates that do not involve a physical change or change in the method of operation;
- (b) Changes in the method of operation due to using an alternative fuel or raw material that the source or part of a source was physically capable of accommodating during the baseline period; and
- (c) Routine maintenance, repair and like-for-like replacement of components unless they increase the expected life of the source or part of a source by using component upgrades that would not otherwise be necessary for the source or part of a source to function.

(94) "Monitoring" means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Monitoring may include record keeping if the records are used to determine or assess compliance with an emission limitation or standard such as records of raw material content and usage, or records documenting compliance with work practice requirements. Monitoring may include conducting compliance method tests, such as the procedures in appendix A to 40 C.F.R. part 60, on a routine periodic basis. Requirements to conduct such tests on a one-time basis, or at such times as a regulatory authority may require on a non-regular basis, are not considered monitoring requirements for purposes of this definition. Monitoring may include one or more than one of the following data collection techniques as appropriate for a particular circumstance:

- (a) Continuous emission or opacity monitoring systems.
- (b) Continuous process, capture system, control device or other relevant parameter monitoring systems or procedures, including a predictive emission monitoring system.
- (c) Emission estimation and calculation procedures (e.g., mass balance or stoichiometric calculations).
- (d) Maintaining and analyzing records of fuel or raw materials usage.
- (e) Recording results of a program or protocol to conduct specific operation and maintenance procedures.
- (f) Verifying emissions, process parameters, capture system parameters, or control device parameters using portable or in situ measurement devices.
- (g) Visible emission observations and recording.
- (h) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device parameters or other factors relevant to assessing compliance with emission limitations or standards.

(95) "Natural gas" means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal component is methane.

(96) "Netting basis" means an emission rate determined as specified in OAR 340-222-0046.

(97) "Nitrogen oxides" or "NO_x" means all oxides of nitrogen except nitrous oxide.

(98) "Nonattainment area" means a geographical area of the state, as designated by the EQC or the EPA, that exceeds any state or federal primary or secondary ambient air quality standard. Nonattainment areas are designated by the EQC according to division 204.

(99) "Nonattainment pollutant" means a regulated pollutant for which an area is designated a nonattainment area. Nonattainment areas are designated by the EQC according to division 204.

(100) "Normal source operation" means operation that does not include such conditions as forced fuel substitution, equipment malfunction, or highly abnormal market conditions.

(101) "Odor" means that property of an air contaminant that affects the sense of smell.

(102) "Offset" means an equivalent or greater emission reduction that is required before allowing an emission increase from a source that is subject to Major NSR or State NSR.

(103) "Opacity" means the degree to which emissions, excluding uncombined water, reduce the transmission of light and obscure the view of an object in the background as measured by EPA Method 9 or other method, as specified in each applicable rule.

(104) "Oregon Title V operating permit" or "Title V permit" means written authorization issued, renewed, amended, or revised under OAR 340 division 218.

(105) "Oregon Title V operating permit program" or "Title V program" means the Oregon program described in OAR 340 division 218 and approved by the Administrator under 40 C.F.R. part 70.

(106) "Oregon Title V operating permit program source" or "Title V source" means any source subject to the permitting requirements, OAR 340 division 218.

(107) "Ozone precursor" means nitrogen oxides and volatile organic compounds.

(108) "Ozone season" means the contiguous 3 month period during which ozone exceedances typically occur, i.e., June, July, and August.

(109) "Particleboard" means matformed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(110) "Particulate matter" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by the test method specified in each applicable rule, or where not specified by rule, in the permit.

(111) "Permit" means an Air Contaminant Discharge Permit or an Oregon Title V Operating Permit, permit attachment and any amendments or modifications thereof.

(112) "Permit modification" means a permit revision that meets the applicable requirements of OAR 340 division 216, OAR 340 division 224, or OAR 340-218-0160 through 340-218-0180.

(113) "Permit revision" means any permit modification or administrative permit amendment.

(114) "Permitted emissions" as used in OAR 340 division 220 means each regulated pollutant portion of the PSEL, as identified in an ACDP, Oregon Title V Operating Permit, review report, or by DEQ under OAR 340-220-0090.

(115) "Permittee" means the owner or operator of a source, authorized to emit regulated pollutants under an ACDP or Oregon Title V Operating Permit.

(116) "Person" means individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the State of Oregon and any agencies thereof, and the federal government and any agencies thereof.

(117) "Plant Site Emission Limit" or "PSEL" means the total mass emissions per unit time of an individual regulated pollutant specified in a permit for a source. The PSEL for a major source may consist of more than one permitted emission for purposes of Oregon Title V Operating Permit Fees in OAR 340 division 220.

(118) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(119) "PM10":

(a) When used in the context of emissions, means finely divided solid or liquid material, including condensable particulate, other than uncombined water, with an aerodynamic diameter less than or equal to a nominal 10 micrometers, emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit;

(b) When used in the context of ambient concentration, means airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured under 40 C.F.R. part 50, Appendix J or an equivalent method designated under 40 C.F.R. part 53.

(120) "PM2.5":

(a) When used in the context of direct PM2.5 emissions, means finely divided solid or liquid material, including condensable particulate, other than uncombined water, with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers, emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit.

(b) When used in the context of PM2.5 precursor emissions, means sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit.

(c) When used in the context of ambient concentration, means airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured under 40 C.F.R. part 50, Appendix L, or an equivalent method designated under 40 C.F.R. part 53.

(121) "PM2.5 fraction" means the fraction of PM2.5 in relation to PM10 for each emissions unit that is included in the netting basis and PSEL.

(122) "Pollutant-specific emissions unit" means an emissions unit considered separately with respect to each regulated pollutant.

(123) "Portable" means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(124) "Potential to emit" or "PTE" means the lesser of:

(a) The regulated pollutant emissions capacity of a stationary source; or

(b) The maximum allowable regulated pollutant emissions taking into consideration any physical or operational limitation, including use of control devices and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, if the limitation is enforceable by the Administrator.

(c) This definition does not alter or affect the use of this term for any other purposes under the FCAA or the term "capacity factor" as used in Title IV of the FCAA and the regulations promulgated thereunder. Secondary emissions are not considered in determining the potential to emit.

(125) "ppm" means parts per million by volume unless otherwise specified in the applicable rule or an individual permit. It is a dimensionless unit of measurement for gases that expresses the ratio of the volume of one component gas to the volume of the entire sample mixture of gases.

(126) "Predictive emission monitoring system" or "PEMS" means a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard.

(127) "Press/cooling vent" means any opening through which particulate and gaseous emissions from plywood, particleboard, or hardboard manufacturing are exhausted, either by natural draft or powered fan, from the building housing the process. Such openings are generally located immediately above the board press, board unloader, or board cooling area.

(128) "Process upset" means a failure or malfunction of a production process or system to operate in a normal and usual manner.

(129) "Proposed permit" means the version of an Oregon Title V Operating Permit that DEQ or LRAPA proposes to issue and forwards to the Administrator for review in compliance with OAR 340-218-0230.

(130) "Reattainment area" means an area that is designated as nonattainment and has three consecutive years of monitoring data that shows the area is meeting the ambient air quality standard for the regulated pollutant for which the area was designated a nonattainment area, but a formal redesignation by EPA has not yet been approved. Reattainment areas are designated by the EQC according to division 204.

(131) "Reattainment pollutant" means a regulated pollutant for which an area is designated a reattainment area.

(132) "Reference method" means any method of sampling and analyzing for a regulated pollutant as specified in 40 C.F.R. part 52, 60, 61 or 63.

(133) "Regional agency" means Lane Regional Air Protection Agency.

(134) "Regulated air pollutant" or "Regulated pollutant":

(a) Except as provided in subsections (b), (c) and (d), means:

(A) Nitrogen oxides or any VOCs;

(B) Any pollutant for which an ambient air quality standard has been promulgated, including any precursors to such pollutants;

(C) Any pollutant that is subject to any standard promulgated under section 111 of the FCAA;

(D) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA;

(E) Any pollutant listed under OAR 340-244-0040 or 40 C.F.R. 68.130;

(F) Greenhouse gases; and

(G) Toxic Air Contaminants.

(b) As used in OAR 340 division 220, Oregon Title V Operating Permit Fees, regulated pollutant means particulate matter, volatile organic compounds, oxides of nitrogen and sulfur dioxide.

(c) As used in OAR 340 division 222, Plant Site Emission Limits and division 224, New Source Review, regulated pollutant does not include any pollutant listed in OAR 340 divisions 244 and 246.

(d) As used in OAR 340 division 202 Ambient Air Quality Standards And PSD Increments ~~through division 210 Stationary Source Notification Requirements;~~ [division 208 Visible Emissions and Nuisance Requirements](#); division 215 Greenhouse Reporting Requirements; division 222 Stationary Source Plant Site Emission Limits through division 244 Oregon Federal Hazardous Air Pollutant Program; and division 248 Asbestos Requirements through division 268 Emission Reduction Credits; regulated pollutant means only the air contaminants listed under paragraphs (a)(A) through (F).

(135) "Removal efficiency" means the performance of an air pollution control device in terms of the ratio of the amount of the regulated pollutant removed from the airstream to the total amount of regulated pollutant that enters the air pollution control device.

(136) "Renewal" means the process by which a permit is reissued at the end of its term.

(137) "Responsible official" means one of the following:

(a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(A) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(B) The delegation of authority to such representative is approved in advance by DEQ or LRAPA.

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(c) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this division, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of EPA (e.g., a Regional Administrator of the EPA); or

(d) For affected sources:

(A) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated there under are concerned; and

(B) The designated representative for any other purposes under the Oregon Title V Operating Permit program.

(138) "Secondary emissions" means emissions that are a result of the construction and/or operation of a source or modification, but that do not come from the source itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the source associated with the secondary emissions. Secondary emissions may include, but are not limited to:

(a) Emissions from ships and trains coming to or from a facility;

(b) Emissions from off-site support facilities that would be constructed or would otherwise increase emissions as a result of the construction or modification of a source.

(139) "Section 111" means section 111 of the FCAA, 42 U.S.C. § 7411, which includes Standards of Performance for New Stationary Sources (NSPS).

(140) "Section 111(d)" means subsection 111(d) of the FCAA, 42 U.S.C. § 7411(d), which requires states to submit to the EPA plans that establish standards of performance for existing sources and provides for implementing and enforcing such standards.

(141) "Section 112" means section 112 of the FCAA, 42 U.S.C. § 7412, which contains regulations for Hazardous Air Pollutants.

(142) "Section 112(b)" means subsection 112(b) of the FCAA, 42 U.S.C. § 7412(b), which includes the list of hazardous air pollutants to be regulated.

(143) "Section 112(d)" means subsection 112(d) of the FCAA, 42 U.S.C. § 7412(d), which directs the EPA to establish emission standards for sources of hazardous air pollutants. This section also defines the criteria to be used by the EPA when establishing the emission standards.

(144) "Section 112(e)" means subsection 112(e) of the FCAA, 42 U.S.C. § 7412(e), which directs the EPA to establish and promulgate emissions standards for categories and subcategories of sources that emit hazardous air pollutants.

(145) "Section 112(r)(7)" means subsection 112(r)(7) of the FCAA, 42 U.S.C. § 7412(r)(7), which requires the EPA to promulgate regulations for the prevention of accidental releases and requires owners or operators to prepare risk management plans.

(146) "Section 114(a)(3)" means subsection 114(a)(3) of the FCAA, 42 U.S.C. § 7414(a)(3), which requires enhanced monitoring and submission of compliance certifications for major sources.

(147) "Section 129" means section 129 of the FCAA, 42 U.S.C. § 7429, which requires the EPA to establish emission standards and other requirements for solid waste incineration units.

(148) "Section 129(e)" means subsection 129(e) of the FCAA, 42 U.S.C. § 7429(e), which requires solid waste incineration units to obtain Oregon Title V Operating Permits.

(149) "Section 182(f)" means subsection 182(f) of the FCAA, 42 U.S.C. § 7511a(f), which requires states to include plan provisions in the SIP for NO_x in ozone nonattainment areas.

(150) "Section 182(f)(1)" means subsection 182(f)(1) of the FCAA, 42 U.S.C. § 7511a(f)(1), which requires states to apply those plan provisions developed for major VOC sources and major NO_x sources in ozone nonattainment areas.

(151) "Section 183(e)" means subsection 183(e) of the FCAA, 42 U.S.C. § 7511b(e), which requires the EPA to study and develop regulations for the control of certain VOC sources under federal ozone measures.

(152) "Section 183(f)" means subsection 183(f) of the FCAA, 42 U.S.C. § 7511b(f), which requires the EPA to develop regulations pertaining to tank vessels under federal ozone measures.

(153) "Section 184" means section 184 of the FCAA, 42 U.S.C. § 7511c, which contains regulations for the control of interstate ozone air pollution.

(154) "Section 302" means section 302 of the FCAA, 42 U.S.C. § 7602, which contains definitions for general and administrative purposes in the FCAA.

(155) "Section 302(j)" means subsection 302(j) of the FCAA, 42 U.S.C. § 7602(j), which contains definitions of "major stationary source" and "major emitting facility."

(156) "Section 328" means section 328 of the FCAA, 42 U.S.C. § 7627, which contains regulations for air pollution from outer continental shelf activities.

(157) "Section 408(a)" means subsection 408(a) of the FCAA, 42 U.S.C. § 7651g(a), which contains regulations for the Title IV permit program.

(158) "Section 502(b)(10) change" means a change which contravenes an express permit term but is not a change that:

(a) Would violate applicable requirements;

(b) Would contravene federally enforceable permit terms and conditions that are monitoring, recordkeeping, reporting, or compliance certification requirements; or

(c) Is a FCAA Title I modification.

(159) "Section 504(b)" means subsection 504(b) of the FCAA, 42 U.S.C. § 7661c(b), which states that the EPA can prescribe by rule procedures and methods for determining compliance and for monitoring.

(160) "Section 504(e)" means subsection 504(e) of the FCAA, 42 U.S.C. § 761c(e), which contains regulations for permit requirements for temporary sources.

(161) "Significant emission rate" or "SER," except as provided in subsections (v) and (w), means an emission rate equal to or greater than the rates specified for the regulated pollutants below:

(a) Greenhouse gases (CO₂e) = 75,000 tons per year

(b) Carbon monoxide = 100 tons per year except in a serious nonattainment area = 50 tons per year, provided DEQ has determined that stationary sources contribute significantly to carbon monoxide levels in that area.

(c) Nitrogen oxides (NO_x) = 40 tons per year.

(d) Particulate matter = 25 tons per year.

(e) PM₁₀ = 15 tons per year.

(f) Direct PM_{2.5} = 10 tons per year.

(g) PM_{2.5} precursors (SO₂ or NO_x) = 40 tons per year.

(h) Sulfur dioxide (SO₂) = 40 tons per year.

(i) Ozone precursors (VOC or NO_x) = 40 tons per year except:

(I) In a serious or severe ozone nonattainment area = 25 tons per year.

(II) In an extreme ozone nonattainment area = any emissions increase.

(j) Lead = 0.6 tons per year.

(k) Fluorides = 3 tons per year.

(l) Sulfuric acid mist = 7 tons per year.

(m) Hydrogen sulfide = 10 tons per year.

(n) Total reduced sulfur (including hydrogen sulfide) = 10 tons per year.

(o) Reduced sulfur compounds (including hydrogen sulfide) = 10 tons per year.

(p) Municipal waste combustor organics (measured as total tetra- through octa- chlorinated dibenzo-p-dioxins and dibenzofurans) = 0.0000035 tons per year.

(q) Municipal waste combustor metals (measured as particulate matter) = 15 tons per year.

(r) Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride) = 40 tons per year.

(s) Municipal solid waste landfill emissions (measured as nonmethane organic compounds) = 50 tons per year.

(t) Ozone depleting substances in aggregate = 100 tons per year.

(u) For the Medford-Ashland Air Quality Maintenance Area, the SER for PM₁₀ is defined as 5 tons per year on an annual basis and 50.0 pounds per day on a daily basis.

(v) For regulated pollutants not listed in subsections (a) through (u), the SER is zero unless DEQ determines the rate that constitutes a SER.

(w) Any new source or modification with an emissions increase less than the rates specified above and that is located within 10 kilometers of a Class I area, and would have an impact on such area equal to or greater than 1 $\mu\text{g}/\text{m}^3$ (24 hour average) is emitting at a SER. This subsection does not apply to greenhouse gas emissions.

(162) "Significant impact" means an additional ambient air quality concentration equal to or greater than the significant impact level. For sources of VOC or NO_x, a source has a significant impact if it is located within the ozone impact distance defined in OAR 340 division 224.

(163) "Significant impact level" or "SIL" means the ambient air quality concentrations listed below. The threshold concentrations listed below are used for comparison against the ambient air quality standards and PSD increments established under OAR 340 division 202, but do not apply for protecting air quality related values, including visibility.

(a) For Class I areas:

(A) PM_{2.5}:

(i) Annual = 0.06 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.07 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.30 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 0.10 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.20 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide: annual = 0.10 $\mu\text{g}/\text{m}^3$.

(b) For Class II areas:

(A) PM_{2.5}:

(i) Annual = 0.3 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.2 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 5.0 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 25.0 $\mu\text{g}/\text{m}^3$.

(iv) 1-hour = 8.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 1-hour = 8.0 $\mu\text{g}/\text{m}^3$.

(E) Carbon monoxide:

(i) 8-hour = 0.5 mg/m^3 .

(ii) 1-hour = 2.0 mg/m^3 .

(c) For Class III areas:

(A) PM_{2.5}:

(i) Annual = 0.3 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.2 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 5.0 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 25.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide: annual = 1.0 $\mu\text{g}/\text{m}^3$

(E) Carbon monoxide:

(i) 8-hour = 0.5 mg/m^3 .

(ii) 1-hour = 2.0 mg/m^3 .

(164) "Significant impairment" occurs when DEQ determines that visibility impairment interferes with the management, protection, preservation, or enjoyment of the visual experience within a Class I area. DEQ will make this determination on a case-by-case basis after considering the recommendations of the Federal Land Manager and the geographic extent, intensity, duration, frequency, and time of visibility impairment. These factors will be considered along with visitor use of the Class I areas, and the frequency and occurrence of natural conditions that reduce visibility.

(165) "Small scale local energy project" means:

(a) A system, mechanism or series of mechanisms located primarily in Oregon that directly or indirectly uses or enables the use of, by the owner or operator, renewable resources including, but not limited to, solar, wind, geothermal, biomass, waste heat or water resources to produce energy, including heat, electricity and substitute fuels, to meet a local community or regional energy need in this state;

- (b) A system, mechanism or series of mechanisms located primarily in Oregon or providing substantial benefits to Oregon that directly or indirectly conserves energy or enables the conservation of energy by the owner or operator, including energy used in transportation;
- (c) A recycling project;
- (d) An alternative fuel project;
- (e) An improvement that increases the production or efficiency, or extends the operating life, of a system, mechanism, series of mechanisms or project otherwise described in this section of this rule, including but not limited to restarting a dormant project;
- (f) A system, mechanism or series of mechanisms installed in a facility or portions of a facility that directly or indirectly reduces the amount of energy needed for the construction and operation of the facility and that meets the sustainable building practices standard established by the State Department of Energy by rule; or
- (g) A project described in subsections (a) to (f), whether or not the existing project was originally financed under ORS 470, together with any refinancing necessary to remove prior liens or encumbrances against the existing project.
- (h) A project described in subsections (a) to (g) that conserves energy or produces energy by generation or by processing or collection of a renewable resource.
- (166) "Source" means any building, structure, facility, installation or combination thereof that emits or is capable of emitting air contaminants to the atmosphere, is located on one or more contiguous or adjacent properties and is owned or operated by the same person or by persons under common control. The term includes all air contaminant emitting activities that belong to a single major industrial group, i.e., that have the same two-digit code, as described in the Standard Industrial Classification Manual, U.S. Office of Management and Budget, 1987, or that support the major industrial group.
- (167) "Source category":
- (a) Except as provided in subsection (b), means all the regulated pollutant emitting activities that belong to the same industrial grouping, i.e., that have the same two-digit code, as described in the Standard Industrial Classification Manual, U.S. Office of Management and Budget, 1987.
- (b) As used in OAR 340 division 220, Oregon Title V Operating Permit Fees, means a group of major sources that DEQ determines are using similar raw materials and have equivalent process controls and pollution control device.
- (168) "Source test" means the average of at least three test runs conducted under the DEQ Source Sampling Manual found in 340-200-0035.
- (169) "Standard conditions" means a temperature of 68° Fahrenheit (20° Celsius) and a pressure of 14.7 pounds per square inch absolute (1.03 Kilograms per square centimeter).
- (170) "Startup" and "shutdown" means that time during which a source or control device is brought into normal operation or normal operation is terminated, respectively.
- (171) "State Implementation Plan" or "SIP" means the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040 and approved by EPA.
- (172) "State New Source Review" or "State NSR" means the new source review process and requirements under OAR 340-224-0010 through 340-224-0038, 340-224-0245 through 340-224-0270 and 340-224-0500 through 340-224-0540 based on the location and regulated pollutants emitted.

(173) "Stationary source" means any building, structure, facility, or installation at a source that emits or may emit any regulated pollutant. Stationary source includes portable sources that are required to have permits under OAR 340 division 216.

(174) "Substantial underpayment" means the lesser of 10 percent of the total interim emission fee for the major source or five hundred dollars.

(175) "Sustainment area" means a geographical area of the state for which DEQ has ambient air quality monitoring data that shows an attainment or unclassified area could become a nonattainment area but a formal redesignation by EPA has not yet been approved. The presumptive geographic boundary of a sustainment area is the applicable urban growth boundary in effect on the date this rule was last approved by the EQC, unless superseded by rule. Sustainment areas are designated by the EQC according to division 204.

(176) "Sustainment pollutant" means a regulated pollutant for which an area is designated a sustainment area.

(177) "Synthetic minor source" means a source that would be classified as a major source under OAR 340-200-0020, but for limits on its potential to emit regulated pollutants contained in an ACDP or Oregon Title V permit issued by DEQ.

(178) "Title I modification" means one of the following modifications under Title I of the FCAA:

(a) A major modification subject to OAR 340-224-0050, Requirements for Sources in Nonattainment Areas or OAR 340-224-0055, Requirements for Sources in Reattainment Areas;

(b) A major modification subject to OAR 340-224-0060, Requirements for Sources in Maintenance Areas;

(c) A major modification subject to OAR 340-224-0070, Prevention of Significant Deterioration Requirements for Sources in Attainment or Unclassified Areas or 340-224-0045 Requirements for Sources in Sustainment Areas;

(d) A modification that is subject to a New Source Performance Standard under Section 111 of the FCAA; or,

(e) A modification under Section 112 of the FCAA.

(179) "Total reduced sulfur" or "TRS" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides present expressed as hydrogen sulfide (H₂S).

(180) "Toxic air contaminant" means an air pollutant that has been determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health and is listed in OAR 340-245-8020 Table 2.

(181) "Type A State NSR" means State NSR as specified in OAR 340-224-0010(2)(a).

(182) "Type B State NSR" means State NSR that is not Type A State NSR.

(183) "Typically Achievable Control Technology" or "TACT" means the emission limit established on a case-by-case basis for a criteria pollutant from a particular emissions unit under OAR 340-226-0130.

(184) "Unassigned emissions" means the amount of emissions that are in excess of the PSEL but less than the netting basis.

(185) "Unavoidable" or "could not be avoided" means events that are not caused entirely or in part by design, operation, maintenance, or any other preventable condition in either process or control device.

(186) "Unclassified area" or "attainment area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment areas or unclassified areas may also be referred to as sustainment or maintenance areas as designated in OAR 340 division 204. Any particular location may be part of an attainment area or unclassified area for one regulated pollutant while also being in a different type of designated area for another regulated pollutant.

(187) "Upset" or "Breakdown" means any failure or malfunction of any pollution control device or operating equipment that may cause excess emissions.

(188) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

(189) "Veneer dryer" means equipment in which veneer is dried.

(190) "Visibility impairment" means any humanly perceptible change in visual range, contrast or coloration from that which existed under natural conditions. Natural conditions include fog, clouds, windblown dust, rain, sand, naturally ignited wildfires, and natural aerosols.

(191) "Volatile organic compounds" or "VOC" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions.

(a) This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity:

(A) Methane;

(B) Ethane;

(C) Methylene chloride (dichloromethane);

(D) 1,1,1-trichloroethane (methyl chloroform);

(E) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);

(F) Trichlorofluoromethane (CFC-11);

(G) Dichlorodifluoromethane (CFC-12);

(H) Chlorodifluoromethane (HCFC-22);

(I) Trifluoromethane (HFC-23);

(J) 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114);

(K) Chloropentafluoroethane (CFC-115);

(L) 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123);

(M) 1,1,1,2-tetrafluoroethane (HFC-134a);

(N) 1,1-dichloro 1-fluoroethane (HCFC-141b);

(O) 1-chloro 1,1-difluoroethane (HCFC-142b);

(P) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
(Q) Pentafluoroethane (HFC-125);
(R) 1,1,2,2-tetrafluoroethane (HFC-134);
(S) 1,1,1-trifluoroethane (HFC-143a);
(T) 1,1-difluoroethane (HFC-152a);
(U) Parachlorobenzotrifluoride (PCBTF);
(V) Cyclic, branched, or linear completely methylated siloxanes;
(W) Acetone;
(X) Perchloroethylene (tetrachloroethylene);
(Y) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
(Z) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
(AA) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
(BB) Difluoromethane (HFC-32);
(CC) Ethylfluoride (HFC-161);
(DD) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
(EE) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
(FF) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
(GG) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
(HH) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
(II) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
(JJ) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
(KK) chlorofluoromethane (HCFC-31);
(LL) 1 chloro-1-fluoroethane (HCFC-151a);
(MM) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
(NN) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C4 F9 OCH3 or HFE-7100);
(OO) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2 CF2 OCH3);
(PP) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C4 F9 OC2 H5 or HFE-7200);
(QQ) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2 CF2 OC2 H5);
(RR) Methyl acetate;
(SS) 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C3F7OCH3, HFE-7000);
(TT) 3-ethoxy- 1,1,1,2,3,4,4,5,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500);

- (UU) 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea);
- (VV) Methyl formate (HCOOCH₃);
- (WW) 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);
- (XX) Propylene carbonate;
- (YY) Dimethyl carbonate;
- (ZZ) Trans -1,3,3,3-tetrafluoropropene (also known as HFO-1234ze);
- (AAA) HCF₂ OCF₂ H (HFE-134);
- (BBB) HCF₂ OCF₂ OCF₂ H (HFE-236cal2);
- (CCC) HCF₂ OCF₂ CF₂ OCF₂ H (HFE-338pcc13);
- (DDD) HCF₂ OCF₂ OCF₂ CF₂ OCF₂ H (H-Galden 1040x or H-Galden ZT 130 (or 150 or 180));
- (EEE) Trans 1-chloro-3,3,3-trifluoroprop-1-ene (also known as SolsticeTM 1233zd(E));
- (FFF) 2,3,3,3-tetrafluoropropene (also known as HFO-1234yf);
- (GGG) 2-amino-2-methyl-1-propanol; and
- (HHH) perfluorocarbon compounds which fall into these classes:
- (i) Cyclic, branched, or linear, completely fluorinated alkanes;
 - (ii) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
 - (iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
 - (iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- (b) For purposes of determining compliance with emissions limits, VOC will be measured by an applicable reference method in the DEQ Source Sampling Manual referenced in OAR 340-200-0035. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as VOC if the amount of such compounds is accurately quantified, and DEQ approves the exclusion.
- (c) DEQ may require an owner or operator to provide monitoring or testing methods and results demonstrating, to DEQ's satisfaction, the amount of negligibly-reactive compounds in the source's emissions.
- (d) The following compounds are VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOC and must be uniquely identified in emission reports, but are not VOC for purposes of VOC emissions limitations or VOC content requirements: t-butyl acetate.
- (192) "Wood fired veneer dryer" means a veneer dryer, that is directly heated by the products of combustion of wood fuel in addition to or exclusive of steam or natural gas or propane combustion.
- (193) "Wood fuel-fired device" means a device or appliance designed for wood fuel combustion, including cordwood stoves, woodstoves and fireplace stove inserts, fireplaces, wood fuel-fired cook stoves, pellet stoves and combination fuel furnaces and boilers that burn wood fuels.

(194) "Year" means any consecutive 12 month period of time.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan that EQC adopted under OAR 340-200-0040 with the exception of all references to toxic air contaminants and OAR chapter 340, division 245.

[NOTE: Referenced publications not linked to below are available from the agency.]

[NOTE: View a PDF of referenced tables and EPA Methods by clicking on "Tables" link below.]

[\[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.\]](#)

Statutory/Other Authority: ORS 468.020 & 468A

Statutes/Other Implemented: ORS 468A.025, 468A.035, 468A.040, 468A.050, 468A.055, 468A.070, 468A.075, 468A.085, 468A.105, 468A.135, 468A.140, 468A.155, 468A.280, 468A.310, 468A.315, 468A.360, 468A.363, 468A.380, 468A.385, 468A.420, 468A.495, 468A.500, 468A.505, 468A.515, 468A.575, 468A.595, 468A.600, 468A.610, 468A.612, 468A.620, 468A.635, 468A.707, 468A.740, 468A.745, 468A.750, 468A.775, 468A.780, 468A.797, 468A.799, 468A.803, 468A.820 & & Or. Laws 2009, chapter 754

Division 216 AIR CONTAMINANT DISCHARGE PERMITS

340-216-0090

Sources Subject to ACDPs and Fees

(1) All air contaminant discharge sources listed in OAR 340-216-8010 must obtain a permit from DEQ and are subject to fees in OAR 340-216-8020.

(2) An owner or operator of a source that is required to demonstrate compliance with Cleaner Air Oregon rules under OAR 340-245-0005 through 340-245-80150 must pay the fees specified in OAR 340-216-8030.

Division 218 OREGON TITLE V OPERATING PERMITS

340-218-0020

Applicability

(1) Except as provided in section (4), this division applies to the following sources:

(a) Any major source;

(b) Any source, including an area source, subject to a standard, limitation, or other requirement under section 111 of the FCAA;

(c) Any source, including an area source, subject to a standard or other requirement under section 112 of the FCAA, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under section 112(r) of the FCAA;

(d) Any affected source under Title IV; and

(e) Any source in a source category designated by the EQC under this rule.

(2) The owner or operator of a source with an Oregon Title V Operating Permit whose potential to emit later falls below the emission level that causes it to be a major source, and which is not otherwise required to have an Oregon Title V Operating Permit, may submit a request for revocation of the Oregon Title V Operating Permit. Granting of the request for revocation does not relieve the source from compliance with all applicable requirements or ACDP requirements.

(3) Synthetic minor sources.

(a) A source which would otherwise be a major source subject to this division may choose to become a synthetic minor source by limiting its emissions below the emission level that causes it to be a major source through limits contained in an ACDP issued by DEQ under 340 division 216.

(b) The reporting and monitoring requirements of the emission limiting conditions contained in the ACDPs of synthetic minor sources issued by DEQ under OAR 340-216 must meet the requirements of OAR 340-212-0010 through 340-212-0150 and division 214.

(c) Synthetic minor sources who request to increase their potential to emit above the major source emission rate thresholds will become subject to this division and must submit a permit application under OAR 340-218-0040 and obtain an Oregon Title V Operating Permit before increasing emissions above the major source emission rate thresholds.

(d) Synthetic minor sources that exceed the limitations on potential to emit are in violation of OAR 340-218-0020(1)(a).

(4) Source category exemptions.

(a) All sources listed in 340-218-0020(1) that are not major sources, affected sources, or solid waste incineration units required to obtain a permit under section 129(e) of the FCAA are not required to obtain a Title V permit, except non-major sources subject to a standard under section 111 or section 112 of the FCAA promulgated after July 21, 1992 are required to obtain a Title V permit unless specifically exempted from the requirement to obtain a Title V permit in section 111 or 112 standards.

(b) The following source categories are exempted from the obligation to obtain an Oregon Title V Operating Permit:

(A) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 C.F.R. part 60, subpart AAA — Standards of Performance for New Residential Wood Heaters; and

(B) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 C.F.R. part 61, subpart M — National Emission Standard for Hazardous Air Pollutants for Asbestos, section 61.145, Standard for Demolition and Renovation.

(c) Any source listed in OAR 340-218-0020(1) exempt from the requirement to obtain a permit under this rule may opt to apply for an Oregon Title V Operating Permit.

(5) Sources subject to this division may also be subject to OAR 340-245-0005 through 340-245-80510.

[340-218-0110](#)
Permit Shield

(1) Except as provided in this division, DEQ must expressly include in an Oregon Title V Operating Permit a provision stating that compliance with the conditions of the permit will be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

(a) Such applicable requirements are included and are specifically identified in the permit; or

(b) DEQ, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(2) An Oregon Title V Operating Permit that does not expressly state that a permit shield exists will be presumed not to provide such a shield.

(3) Changes made to a permit using OAR 340-218-0150(1)(h) and 340-218-0180 will be shielded.

(4) Nothing in this rule or in any Oregon Title V Operating Permit may alter or affect the following:

(a) The provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035;

(b) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(c) The applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or

(d) The ability of DEQ to obtain information from a source under ORS 468.095 (investigatory authority, access to records).

(5) The permit shield does not apply to conditions and requirements included in a Toxic Air Contaminant Permit Addendum or included in an Oregon Title V Operating Permit under OAR 340-245-0005 through 340-245-80150.

Division 245 Draft Rules – Edits Incorporated

Last revised: June 16, 2021

Division 245 CLEANER AIR OREGON

[340-245-0005](#)

Purpose and Overview

(1) This statement of purpose and overview is an aid to understanding the rules in OAR 340-245-0010 through 340-245-8050 that follow, and is not for the purpose of regulation or compliance.

(2) Purpose. The purpose of Oregon’s risk-based toxic air contaminant permitting program, known as Cleaner Air Oregon, is to:

(a) Prioritize and protect the health and well-being of all Oregonians with a special focus on sensitive populations such as children;

(b) Analyze public health risk due to toxic air contaminant emissions from industrial and commercial sources based on verified science and data;

(c) Consider similar regulations in other states and jurisdictions and use a science-based, consistent and transparent process for communicating and addressing risks from industrial and commercial emissions of toxic air contaminants, provide regulatory predictability to businesses and the communities they are a part of; and

(d) Reduce exposure to industrial and commercial toxic air contaminant emissions while supporting an environment where businesses and communities can thrive.

(3) Overview.

(a) OAR 340-245-0010, Applicability and Jurisdiction, OAR 340-245-0020, Definitions, and OAR 340-245-0022, Abbreviations and Acronyms, describe which sources the risk-based toxic air contaminant permitting program applies to and specifies definitions, abbreviations and acronyms to be used in the program;

(b) OAR 340-245-0030, Submittal and Payment Deadlines, provides the deadlines by which owners or operators must submit risk assessment compliance information when required by DEQ under this division. That rule generally provides owners or operators more time to submit the more complex assessments;

(c) OAR 340-245-0040, Emissions Inventory, authorizes DEQ to require a source to submit an inventory of all of its toxic air contaminant emissions to be used in a risk assessment and to submit periodic emissions inventory updates;

(d) OAR 340-245-0050, Risk Assessment Procedures, includes requirements and procedures for the owners and operators of sources to undertake any of the four levels of risk assessment to demonstrate compliance and determine what requirements apply. The first level of risk assessment is a conservative estimate that is likely to overestimate risk. As the levels progress from Level 1 to Level 4, the assessments

become more complex but also provide increasingly more site-specific and refined risk estimates. An owner or operator can choose to start with any level of risk assessment;

(e) OAR 340-245-0060, Toxic Emissions Units, explains how TEUs are analyzed and regulated in the context of assessing and regulating risk from an entire source. This rule includes the criteria for a TEU to be designated exempt or aggregated because it poses very low risk and the requirements for approval of new and modified TEUs;

(f) OAR 340-245-0100, Toxic Air Contaminant Permit Addenda, includes the procedural requirements for obtaining a permit addendum or a new operating permit under these rules. A Toxic Air Contaminant Permit Addendum will amend the source's Air Contaminant Discharge Permit or Title V Operating Permit until the requirements in the addendum can be incorporated into the source's operating permit, but will remain separate for a source that has a General Air Contaminant Discharge Permit;

(g) OAR 340-245-0110, Source Risk Limits, explains how risk limits will be set in Toxic Air Contaminant Permit Addenda or in operating permits with conditions required under this division;

(h) OAR 340-245-0120, Community Engagement, contains requirements for community engagement meetings and other aspects of community engagement;

(i) OAR 340-245-0130, Risk Reduction Plan Requirements, specifies how an owner or operator of an existing source must develop a plan to reduce risk, if required to do so, because the source risk exceeds the TBACT Level or the Risk Reduction Level. Risk can be reduced using a variety of methods as long as they are enforceable as permit conditions and achieve the required level of risk reduction. Provisions for Voluntary Risk Reduction are included in this rule;

(j) OAR 340-245-0140, Pollution Prevention, explains how the owner or operator of a source must perform a pollution prevention analysis when required under OAR 340-245-0130;

(k) OAR 340-245-0150, Postponement of Risk Reduction, specifies how an owner or operator of a source may request postponement of risk reduction due to financial hardship;

(l) OAR 340-245-0200, Risk Estimates, explains how the owner or operator of a source must perform the calculations required in this division. This rule explains how calculations should be rounded to evaluate compliance with Source Risk Limits;

(m) OAR 340-245-0210, Modeling and Risk Assessment Work Plan Requirements, contains air quality modeling and work plan requirements for owners or operators of sources that are required to assess risk;

(n) OAR 340-245-0220, TBACT and TLAER Procedures, explains how the owner or operator of a source must perform, respectively, a Toxics Best Available Control Technology or Toxics Lowest Achievable Emission Rate analysis;

(o) OAR 340-245-0230, Toxic Air Contaminant Monitoring Requirements, allows an owner or operator of a source to perform air monitoring to determine actual concentrations of toxic air contaminants in the ambient air around a source;

(p) OAR 340-245-0310 Process for Updating Risk-Based Concentrations and 340-245-0320, Standards and Criteria for Noncancer Risk Action Levels for Existing Sources, describe the process of how the RBCs may be updated and assignment of hazard index values based on health effects;

(q) OAR 340-245-0400, Cleaner Air Oregon Fees, specifies the permitting fees that apply to sources subject to the rules in this division; and

(r) OAR 340-245-8010 Tables 1-3, include the established Risk Action Levels, Risk-Based Concentrations and the Level 1 Risk Assessment Dispersion Factor Tables.

(4) The long-term goal of Cleaner Air Oregon is to achieve a 50% reduction in the number of existing sources posing either an excess cancer risk of more than 25 in a million or a Hazard Index of more than 1 by the year 2034.

(5) This program supplements requirements in OAR chapter 340, division 244, Oregon Federal Hazardous Air Pollutant Program, and division 246, Oregon State Toxic Air Contaminant Program. This program includes four levels of risk assessment and allows sources to choose any level of assessment to assess risk.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, 468A.337, 468A.345 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155, 468A.335, 468A.337, 468A.343, 468A.345 & Or Laws 2018, ch. 102, § 7

History:

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0010

Applicability and Jurisdiction

(1) This division applies in all areas of the state and to all portable and stationary sources, excluding sources located on tribal and federal lands that are not subject to regulation by DEQ.

(2) DEQ may consult with OHA as necessary on the implementation of the rules in this division.

(3) Subject to the requirements in this division and OAR 340-200-0010(3), Lane Regional Air Protection Agency is designated by the EQC to implement the rules in this division within its area of jurisdiction.

(4) This division applies to entire sources as well as to individual TEUs.

(5) The owner or operator of a source subject to this division may also be subject to other air quality rules including but not limited to those listed below, either in relation to its obligations under this division or independent of this division.

(a) OAR chapter 340, division 209, Public Participation;

(b) OAR chapter 340, division 210, Stationary Source Notification Requirements;

(c) OAR chapter 340, division 212, Stationary Source Testing and Monitoring;

(d) OAR chapter 340, division 214, Stationary Source Reporting Requirements;

(e) OAR chapter 340, division 216, Air Contaminant Discharge Permits, including fees;

(f) OAR chapter 340, division 218, Oregon Title V Operating Permits;

- (g) OAR chapter 340, division 220, Oregon Title V Operating Permit Fees;
 - (h) OAR chapter 340, division 224, New Source Review;
 - (i) OAR chapter 340, division 226, General Emission Standards;
 - (j) OAR chapter 340, division 244, Oregon Federal Hazardous Air Pollutant Program; and
 - (k) OAR chapter 340, division 246, Oregon State Toxic Air Contaminant Program.
- (6) Disclaimer. Compliance with this division does not authorize the emission of any toxic air contaminant in violation of any other federal, state, or local law or regulation, or exempt the owner or operator from any other applicable law or regulation.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337, ORS 468A.345

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343, ORS 468A.345

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0020

Definitions

The definitions in OAR 340-200-0020, 340-204-0010, 340-246-0030, 340-247-0020 and this rule apply to this division. If the same term is defined in this rule and OAR 340-200-0020 or 340-204-0010, the definition in this rule applies to this division.

- (1) “ABEL” means a computer model developed by EPA that evaluates a corporation's or partnership's ability to afford compliance costs, cleanup costs or civil penalties. ABEL is available upon request from DEQ.
- (2) “Actual toxic air contaminant emission rate” means:
 - (a) For an existing source, the toxic air contaminant emissions rate from the source’s actual production; or
 - (b) For a new or reconstructed source, the toxic air contaminant emissions rate from the reasonably anticipated actual production by the new or reconstructed source.
- (3) “Acute” means evaluated over a 24-hour period or day.
- (4) “Acute exposure location” means an exposure location outside the boundary of a source being modeled for the maximum daily average concentrations of a toxic air contaminant, and that is:
 - (a) A chronic exposure location; or
 - (b) A location where people may spend several hours of one day.
- (5) “AERMOD” is the EPA approved steady-state air dispersion model, specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," that is the primary model used for the analysis of ambient concentrations for regulatory compliance. AERMOD uses a fully developed set of meteorological and terrain data. AERMOD stands for American Meteorological Society/Environmental Protection Agency Regulatory Model. AERMOD is available upon request from DEQ.

(6) "AERSCREEN" is the EPA approved screening dispersion model, specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," based on AERMOD. The model uses conservative screening meteorology to produce estimates of "worst-case" concentration estimates that are equal to or greater than the estimates produced by AERMOD. AERSCREEN stands for American Meteorological Society/Environmental Protection Agency Regulatory Screening Model. AERSCREEN is available upon request from DEQ.

(7) "Aggregate TEU Level" means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, that aggregated TEUs may not exceed, based on a calculation of the cumulative risk of all aggregated TEUs.

(8) "Aggregated TEUs" means all of a source's TEUs that are identified by an owner or operator with total cumulative risk less than the Aggregate TEU Level. A TEU that is identified as one of the aggregated TEUs is referred to in the singular as an aggregated TEU.

(9) "Area of impact" means the geographic area where risk is determined to be above the applicable Risk Action Level, and is determined by AERMOD or other comparable model approved by DEQ.

(10) "Chronic" means evaluated over a one-year period or longer.

(11) "Chronic exposure location" means an exposure location outside the boundary of a source being modeled for annual average concentrations of a toxic air contaminant, and can be either:

(a) A residential exposure location; or

(b) A nonresidential exposure location.

(12) "Community Engagement Level" means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which DEQ will conduct community engagement.

(13) "Construction permit" means a Construction Air Contaminant Discharge Permit issued under OAR chapter 340, division 216, or a Standard Air Contaminant Discharge Permit used for approval of Type 3 or 4 changes under OAR chapter 340, division 210.

(14) "De minimis source" means a source whose excess cancer risk, chronic noncancer risk and acute noncancer risk estimates are each less than or equal to the Source Permit Level in OAR 340-245-8010 Table 1 when calculated based on the source's capacity, as determined under OAR 340-245-0050(7).

(15) "DEQ notice date" means the date that DEQ sends a notice to an owner or operator that a risk assessment is required.

(16) "Environmental Justice" means equal protection from environmental and health hazards, and meaningful public participation in decisions that affect the environment in which people live, work, learn, practice spirituality, and play. Environmental Justice communities include minority and low-income communities, tribal communities, and other communities traditionally underrepresented in the public process.

(17) "Excess cancer risk" means the probability of developing cancer resulting from exposure to toxic air contaminant emissions from a TEU or an entire source under an applicable exposure scenario, over and above the background rate of cancer. Excess cancer risk is expressed in terms of "X" in a million, and

means that approximately “X” number of additional cases of cancer would be expected in a population of one million people subject to the applicable exposure scenario.

(18) “Exempt source” means a source at which all TEUs are exempt TEUs or a source that has no TEUs that emit toxic air contaminants, as determined under OAR 340-245-0050(6).

(19) “Exempt TEU” means a TEU that DEQ has determined is exempt under OAR 340-245-0060(3). An exempt TEU is not required to comply with any other requirements of this division, other than those applicable to qualify as an exempt TEU and OAR 340-245-0060(4)(c)(A).

(20) “Existing source” means a source that:

(a) Commenced construction before November 16, 2018; or

(b) Submitted all necessary applications to DEQ under OAR 340 divisions 210 or 216 before November 16, 2018, and all such applications were deemed complete by DEQ.

(21) “Existing TEU” means a TEU that is not a new or modified TEU.

(22) “Exposure location” means a location where people, including sensitive populations, actually live or normally congregate and will be exposed to a toxic air contaminant present in the air, and thus be the location of an air quality modeling receptor at which toxic air contaminant concentrations and risk are evaluated. Exposure locations are associated with exposure scenarios and identified based on allowed land use zoning, except as allowed under OAR 340-245-0210(1)(a)(F) or when DEQ has sufficient information to determine that an area is being used in a manner contrary to its land use zoning.

(23) “Exposure scenario” means a set of assumptions about how a population is exposed to toxic air contaminants. Included in the assumptions are the type of people exposed (e.g., children or adults), and the frequency and duration of exposure associated with the scenario (e.g., residential or occupational use). Exposure scenarios are associated with exposure locations (e.g., nonresidential child).

(24) “Fixed capital cost” means the capital needed to purchase and construct all the depreciable components of a source.

(25) “Hazard Index number” or “Hazard Index,” as defined in Oregon Laws 2018, chapter 102, section 2, means a number equal to the sum of the hazard quotients attributable to toxic air contaminants that have noncancer effects on the same target organs or organ systems.

(26) “Hazard quotient,” as defined in Oregon Laws 2018, chapter 102, section 2, means a calculated numerical value that is used to evaluate noncancer health risk from exposure to a single toxic air contaminant. The calculated numerical value is the ratio of the air concentration of a toxic air contaminant to the noncancer Risk-Based Concentration at which no serious adverse human health effects are expected to occur.

(27) “Immediate Curtailment Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which DEQ will require immediate risk reduction as provided in OAR 340-245-0130(7).

(28) “INDIPAY” means a computer model developed by EPA that evaluates an individual's ability to afford compliance costs, cleanup costs or civil penalties. INDIPAY is available upon request from DEQ.

(29) “Inhalation Unit Risk” means the upper-bound lifetime excess cancer risk estimated to result from continuous exposure to a toxic air contaminant at a concentration of $1 \mu\text{g}/\text{m}^3$ in air. The interpretation of inhalation unit risk would be as follows: if unit risk = 2×10^{-6} per $\mu\text{g}/\text{m}^3$, then two excess cancer cases (upper bound estimate) are expected to develop per one million people if exposed daily for 70 years to one microgram of the toxic air contaminant per cubic meter of air.

(30) “Multipathway” means consideration of exposure pathways in addition to inhalation of chemicals in air, such as incidental ingestion and dermal contact with toxic air contaminants migrating to soil and water.

(31) “MUNIPAY” means a computer model developed by EPA that evaluates a municipality's or regional utility's ability to afford compliance costs, cleanup costs or civil penalties. MUNIPAY is available upon request from DEQ.

(32) “New or modified TEU” means:

(a) A TEU at an existing source where one of the following criteria is met:

(A) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 was not required for the TEU, and construction commenced on or after November 16, 2018;

(B) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 is or was required for the TEU, and the owner or operator submitted the application on or after November 16, 2018; or

(C) Approval to construct or operate under OAR 340-210-0205 through 340-210-0250 was required for the TEU, but the owner or operator did not obtain the approval as required, and construction commenced on or after the following, as applicable:

(i) For Type 1 changes under OAR 340-210-0225, 10 days before November 16, 2018;

(ii) For Type 2 changes under OAR 340-210-0225, 60 days before November 16, 2018;

(iii) For Type 3 changes under OAR 340-210-0225, 120 days before November 16, 2018; and

(iv) For Type 4 changes under OAR 340-210-0225, 240 days before November 16, 2018;

(b) With respect to a modification to a TEU, approval to construct or operate refers to approval to construct or operate the modification.

(33) “New source” means a source that:

(a) Is not an existing source; or

(b) Was an existing source that has moved to a new location that is not contiguous or adjacent to its original facility location on or after <enter effective date of rules>, excluding existing portable sources.

(34) “Noncancer risk” means the chance of noncancer harmful effects to human health resulting from exposure to toxic air contaminant emissions from a TEU or an entire source under an applicable exposure scenario. There are two types of noncancer risk, chronic and acute. Noncancer risk is expressed

numerically using the Hazard Index. Below a Hazard Index of 1, adverse noncancer health effects are unlikely, and above a Hazard Index of 1, adverse noncancer health effects become more likely.

(35) “Nonresident” means people who regularly spend time at a location but do not reside there. This includes, but is not limited to, children attending schools and daycare facilities and adults at workplaces.

(36) “Nonresidential exposure location” means an exposure location outside the boundary of a source where people may reasonably be present for a few hours several days per week, possibly over a period of several years, and that is zoned for uses that do not allow residential use. A nonresidential exposure location includes nonresidential worker exposure locations and nonresidential child exposure locations.

(37) “Notification area” means the area of impact or the area within a distance of 1.5 kilometers of a source, whichever is greater.

(38) “Operating permit” means a General, Basic, Simple or Standard Air Contaminant Discharge Permit under OAR chapter 340, division 216 or an Oregon Title V Operating Permit under OAR chapter 340, division 218.

(39) “Owner or operator” means any person who owns, leases, operates, controls, or supervises a stationary source.

(40) “Permit Denial Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which DEQ will not approve an operating permit for a new or reconstructed source, as provided in OAR 340-245-0100(5).

(41) “Pollution Prevention” means any practice that reduces, eliminates, or prevents pollution at its source, as described in OAR 340-245-0140.

(42) “Reconstructed,” as defined in Oregon Laws 2018, chapter 102, section 2, means an individual project is constructed at an air contamination source that, once constructed, increases the hourly capacity of any changed equipment to emit, and where the fixed capital cost of new components exceeds 50 percent of the fixed capital cost that would have been required to construct a comparable new source.

(43) “Residential exposure location” means an exposure location outside the boundary of a source where people may reasonably be present for most hours of each day over a period of many years, including individual houses and areas that are zoned to allow residential use either exclusively or in conjunction with other uses.

(44) “Risk” means the chance of harmful effects to human health resulting from exposure to a toxic air contaminant emitted from a TEU or an entire source under an applicable exposure scenario. For the purpose of these rules, risk includes three types of risk: excess cancer risk, chronic noncancer risk, and acute noncancer risk.

(45) “Risk Action Level” as identified under OAR 340-245-8010 Table 1, means the levels of risk posed by a source or a TEU at which particular requirements of these rules will apply, or the owner or operator will be required to take specific action, depending on the risk posed to the area of impact as described in these rules.

(46) “Risk assessment” means a procedure that identifies toxic air contaminant emissions from a source or a TEU and calculates the risk from those emissions. This term specifically refers to the procedures under OAR 340-245-0050(8) through (11) and may include the results of air monitoring as allowed under

OAR 340-245-0050(1)(c)(B). The procedures are designated Level 1 through Level 4, respectively, with complexity of a risk assessment increasing as the level numeration increases, (i.e., a Level 1 Risk Assessment is the simplest and a Level 4 Risk Assessment is the most complex).

(47) “Risk Determination Ratio” means the calculated value used to determine compliance with noncancer Risk Action Levels for existing sources as determined under OAR 340-245-0200.

(48) “Risk limit” means a condition or requirement in a permit or permit addendum that serves to limit the risk from a source or part of a source. Such conditions or requirements may include, but are not restricted to, limits on risk from the source or part of a source, limits on emissions of one or more toxic air contaminants, limits on emissions from one or more TEUs, or limits on source operation.

(49) “Risk-Based Concentration” or “RBC” means the concentration of a toxic air contaminant listed in OAR 340-245-8010 Table 2 that, for the designated exposure scenario, results in an excess cancer risk of one in one million, or a noncancer hazard quotient of one for either chronic exposure or acute daily exposure.

(50) “Risk Reduction Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, at which the owner or operator of an existing source will be required to have an approved Risk Reduction Plan under OAR 340-245-0130.

(51) “Sensitive Population” means people with biological traits that may magnify the harmful effects of toxic air contaminant exposures that include individuals undergoing rapid rates of physiological change, such as children, pregnant women and their fetuses, and individuals with impaired physiological conditions, such as elderly people with existing diseases such as heart disease or asthma. Other sensitive populations include those with lower levels of protective biological mechanisms due to genetic factors and those with increased exposure rates.

(52) “Significant TEU” means a TEU that is not an exempt TEU and is not an aggregated TEU.

(53) “Source Permit Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1.

(54) “Source risk” means the cumulative risk from all toxic air contaminants emitted by all significant and aggregated TEUs at a source.

(55) “TBACT Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, below which an existing source will be considered to be in compliance with these rules without having to further reduce its risk, and above which will require the owner or operator of the existing source either to demonstrate that its significant TEUs meet TBACT or to further reduce risk from the source, under OAR 340-245-0050(1)(c).

(56) “TLAER Level” means the risk action levels, as identified under that name in OAR 340-245-8010 Table 1, below which a new or reconstructed source will be considered to be in compliance with these rules, and above which will require the owner or operator of the new or reconstructed source to demonstrate that its significant TEUs meet TLAER, under OAR 340-245-0050(2)(b).

(57) “Toxic Air Contaminant Permit Addendum” means written authorization that incorporates the requirements under this division into a permit by amending an Air Contaminant Discharge Permit or a Title V Operating Permit, or in the case of a source assigned to a General Air Contaminant Discharge

Permit, means written authorization imposing requirements under this division as additional source-specific permit conditions.

(58) “Toxics Best Available Control Technology” or “TBACT” means a toxic air contaminant emission limitation or emission control measure or measures based on the maximum degree of reduction of toxic air contaminants that is feasible, determined using the procedures in OAR 340-245-0220.

(59) “Toxics emissions unit” or “TEU” means an emissions unit, or one or more individual emissions producing activities, that emit or have the potential to emit any toxic air contaminant, as designated under OAR 340-245-0060.

(60) “Toxics Lowest Achievable Emission Rate” or “TLAER” means that rate of emissions which reflects the most stringent emission limitation which is achieved in practice by a source in the same class or category of sources as the proposed source, determined using the procedures in OAR 340-245-0220.

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337, ORS 468A.345 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343, ORS 468A.345 & Or Laws 2018, ch. 102, § 7

History:

DEQ 11-2020, amend filed 04/29/2020, effective 04/29/2020

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-0022](#)

Abbreviations and Acronyms

As used in this division:

(1) “HI” means Hazard Index.

(2) “IUR” means Inhalation Unit Risk.

(3) “m³” means cubic meter.

(4) “NESHAP” means National Emission Standards for Hazardous Air Pollutants, established by the Environmental Protection Agency under section 112 of the Clean Air Act, 42 U.S.C. §7412.

(5) “NSPS” means New Source Performance Standards, established by the Environmental Protection Agency under section 111(b) of the Clean Air Act, 42 U.S.C. §7411(b).

(6) “OHA” means Oregon Health Authority.

(7) “PTE” means Potential to Emit.

(8) “RBC” means Risk-Based Concentration.

(9) “TBACT” means Toxics Best Available Control Technology.

(10) “TEU” means Toxics Emissions Unit.

(11) “TLAER” means Toxics Lowest Achievable Emission Rate.

(12) “TRV” means Toxicity Reference Value.

(13) “µg” means microgram.

(14) “µg/m³” means micrograms per cubic meter.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337, ORS 468A.345

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343, ORS 468A.345

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0030

Submittal and Payment Deadlines

(1) When required to demonstrate compliance with OAR 340-245-0040, 340-245-0050, 340-245-0060, or 340-245-0100 the owner or operator of a source must submit to DEQ all information and specific activity fees under OAR 340-216-8030 Table 3 required by, and by the deadlines specified in, subsections (a) through (h), as applicable, except as allowed under section (3). The owner or operator of a new or reconstructed source must also submit the following information but the time deadlines in subsections (a) through h) do not apply.

(a)(A) An emissions inventory under OAR 340-245-0040 that will be used in the risk assessment must be submitted to DEQ no later than 90 days after the DEQ notice date; and

(B) For an existing source, if the owner or operator is submitting DEQ-approved source test data to supplement the emissions inventory, the updated emissions inventory must be submitted to DEQ no later than 150 days after the DEQ notice date. The owner or operator must also submit a modeling protocol and Level 3 or Level 4 Risk Assessment work plan prior to or concurrent with the submission of source test data, if applicable;

(b) The modeling protocol under OAR 340-245-0210 must be submitted to DEQ no later than 30 days after receiving DEQ approval of the emissions inventory under subsection (a);

(c) The Level 3 or Level 4 Risk Assessment work plan under OAR 340-245-0210 must be submitted to DEQ no later than 60 days after receiving DEQ approval of the updated emissions inventory under subsection (a);

(d) Risk Assessments required under OAR 340-245-0050(8) through (11) must be submitted to DEQ in accordance with the following deadlines:

(i) A Level 1 or Level 2 Risk Assessment under OAR 340-245-0050(8) or (9) must be submitted to DEQ no later than 60 days after DEQ approval of the modeling protocol required under subsection (b);

(ii) A Level 3 Risk Assessment under OAR 340-245-0050(10) must be submitted to DEQ no later than 120 days after DEQ approval of the Level 3 Risk Assessment work plan required under subsection (c);

(iii) A Level 4 Risk Assessment under OAR 340-245-0050(11) must be submitted to DEQ no later than 150 days after DEQ approval of the Level 4 Risk Assessment work plan required under subsection (c);

(iv) In the case where DEQ has determined, upon review of the approved emissions inventory, modeling protocol, and Risk Assessment work plan (if applicable) required under OAR 340-245-0050(1), that risk from an existing source may exceed the Immediate Curtailment Level, DEQ may reduce the Risk Assessment submittal deadline to a period of no less than 30 days for chronic risk or 15 days for acute risk, unless a shorter deadline is agreed to in writing between DEQ and the source;

(e) If risk from the source is greater than the Immediate Curtailment Level, a report describing the immediate action taken by the owner or operator to reduce risk to below the Immediate Curtailment Level as required under OAR 340-245-0130(7) must be submitted to DEQ no later than seven days after DEQ approval of a Level 3 Risk Assessment or a Level 4 Risk Assessment under subsection (d)(ii), (iii), or (iv);

(f) A Toxic Air Contaminant Monitoring Plan under OAR 340-245-0230 and an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ no later than 30 days after DEQ approval of a Level 3 Risk Assessment or a Level 4 Risk Assessment under subsection (d)(ii), (iii), or (iv);

(g) A Risk Reduction Plan under OAR 340-245-0130 and an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ no later than 30 days after DEQ approval of a Level 3 or a Level 4 Risk Assessment under subsection (d)(ii), (iii), or (iv); and

(h) For owners or operators that are not required to submit a Risk Reduction Plan and who do not choose to perform air monitoring, an application for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 must be submitted to DEQ within 30 days after DEQ approval of any level of risk assessment, whichever is applicable.

(2) Upon receipt of a submittal described in section (1), DEQ will review the submittal and if DEQ determines that any additional information, corrections, or updates are required in order to approve the submittal, then DEQ will provide the owner or operator with a written request to provide such information by a date certain.

(3) An owner or operator may request an extension of time from a deadline established in section (1) or section (2) by providing DEQ with a written request no fewer than 15 days prior to the submittal deadline. DEQ may grant an extension based on the following criteria:

(a) The owner or operator has demonstrated progress in completing the submittal; and

(b) A delay is necessary, for good cause shown by the owner or operator, related to obtaining more accurate or new data, performing additional analyses, or addressing changes in operations or other key parameters, any of which are likely to have a substantive impact on the outcomes of the submittal.

(4) If DEQ determines it is not able to approve the owner or operator's submittal, or if the owner or operator does not timely provide additional information or corrections requested by DEQ, then in addition to any other remedies available, DEQ may:

(a) With sufficient factual basis, modify the information provided by the owner or operator, approve it as modified, and the owner or operator must pay the document modification fee in OAR 340-216-8030 Table 3; or

(b) Inform the owner or operator of the deficiency, and provide the owner or operator with a revised deadline to submit the needed information.

(5) Recordkeeping. The owner or operator of a source that provides DEQ with any information related to a risk assessment completed under this rule must retain all of its records related to the risk assessment for five years from the date the information is submitted to DEQ.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337, ORS 468A.345

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343, ORS 468A.345

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0040

Emissions Inventory

(1) Individual emissions inventories for risk assessment of sources. New sources must submit an emissions inventory as part of the permit application. DEQ may also require the owner or operator of any existing permitted or unpermitted source to submit an emissions inventory for the purpose of assessing risk. These emissions inventories must include all toxic air contaminants emitted by the source listed in OAR 340-247-8010 Table 1. The owner or operator must assess risk from the toxic air contaminants in OAR 340-247-8010 Table 2. For existing sources, the owner or operator must submit the emissions inventory electronically to DEQ no later than 90 days after the DEQ notice date unless DEQ allows additional time under OAR 340-245-0030.

(2) Periodic state-wide emissions inventory.

(a) DEQ may require the owners and operators of all permitted and unpermitted sources to submit an updated toxic air contaminant emissions inventory of all toxic air contaminants emitted by the source listed in OAR 340-247-8010 Table 1. The reporting year will generally correspond with EPA's National Emissions Inventory reporting year (2020, 2023, 2026, etc.);

(b) The owner or operator must submit its updated emissions inventory electronically to DEQ no later than 60 days after the date that DEQ sends a written request by electronic mail or regular U.S. mail, to the owner or operator, unless DEQ allows additional time under OAR 340-245-0030; and

(3) Emissions inventory revision. DEQ may also require the owner or operator of a source that has previously submitted a toxic air contaminant emissions inventory under section (1) or (2) to submit an updated emissions inventory if DEQ discovers additional information that indicates that the source's emissions have changed since it completed its most recent emissions inventory.

(4) Emissions inventory requirements.

(a) When required to submit an emissions inventory, the owner or operator must submit:

(A) A list of TEUs that emit toxic air contaminants. The owner or operator must include exempt TEUs but does not have to calculate toxic air contaminant emissions from the exempt TEUs. The list of TEUs that emit toxic air contaminants should not be limited to what is listed in a source's operating permit but should include all operations at the source that emit toxic air contaminants;

(B) A list of all activities used to calculate toxic air contaminant emissions, such as production rates, fuel consumption, and material usage, for each TEU for the following:

(i) For an emissions inventory required under section (1), production activities and usage, as applicable, based on the following:

(I) For existing sources, actual annual and maximum daily production activities and usage, as applicable, in the calendar year preceding the year DEQ's written request is made;

(II) For all sources, potential annual and maximum daily production activities and usage, as applicable, that are used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on a requested PTE or risk limit; or

(III) For all sources, potential annual and maximum daily production activities and usage, as applicable, based on capacity that is used to prove the source is de minimis if the owner or operator chooses to be permitted as a de minimis source;

(ii) For an emissions inventory required under section (2), the actual production activities and usage, as applicable, in the calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, the reasonably anticipated actual production and usage, as applicable.

(C) Material balance information using Safety Data Sheets (formerly Material Safety Data Sheets) and Technical Data Sheets, as applicable, for materials used in any process; and

(D) Operating schedule (hours/day, days/year, seasonal variability) for the source, including schedules for each TEU, if different, for the calendar year preceding the year DEQ's written request is made and the year based on a requested PTE or risk limit;

(b) Owners or operators of sources with Title V, Standard and Simple Air Contaminant Discharge Permits, and unpermitted sources when DEQ so requires, must also submit:

(A) A list of all toxic air contaminants emitted by the source;

(B) The amount of each toxic air contaminant listed in OAR 340-247-8010 Table 1 emitted from each TEU, reported as both maximum mass emitted per day and per year, with the emission factors used or material balance information, as appropriate, for the following:

(i) For an emissions inventory required under section (1), emissions based on the following, and including startup and shutdown emissions for sources required to do so under OAR 340-214-0310:

(I) For an existing source, actual emissions used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on actual emissions;

(II) For all sources, requested PTE or risk limit used to calculate the Source Risk Limit if the owner or operator chooses to be permitted based on a requested PTE or risk limit; or

(III) For all sources, capacity that is used to prove the source is de minimis if the owner or operator chooses to be permitted as a de minimis source;

(ii) For an emissions inventory required under section (1), maximum daily production. The owner or operator must use knowledge of process to calculate the maximum daily emissions; and

(iii) For an emissions inventory required under section (2), the actual emissions for the calendar year preceding the year DEQ's written request is made, or for new or reconstructed sources, emissions based on the reasonably anticipated actual production or usage; and

(C) All supplementary materials required to verify the calculated emissions as submitted in an emissions inventory under this rule, including but not limited to:

(i) Detailed process flow diagrams for all emissions producing activities, including expected points of all fugitive and non-fugitive emissions and air pollution control devices;

(ii) The name of each resource used to obtain toxic air contaminant emission factors (e.g., AP-42, WebFIRE, California Air Toxic Emission Factors, or source test data);

(iii) Methodologies used to calculate emissions, including all formulas and assumptions along with the supporting technical documentation (e.g., environmental data sheets, safety data sheets, or engineering estimates);

(iv) Continuous emissions monitoring data that meets data sufficiency requirements as required under the Continuous Monitoring Manual in OAR 340-200-0035;

(v) Technical documentation related to air pollution control device operation and efficiency (e.g., manufacturer or source test data); and

(vi) Source test data sufficient to verify emission factors (e.g., source test reports).

(5) Review of toxic air contaminant emissions inventory reports. DEQ shall use the procedures in OAR 340-245-0030 to review any emissions inventory in determining its completeness, consider extensions requests, and request additional information, if needed.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0050

Risk Assessment Procedures

(1) Existing source.

(a) When notified in writing by DEQ, at DEQ's discretion, the owner or operator of an existing source with an operating permit must either demonstrate that it is an exempt source by following the procedure in section (6) or:

(A) Assess risk from the source using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11);

(B) Assess risk from the source using the emissions inventory submitted under OAR 340-245-0040(1); and

(C) Follow the applicable calculation procedures under OAR 340-245-0200.

(b) The owner or operator proposing an action listed in OAR 240-224-0010(1) or (2) that requires compliance under OAR chapter 340, division 224, "New Source Review" must submit an emissions inventory under OAR 340-245-0040(1) for the proposed modifications or operational changes;

(A) The emissions inventory must be approved by DEQ before the New Source Review application can be deemed complete under OAR 340-224-0030(2); and

(B) The emissions inventory submittal deadline for existing sources in OAR 340-245-0030(1)(a)(A) does not apply.

(c) The owner or operator must demonstrate compliance with paragraph (A), (B), (C) or (D), and also comply with paragraph (E), if applicable.

(A) The owner or operator must demonstrate that the source is a de minimis source by following the procedure in section (7), or demonstrate that the risk from the source is less than or equal to the TBACT Level. The owner or operator of a source whose risk is less than or equal to the TBACT Level must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 with Source Risk Limits or an application that modifies the existing permit in a manner that ensures that the risk from the source will be less than or equal to the TBACT Level.

(B) Toxic air contaminant monitoring.

(i) Before the owner or operator of a source may begin air monitoring, the owner or operator must complete and submit to DEQ a Level 3 or Level 4 Risk Assessment and comply with the applicable requirements of OAR 340-245-0230.

(ii) An owner or operator may not delay submission of an application for an Air Contaminant Permit Addendum and subsequent implementation of the approved Risk Reduction Plan prepared under OAR 340-245-0130 if a Level 3 or 4 Risk Assessment shows that:

(I) Calculated excess cancer risk exceeds 200 in 1 million;

(II) Calculated noncancer risk exceeds a Hazard Index of 12 if all toxic air contaminants emitted have been assigned a noncancer TBACT Risk Action Level of a Hazard Index of 3;

(III) Calculated noncancer risk exceeds a Hazard Index of 20 if all toxic air contaminants emitted have been assigned a noncancer TBACT Risk Action Level of a Hazard Index of 5; or

(IV) Calculated noncancer Risk Determination Ratio exceeds 4 if air toxic contaminants emitted include a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5.

(iii) If the Level 3 or Level 4 Risk Assessment calculates risk from the source that does not cause any exceedances of the criteria in subparagraph (ii), then DEQ shall issue a Toxics Air Contaminant Permit Addendum addressing toxic air contaminant monitoring requirements, including a reporting and compliance schedule for implementing the Toxic Air Contaminant Monitoring Plan required under OAR 340-245-0230;

(iv) Upon completion and DEQ approval of toxic air contaminant monitoring in compliance with OAR 340-245-0230, the owner or operator must use the toxic air contaminant monitoring results, in association

with other applicable, relevant data to determine compliance requirements under paragraph (c)(A), (C), or (D) and apply for a Toxic Air Contaminant Permit Addendum modification under OAR 340-245-0100;

(C) TBACT compliance. If the risk from the source is greater than the TBACT Level and less than or equal to the Risk Reduction Level, and all significant TEUs meet TBACT under OAR 340-245-0220, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes Source Risk Limits that ensure the risk from the source will be less than or equal to the Risk Reduction Level; or

(D) Risk Reduction Plan. The owner or operator may demonstrate compliance with this paragraph under either subparagraph (i), (ii), or (iii), whichever is applicable:

(i) If the risk from the source is greater than the TBACT Level and the owner or operator can make physical, operational or process changes to reduce the risk to less than or equal to the TBACT Level, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 and Source Risk Limits that ensure that the risk from the source will be less than or equal to the TBACT Level;

(ii) If the risk from the source is greater than the TBACT Level and less than or equal to the Risk Reduction Level, but not all significant TEUs meet TBACT under OAR 340-245-0220, then the owner or operator must either reduce risk below the TBACT Level under subparagraph (i) or apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 to meet TBACT on all significant TEUs and Source Risk Limits that ensure that the risk from the source will be less than or equal to the Risk Reduction Level; or

(iii) If the risk from the source is greater than the Risk Reduction Level, the owner or operator must meet the requirements in subparagraph (ii) and apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 that includes a Risk Reduction Plan under OAR 340-245-0130 with additional risk reduction measures and Source Risk Limits that ensure that the risk from the source will be less than or equal to the Risk Reduction Level.

(E) If the risk from the source is greater than the Immediate Curtailment Level, the owner or operator must take immediate action to reduce risk to below the Immediate Curtailment Level under OAR 340-245-0130(7).

(2) New or reconstructed source.

(a)(A) The owner or operator of a proposed new or reconstructed source that is required to obtain a Simple or Standard Air Contaminant Discharge Permit, and that is not an exempt source as determined by the procedure in section (6), must also perform a risk assessment, and if applicable, apply for a Toxic Air Contaminant Permit Addendum concurrently with an application for a permit under OAR chapter 340, division 216, before a permit is issued. If DEQ approves the applications, then DEQ will incorporate the toxic air contaminant permit conditions directly into the new Simple or Standard Air Contaminant Discharge Permit and will not issue a separate Toxic Air Contaminant Permit Addendum.

(B) DEQ may require the owner or operator of a proposed new or reconstructed source that is required to obtain a Basic or a General Air Contaminant Discharge Permit to perform a risk assessment and demonstrate compliance with this division, and if applicable, apply for a Toxic Air Contaminant Permit Addendum concurrently with an application for a permit under OAR chapter 340, division 216.

(i) If DEQ approves the applications for a source that will have a Basic Air Contaminant Discharge Permit, then DEQ will incorporate the toxic air contaminant permit conditions directly into the new operating permit.

(ii) If DEQ approves the applications for a source that will be assigned to a General Air Contaminant Discharge Permit, then DEQ will issue a Toxic Air Contaminant Permit Addendum as a source-specific addendum to the new operating permit that will not be incorporated into the operating permit.

(C) Any owner or operator of a proposed new or reconstructed source that is required to perform a risk assessment must:

(i) Assess risk from the source using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11);

(ii) Assess risk from the source using the emissions inventory submitted under OAR 340-245-0040(1); and

(iii) Follow the applicable calculation procedures under OAR 340-245-0200.

(b) The owner or operator of a new or reconstructed source must demonstrate compliance with either paragraph (A) or (B).

(A) The owner or operator must demonstrate that the source is a de minimis source by following the procedure in section (7), or demonstrate that the risk from the source is less than or equal to the TLAER Level. The owner or operator of a source whose risk is less than or equal to the TLAER Level must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 or an operating permit with Source Risk Limits that ensure that the risk from the source will be less than or equal to the TLAER Level; or

(B) TLAER compliance. If the risk from the new or reconstructed source is greater than the TLAER Level and less than or equal to the Permit Denial Level, and all significant TEUs meet TLAER under OAR 340-245-0220, then the owner or operator must apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 or an operating permit that includes Source Risk Limits that ensure the risk from the source will be less than or equal to the Permit Denial Level.

(3) Other sources. When notified in writing by DEQ, the owner or operator of a source that is not subject to sections (1) or (2) must perform a risk assessment using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11). DEQ may notify such a source after determining through an investigation or file review that the source may emit toxic air contaminants in quantities that may cause the source's risk to exceed the Source Permit Level.

(4) A risk assessment for a source must include all TEUs at the source, as of the date that the owner or operator submits an application under OAR 340-245-0100 for a Toxic Air Contaminant Permit Addendum, except for the following:

(a) Exempt TEUs; and

(b) Gas combustion TEUs, as provided under section (5).

(5) Gas combustion exemption. This exemption applies to TEUs that solely combust natural gas, propane, liquefied petroleum gas, and, when approved by DEQ in response to a written request by an owner or

operator, pretreated landfill gas and pretreated digester gas or biogas. Risk from toxic air contaminants emitted from such combustion must be calculated and reported in the risk assessment, but the risk from such toxic air contaminants may be treated as follows:

(a) At each exposure location, risk must be reported as two values:

(A) The risk from toxic air contaminants emitted from such combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas and pretreated digester gas or biogas; and

(B) The risk from all other toxic air contaminant emissions;

(b) At each exposure location, the risk from toxic air contaminants emitted solely from the combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas and pretreated digester gas or biogas may be excluded from the total risk for the purpose of determining compliance with Risk Action Levels and may be omitted from any requirements determined under a Risk Reduction Plan under OAR 340-245-0130 if good air pollution control practices are followed to ensure proper combustion; and

(c) Notwithstanding subsections (a) and (b), an owner or operator must include in its risk assessment any toxic air contaminants that are emitted from materials that are contacted by the flame or combustion gases from the combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas or pretreated digester gas or biogas. Materials that may emit toxic air contaminants include but are not limited to VOCs combusted in thermal oxidizers and materials dried in direct-contact dryers.

(6) Exempt Source Determination.

(a) To be approved as an exempt source, no later than 30 days after the date that DEQ sends a notice under subsection (1)(a), or with submittal of an application for a new or reconstructed source under subsection (2)(a), the owner or operator must submit information to DEQ that demonstrates that all TEUs at the source are exempt TEUs as provided in OAR 340-245-0060(3); and

(b) Upon receipt of a submittal from an owner or operator under subsection (a), DEQ will:

(A) Review the submissions and, if approved, write a memo to the DEQ file for the source summarizing the assessment that will be:

(i) Incorporated into the review report of a permitted source upon permit issuance or renewal; or

(ii) Maintained in the file and tracked in a DEQ database.

(B) Follow the Category I public notice procedure in OAR chapter 340, division 209, prior to approving or denying the request to be considered an exempt source; and

(C) Keep records of exempt sources in a database for the emissions inventory and future communication if RBCs change or other information about risk is received such that toxic air contaminant emissions must be reevaluated.

(7) De minimis Source Determination.

(a) To be approved as a de minimis source, the owner or operator must assess risk at the capacity of all significant and aggregated TEUs, using any of the Level 1 through Level 4 Risk Assessment procedures in sections (8) through (11). The owner or operator must submit to DEQ the following, as applicable:

- (A) Information that demonstrates the source does not exceed the Source Permit Level when operating without control devices;
- (B) Information that demonstrates the source does not exceed the Source Permit Level if the owner or operator is required to operate and maintain control devices to remain a de minimis source and the existing or proposed operating permit includes necessary conditions to operate and maintain the control devices; or
- (C) An application for a Toxic Air Contaminant Permit Addendum that demonstrates that the source does not exceed the Source Permit Level if the owner or operator is required to operate and maintain control devices to remain a de minimis source, and the existing or proposed operating permit does not include necessary conditions to operate and maintain the control devices.
- (b) Upon receipt of a submittal from an owner or operator under subsection (a), DEQ will:
- (A) Review the submissions and, if approved, either:
- (i) Write a memo to the DEQ file for the source summarizing the assessment that will be:
- (I) Incorporated into the review report of a permitted source upon permit issuance or renewal; or
- (II) Maintained in the file and tracked in a DEQ database for sources that meet the criteria in paragraph (a)(A) or (B); or
- (ii) Issue a Toxic Air Contaminant Permit Addendum or operating permit, for sources that meet the criteria in paragraph (a)(C);
- (B) Follow the Category I public notice procedure in OAR chapter 340, division 209, prior to approving or denying the request to be considered a de minimis source; and
- (C) Keep records of de minimis sources in a database for the emissions inventory and future communication if RBCs change or other information about risk is received such that toxic air contaminant emissions must be reevaluated.
- (8) Level 1 Risk Assessment. To complete a Level 1 Risk Assessment, the owner or operator must comply with OAR 340-245-0210(1) and then assess risk by using the Level 1 Risk Assessment Dispersion Factor Tables in OAR 340-245-8010 Tables 3A through 3D to determine toxic air contaminant concentrations at approved exposure locations.
- (a) The owner or operator must follow the directions for using the Level 1 Risk Assessment Dispersion Factor Tables described in OAR 340-245-0200(2);
- (b) For sources with multiple stacks, stacks must either be considered individually using OAR 340-245-8010 Tables 3A and 3B with risk calculated as the summation of individual stack risk, or the stacks combined into a single stack in a manner approved by DEQ and risk calculated for that single stack;
- (c) A Level 1 Risk Assessment may not be approved if DEQ determines that the actual source modeling parameters, such as terrain features, exposure location distances less than 50m, unusual stack or building configurations, or other factors may invalidate the assumptions used to develop the Level 1 Risk Assessment Dispersion Factor Tables in OAR 340-245-8010 Table 3; and

(d) If DEQ concludes that the source complies with this division based on a Level 1 Risk Assessment, then DEQ will follow the Category II public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(9) Level 2 Risk Assessment. To complete a Level 2 Risk Assessment, the owner or operator must comply with OAR 340-245-0210(1) and then assess risk by submitting a modeling protocol, conducting modeling, and performing a risk assessment. The owner or operator must use AERSCREEN or comparable screening model approved by DEQ to determine air concentrations at approved exposure locations. If DEQ concludes that the source complies with this division based on a Level 2 Risk Assessment, then DEQ will follow the Category II public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(10) Level 3 Risk Assessment. To complete a Level 3 Risk Assessment, the owner or operator must comply with OAR 340-245-0210 and then assess risk by submitting a modeling protocol and a risk assessment work plan, conducting modeling, and performing a risk assessment. The owner or operator must use AERMOD or comparable model approved by DEQ to determine air concentrations at approved exposure locations. If DEQ concludes that the source complies with this division based on a Level 3 Risk Assessment, then DEQ will follow the Category III public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(11) Level 4 Risk Assessment. To complete a Level 4 Risk Assessment, the owner or operator must comply with OAR 340-245-0210 and then assess risk by submitting a modeling protocol and a risk assessment work plan, conducting modeling, and performing a risk assessment. The owner or operator must use AERMOD or comparable model approved by DEQ to determine air concentrations at approved exposure locations. The risk assessment must include toxicity and bioaccumulation assessments, and may include proposed modifications to default exposure assumptions as specified in OAR 340-245-0210. If DEQ concludes that the source complies with this division based on a Level 4 Risk Assessment, then DEQ will follow the Category III public notice procedure in OAR chapter 340, division 209 for issuance of the Toxic Air Contaminant Permit Addendum.

(12) DEQ may require the owner or operator of a source to conduct and submit an additional multipathway risk evaluation for any level of risk assessment if DEQ determines that airborne deposition of chemicals could be important for scenarios not included in the default multipathway adjustment factor assumptions used in the original risk assessment for the source.

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 & Or Laws 2018, ch. 102, § 7

History:

DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0060

Toxics Emissions Units

(1) TEU Designation. An owner or operator must designate TEUs in the same manner as the owner or operator designated emissions units listed in a source's operating or construction permit, if they are designated, unless the owner or operator requests a different designation in writing and DEQ approves that request in writing. The request for a new or a different TEU designation must be compatible with the following:

- (a) TEUs may not be designated in such a way as to avoid the requirements of this division;
 - (b) An individual emissions-producing activity that exhausts through multiple stacks or openings must be designated as an individual TEU;
 - (c) Where multiple emissions-producing activities exhaust through a common opening, exhaust stack or emissions control device, all of these emissions producing activities may be considered a single TEU or may be considered separate TEUs;
 - (d) The list of TEUs should not be limited to what is listed in a source's operating or construction permit but should include all processes and activities that emit toxic air contaminants; and
 - (e) DEQ may require the owner or operator to designate TEUs differently than as listed in the source's operating or construction permit, if DEQ determines such listing is appropriate to meet the purposes of this division.
- (2) Aggregated TEUs.
- (a) An owner or operator must designate the same TEUs as aggregated TEUs for all of the different types of risk: excess cancer risk, chronic noncancer risk and acute noncancer risk.
 - (b) An owner or operator may choose to assign risk from aggregated TEUs based on either:
 - (A) The applicable Aggregate TEU Level in OAR 340-245-8010 Table 1; or
 - (B) The modeled risk from the approved risk assessment.
 - (c) An owner or operator must request approval to change any aggregated TEU designation after the source's aggregated TEUs have been designated in a risk assessment approved by DEQ.
 - (d) An owner or operator may request approval to construct a new aggregated TEU or modify an existing aggregated TEU, following the procedures in section (4) if the total risk from the aggregated TEUs, including the new or modified TEU, remains less than or equal to the applicable Aggregate TEU Level in OAR 340-245-8010 Table 1.
- (3) Exempt TEUs. A TEU is an exempt TEU if it meets the criteria in subsection (a) or (b):
- (a) The owner or operator of the TEU has demonstrated that the TEU is not likely to emit toxic air contaminants and DEQ approves such demonstration. The demonstration may include any information the owner or operator considers relevant, including but not limited to:
 - (A) The chemical make-up of the materials handled or processed in the TEU as provided by Environmental, Safety, or Product Data Sheets, or equivalent documents; and
 - (B) Whether or not the handling or processing of materials in the TEU is likely to alter the chemical make-up of the materials and the chemical make-up or likely chemical make-up of the materials emitted by the TEU.

(b) The TEU is one of the following regulated pollutant emitting activities, principally supporting the source or the major industrial group:

(A) Evaporative and tailpipe emissions from on-site motor vehicle operation;

(B) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified does not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as an exempt TEU with the remainder not designated as an exempt TEU. The following equipment may never be included as part of the exempt TEU:

(i) Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour; and

(ii) Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour.

(C) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment brought on site for six months or less for maintenance, construction or similar purposes, such as but not limited to generators, pumps, hot water pressure washers and space heaters, provided that any such equipment that performs the same function as the permanent equipment, must be operated within the source's existing PSEL;

(D) Office activities;

(E) Food service activities;

(F) Janitorial activities;

(G) Personal care activities;

(H) Groundskeeping activities including, but not limited to, building painting and road and parking lot maintenance;

(I) On-site laundry activities;

(J) On-site recreation facilities;

(K) Instrument calibration;

(L) Automotive storage garages;

(M) Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems;

(N) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities;

- (O) Temporary construction activities;
- (P) Warehouse activities;
- (Q) Accidental fires and fire suppression;
- (R) Air vents from air compressors;
- (S) Air purification systems;
- (T) Continuous emissions monitoring vent lines;
- (U) Demineralized water tanks;
- (V) Pre-treatment of municipal water, including use of deionized water purification systems;
- (W) Electrical charging stations;
- (X) Fire brigade training only using fire suppression materials that do not contain toxic air contaminants;
- (Y) Instrument air dryers and distribution;
- (Z) Fully enclosed process raw water filtration systems;
- (AA) Electric motors;
- (BB) Pressurized tanks containing gaseous compounds that do not contain toxic air contaminants
- (CC) Vacuum sheet stacker vents;
- (DD) Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities;
- (EE) Log ponds;
- (FF) Stormwater settling basins;
- (GG) Paved roads and paved parking lots within an urban growth boundary;
- (HH) Hazardous air pollutant emissions in fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils;
- (II) Health, safety, and emergency response activities;
- (JJ) Non-diesel, compression ignition emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency, provided that the aggregate horsepower rating of all stationary emergency generator and pump engines is not more than 3,000 horsepower. If the aggregate horsepower rating of all stationary emergency generator and pump engines is more than 3,000 horsepower, then no emergency generators and pumps at the source may be considered categorically insignificant;

(KK) Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems;

(LL) Non-contact steam condensate flash tanks;

(MM) Non-contact steam vents on condensate receivers, deaerators and similar equipment;

(NN) Boiler blowdown tanks; and

(OO) Ash piles maintained in a wetted condition and associated handling systems and activities.

(4) New or modified TEU requirements.

(a) The owner or operator of a source that has not been notified in writing by DEQ that they are required to submit a risk assessment and that proposes to construct a new or modified TEU must comply with OAR 340-210-0205 through 340-210-0250 before beginning construction of the new or modified TEU;

(b) The owner or operator of a source that has been notified in writing by DEQ that they are required to submit a risk assessment but has not yet been issued a Toxic Air Contaminant Permit Addendum or an operating permit in compliance with this division and that proposes to construct a new or modified TEU must do the following before beginning construction of the new or modified TEU:

(A) Comply with OAR 340-210-0205 through 340-210-0250; and

(B) Revise and update any materials submitted to date under OAR 340-245-0050 to include the new or modified TEU by a date certain.(c) The owner or operator of a source that previously has been issued a Toxic Air Contaminant Permit Addendum or an operating permit in compliance with this division and that proposes to construct a new or modified TEU must follow the applicable procedures in paragraphs (c)(A) through (C) and must pay to DEQ all applicable specific activity fees under OAR 340-216-8020 Table 2 Part 4 and OAR 340-216-8030 Table 3.

(A) New or modified exempt TEUs. If the proposed new or modified exempt TEU is subject to National Emission Standards for Hazardous Air Pollutants or New Source Performance Standards requirements, then the owner or operator must request approval of a new or modified exempt TEU under this rule and under OAR 340-210-0205 through 340-210-0250;

(B) New or modified aggregated TEUs.

(i) The owner or operator must request approval of a new or modified TEU to be an aggregated TEU by demonstrating that the risk from the aggregated TEUs, including the new or modified TEU, will be less than or equal to the Aggregate TEU Level. The owner or operator may use any risk assessment procedure, Level 1 through Level 4, under OAR 340-245-0050(8) through (11).

(ii) If the current aggregated TEUs are permitted at the modeled risk levels as specified in OAR 340-245-0060(2)(b)(B), the owner or operator may add the risk from the new or modified aggregated TEU to prior results from the latest risk assessment for the source rather than updating the entire risk assessment for the source.

(iii) The owner or operator must request approval of a new or modified aggregated TEU by submitting an application to modify its Toxic Air Contaminant Permit Addendum or operating permit as required under OAR 340-245-0100(8).

(iv) The owner or operator of a proposed new or modified aggregate TEU may not begin construction until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU;

(C) New or modified significant TEUs.

(i) The owner or operator must request approval of a new or modified significant TEU by submitting an application to modify its Toxic Air Contaminant Permit Addendum or operating permit that includes the following:

(I) Information necessary to assess the risk from the new or modified significant TEU using any risk assessment procedure, Level 1 through Level 4, under OAR 340-245-0050(8) through (11). The owner or operator may add the risk from the new or modified TEU to prior results from the latest risk assessment for the source rather than updating the entire risk assessment for the source; and

(II) Information necessary to verify that the new or modified significant TEU meets TLAER, if the source risk is greater than the TLAER Level for a new or reconstructed source, or meets TBACT, if the source risk is greater than the TBACT Level for an existing source using procedures under OAR 340-245-0220;

(ii) The owner or operator of a proposed new or modified significant TEU may not begin construction of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU;

(iii) If a source that was previously determined to be an exempt source under OAR 340-245-0050(6) or a de minimis source under OAR 340-245-0050(7) will no longer be an exempt or a de minimis source after the new or modified significant TEU is constructed, the owner or operator must follow the procedures in this section and apply for a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100. Such an owner or operator may not begin construction of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or an operating permit that approves the TEU; and

(iv) In conjunction with seeking authorization for the construction of a new or modified significant TEU, if the owner or operator makes simultaneous changes to existing TEUs other than the new or modified significant TEU for the purpose of reducing source risk, then the owner or operator may not begin operation of the new or modified significant TEU until DEQ has issued a Toxic Air Contaminant Permit Addendum or operating permit that approves all such changes to the other TEUs;

(d) DEQ will not approve an application for a Toxic Air Contaminant Permit Addendum required under this rule for a new or modified TEU if:

(A) The TEU does not comply with this rule; or

(B) The source does not comply with OAR 340-245-0050, if required.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0100

Toxic Air Contaminant Permit Addenda

(1) Purpose and Intent.

(a) A Toxic Air Contaminant Permit Addendum or conditions included in an operating permit to comply with this division are used to:

(A) Authorize the owner or operator of a source to construct or modify TEUs that discharge toxic air contaminants;

(B) Authorize the owner or operator of a source to discharge toxic air contaminants subject to enforceable permit requirements, limitations, and conditions, including to:

(i) Establish enforceable risk limits for the purpose of limiting the risk from toxic air contaminants from a source;

(ii) Approve, modify and implement a Risk Reduction Plan and require the owner or operator of a source to implement the ongoing requirements; and

(iii) Approve, modify and implement a Voluntary Risk Reduction Plan and require the owner or operator of a source to implement the ongoing requirements;

(C) Approve, modify and implement a Toxic Air Contaminant Monitoring Plan; and

(D) Approve postponement of risk reduction;

(b) A Toxic Air Contaminant Permit Addendum:

(A) For the owner or operator of a source with a General Air Contaminant Discharge Permit, is issued as a source-specific addendum to the operating permit and will not be incorporated into the operating permit;

(B) For the owner or operator of a source with an operating permit other than a General Air Contaminant Discharge Permit:

(i) Is issued to the owner or operator as an addendum to the operating permit and will be incorporated into the operating permit at the time of a permit modification or renewal that subjects all permit conditions to the Category II or Category III public notice procedure in OAR chapter 340, division 209; or

(ii) Will not be issued when the toxic air contaminant permit conditions are incorporated directly into an operating permit after such changes were subject to a public notice period under OAR chapter 340, division 209.

(C) May not be issued to an owner or operator before the source has obtained an operating permit; and

(D) May not be issued in lieu of an otherwise required operating or construction permit.

(2) A Toxic Air Contaminant Permit Addendum amends a source's operating permit, but if the terms of such addendum and the operating permit contain any limit or restriction applicable to the same emissions or processes, then the owner or operator must comply with the more stringent limit or restriction.

(3) Application Requirements. An owner or operator requesting a new or modified Toxic Air Contaminant Permit Addendum must submit an application that includes all of the information specified in subsections (3)(a) through (n) as well as the relevant information required under OAR 340-245-0050. The owner or operator must submit all required information by the submittal deadlines in OAR 340-245-0030, certified by a responsible official that the information submitted is true, accurate, and complete. The owner or operator must submit to DEQ one paper copy and one electronic copy of the application.

(a) Identifying information, including the name of the person that owns or operates the source, the owner's or operator's mailing address, the source address, and a description of the nature of business being operated, the name, phone number and email address of the primary contact at the source who is responsible for compliance with the permit, the permit number for an existing source, and the SIC or NAICS code of the source;

(b) The name of a person authorized to receive requests from DEQ for additional data and information;

(c) For owners or operators of sources with Basic or General Air Contaminant Discharge Permits, an emissions inventory required under OAR 340-245-0040(3)(a);

(d) For owners or operators of sources with Title V, Standard, or Simple Air Contaminant Discharge Permits, an emissions inventory required under OAR 340-245-0040(3)(a) and (b);

(e) Where the operation or maintenance of air pollution control devices and emission reduction processes can be adjusted or varied from the highest reasonable efficiency and effectiveness, information necessary for DEQ to establish operational and maintenance requirements under OAR 340-226-0120(1) and (2);

(f) The final DEQ-approved modeling protocol required under OAR 340-245-0210;

(g) The final DEQ-approved Level 3 or Level 4 Risk Assessment work plan required under OAR 340-245-0210, if applicable;

(h) The final DEQ-approved risk assessment required under OAR 340-245-0050;

(i) Information sufficient to demonstrate that a TEU meets TBACT or TLAER under OAR 340-245-0220, if applicable;

(j) For sources whose risk is greater than or equal to the TBACT Level before any additional risk reduction measures are considered, a pollution prevention analysis that meets the requirements of OAR 340-245-0140;

(k) The final DEQ-approved Risk Reduction Plan under OAR 340-245-0130, if applicable;

(l) The final DEQ-approved postponement of risk reduction under OAR 340-245-0150, if applicable;

(m) The final DEQ-approved Toxic Air Contaminant Monitoring Plan under OAR 340-245-0230, if applicable; and

(n) Any other information requested by DEQ.

(4) Application review and processing.

(a) DEQ shall use the procedures in OAR 340-245-0030 to review an application submitted under this rule to determine its completeness, consider extension requests, and request additional information, if needed;

(b) If DEQ determines that a Toxic Air Contaminant Permit Addendum is not required during review of an application, or at any time during application processing, DEQ will notify the applicant in writing;

(c) When DEQ has approved an application for a Toxic Air Contaminant Permit Addendum or operating permit, DEQ will prepare a review report and either draft Toxic Air Contaminant Permit Addendum or a draft operating permit with conditions that comply with this division;

(d) Prior to initiating any public notice procedure required under OAR 340-245-0050, DEQ will provide a copy of the draft Toxic Air Contaminant Permit Addendum or operating permit to the owner or operator and will provide the owner or operator 14 days to review and provide feedback to DEQ. DEQ may grant an extension for review of the draft permit addendum or operating permit for good cause shown by the owner or operator. Following consideration of comments from the owner or operator, DEQ may revise the draft Toxic Air Contaminant Permit Addendum or operating permit before placing it on public notice; and

(e) Public notice requirements for issuance of a Toxic Air Contaminant Permit Addendum or operating permit with conditions required under this division.

(A) The minimum public notice procedures for issuance are described in the applicable sections of OAR 340-245-0050. DEQ may enhance the public notice procedures at its discretion;

(B) When required to provide public notice, DEQ will make available to the public the draft Toxic Air Contaminant Permit Addendum or operating permit and a review report that sets forth the legal and factual basis for the permit conditions, including references to the applicable regulatory provisions, the source's most recent risk assessment results, and the level of risk assessment that the source used to perform the risk assessment; and

(C) Prior to determining whether to issue, revise, or deny a Toxic Air Contaminant Permit Addendum or an operating permit with conditions required under this division, DEQ must consider public comments it receives under the applicable public notice procedures that are relevant to the draft permit addendum or operating permit and within the scope of DEQ's authority.

(5) DEQ may not issue a Toxic Air Contaminant Permit Addendum or an operating permit for a source if:

(a) The owner or operator of a proposed new or reconstructed source does not comply with OAR 340-245-0050, 340-245-0060 and this rule, as applicable;

(b) DEQ determines that the emissions from a proposed new or reconstructed source would result in risk at any exposure location that will exceed a Permit Denial Level; or

(c) DEQ determines that the emissions from an existing source would result in risk at any exposure location that will exceed the Immediate Curtailment Risk Action Level.

(6) Content of a Toxic Air Contaminant Permit Addendum or Operating Permit Conditions. A Toxic Air Contaminant Permit Addendum or an operating permit with conditions required under this division must:

- (a) Identify the name of the person that owns or operates the source, the owner's or operator's mailing address, the source address, and a description of the nature of business being operated, the name, phone number and email address of the primary contact at the source who is responsible for compliance with the permit, the permit number for an existing source, and the SIC or NAICS code of the source;
 - (b) Include a list of all TEUs that are subject to a Toxic Air Contaminant Permit Addendum or operating permit conditions required under this division, including all exempt TEUs and aggregated TEUs;
 - (c) Include permit conditions that contain Source Risk Limits to implement the requirements specified in OAR 340-245-0110;
 - (d) Establish or revise any operating limits or conditions necessary under this division, including annual or short-term toxic air contaminant emission limits, conditions to limit risk from TEUs or the entire source, and operational limits for toxic air contaminants, including limits or levels that are equipment specific, process specific, TEU-specific, or that apply to the entire source;
 - (e) Include testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with all limits or requirements in the Toxic Air Contaminant Permit Addendum or the operating permit conditions required under this division, as necessary;
 - (f) At the discretion and option of the owner or operator, include a description of the owner's or operator's plans to continue its community engagement activities after DEQ has completed its notification requirements;
 - (g) Include a compliance schedule, as necessary, to ensure compliance or progress toward compliance with the requirements in this division;
 - (h) Include other limits and requirements, as necessary, to ensure compliance with this division; and
 - (i) Include a condition that requires the owner or operator to provide an annual report to DEQ.
- (7) Reporting Requirements. The owner or operator must submit a report at least annually to DEQ to demonstrate compliance with all conditions required under this division that are included in a Toxic Air Contaminant Addendum or an operating permit. The report must include:
- (a) Twice-annual progress reports required under a Risk Reduction Plan under OAR 340-245-0130;
 - (b) Periodic TBACT or TLAER update reports required under OAR 340-245-0220(5);
 - (c) Verification there has not been a change in zoning within 1.5 kilometers of the source and, if so, whether that change increases the source risk;
 - (d) Documentation showing that, for any area that the source demonstrated in its risk assessment was not used in a manner allowed by the land use zoning applicable to the area as allowed under OAR 340-245-0210, the area continues to not be used in the manner allowed by the land use zoning applicable to the area; and
 - (e) Any other information required to be reported by a condition in the Toxic Air Contaminant Permit Addendum or an operating permit.

(8) Procedures to Modify Toxic Air Contaminant Permit Conditions. If the Toxic Air Contaminant Permit Addendum has not been incorporated into the operating permit, the following procedures must be followed for modifications to existing Toxic Air Contaminant Permit Addenda. Otherwise, the owner or operator must apply for an operating permit modification under OAR 340 division 216 or 218 using the procedures in this division for the following modifications:

(a) Modifications initiated by the owner or operator. An owner or operator must submit an application for modification before making any change described in paragraphs (a)(A) through (J) and that would result in a violation of a condition of the Toxic Air Contaminant Permit Addendum or an operating permit condition required under this division;

(A) Construct or modify a TEU that is:

(i) Exempt under OAR 340-245-0060(4)(c)(A);

(ii) Aggregate under OAR 340-245-0060(4)(c)(B); or

(iii) Significant under OAR 340-245-0060(4)(c)(C);

(B) Modify an established Source Risk Limit or any risk limits or conditions necessary under this division;

(C) Request an extension to a compliance date. The owner or operator must submit the application for extension at least 90 days before the compliance date specified in the current Toxic Air Contaminant Permit Addendum or operating permit. Criteria for granting any extension include the following:

(i) The owner or operator has a clear plan towards meeting the Source Risk Limit;

(ii) The owner or operator has made demonstrated progress towards meeting the requirements that are the subject of the extension request; and

(iii) The owner or operator has submitted documentation proving that the delay is due to reasonably unforeseeable events beyond their control;

(D) Modify any physical feature of the source that was used as a modeling parameter in the risk assessment and that affects the results of the risk assessment, such as but not limited to fence lines, building heights, stack heights, or relocation of a TEU or stack by more than 10 meters;

(E) Terminate postponement of risk reductions;

(F) Modify zoning or land use. The owner or operator must submit an application for modification under this division and revise the risk assessment submitted under OAR 340-245-0050 no later than 60 days after the following:

(i) The zoning in the area around the facility has changed in a way that could increase risk;

(ii) Land use has changed in a way that could increase risk in areas where alternative land use was previously approved for use in the risk assessment under OAR 340-245-0210(1)(a)(F);

(G) Modify air monitoring requirements; and

(H) Revise or update the approved risk assessment. An owner or operator must promptly submit a corrected risk assessment upon becoming aware of the need for corrections or additional information. This requirement is in addition to, and not in lieu of, a DEQ decision to commence an enforcement action against such owner or operator for such violation, as DEQ determines appropriate under the circumstances;

(b) Modifications required by DEQ. When notified in writing by DEQ, the owner or operator must update or correct its previous risk assessment and submit an application for a modification if:

(A) DEQ determines through an investigation or file review that a previous risk assessment contains errors or omissions that, when corrected, could increase the risk;

(B) An RBC in OAR 340-245-8010 Table 2 has been added or lowered that would substantially impact risk, implementation, or effectiveness of the Risk Reduction Plan;

(C) Risk assessment procedures change that would substantially impact risk, implementation, or effectiveness of the Risk Reduction Plan; and

(D) Results of toxic air contaminant monitoring done by the owner or operator show higher risk than any risk determined by the risk assessment;

(c) The owner or operator must submit a complete application for modification, and pay the applicable modification fees in subsection (g). If DEQ has provided notice to the owner or operator under subsection

(b), then the owner or operator must submit the necessary information required under section (3) to DEQ 90 days after the date that DEQ sends such written notice;

(d) DEQ shall use the procedures in OAR 340-245-0030 to review a modification application submitted under this rule to determine its completeness, consider extension requests, and request additional information, if needed;

(e) When updating or correcting a risk assessment, the owner or operator must consult with DEQ and must follow the applicable risk assessment requirements in OAR 340-245-0050;

(f) When DEQ receives an application to modify a Toxic Air Contaminant Permit Addendum or operating permit, DEQ will use the following public notice procedures:

(A) Category III public notice procedures in OAR chapter 340, division 209 if the change will:

(i) Increase source risk when an existing or new facility's source risk is above the TBACT or TLAER Risk Action Level prior to the modification, except when the source risk increase is from the addition of an aggregated TEU;

(ii) Increase source risk above a Risk Action Level that requires additional requirements under this division;

(iii) Establish a Risk Reduction Plan for termination of postponement of risk reduction;

(iv) Extend any compliance dates in a compliance schedule established in the permit; or

(v) Significantly change proposed control methods in a Risk Reduction Plan;

(B) Category I public notice procedures in OAR chapter 340, division 209 for non-technical modifications and basic technical modifications; or

(C) Category II public notice procedures in OAR chapter 340, division 209 for all other types of permit changes not described in paragraphs (A) and (B);

(g) The fee for a modification is:

(A) The Complex Technical Modification fee under OAR 340-216-8020 Table Part 4 for modifications under paragraph (f)(A);

(B) The Basic Technical Modification fee or the Non-Technical Permit Modification fee under OAR 340-216-8020 Table 2 Part 4 for modifications under paragraph (f)(B); or

(C) The Moderate Technical Modification fee under OAR 340-216-8020 Table 2 Part 4 for modifications under paragraph (f)(C).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337, ORS 468A.345

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.345 & Or Laws 2018, ch. 102, § 14

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0110

Source Risk Limits

(1) The purpose of a Source Risk Limit is to limit the chronic and acute risk from a source that emits toxic air contaminants. DEQ will establish Source Risk Limits based on the results of the risk assessment performed under OAR 340-245-0050. DEQ will establish Source Risk Limits separately for each of the following risk categories: chronic excess cancer risk, chronic noncancer risk and acute noncancer risk.

(a) Source Risk Limits that are based on chronic risk apply on a rolling 12 consecutive month basis and limit the source's chronic risk or annual PTE, as applicable;

(b) Source Risk Limits that are based on acute risk apply on a daily basis and limit the source's acute risk or daily PTE, as applicable; and

(c) DEQ may establish multiple chronic or acute noncancer Source Risk Limits for an individual source on a case-by-case basis to account for risk to different target organs or organ systems.

(2) Establishing Source Risk Limits. For new, reconstructed, and existing sources whose risk is greater than the Source Permit Level, DEQ may set Source Risk Limits based on either:

(a) The level modeled in the risk assessment required under OAR 340-245-0050 using the emissions inventory submitted under OAR 340-245-0040(1); or

(b) For existing sources, a level other than the modeled level that reflects a reasonable estimate of risk from the source taking into account projected operations and other factors, including but not limited to:

(A) Applicable State and Federal limitations;

(B) Established PTE;

(C) Past operations; and

(D) Recent trends in emission rates.

(3) An owner or operator may propose the type of risk limit that will be included in the source's Toxic Air Contaminant Permit Addendum or operating permit, such as a limit on emissions or source operation, or a limit on risk.

(a) Source Risk Limits will generally be based on conditions imposed on emissions, operational parameters, production activities, fuel or raw material usage, as necessary, to maintain risk below the Source Risk Limits; or

(b) Source Risk Limits may be expressed in terms of risk, such as X per million for excess cancer risk or Hazard Index of Y, where X and Y indicate a numerical value.

(4) If a compliance schedule to reduce risk is included in the Toxic Air Contaminant Permit Addendum or operating permit for an existing source, the owner or operator must comply with all the requirements in the compliance schedule and maintain proposed risk below the Immediate Curtailment Level, if applicable.

(5) Determining Compliance with Source Risk Limits.

(a) Frequency. The owner or operator must maintain compliance with the Source Risk Limit on the frequency specified in the Toxic Air Contaminant Permit Addendum or operating permit as follows:

(A) For excess cancer risk, using the annual actual toxic air contaminant emission rates emitted by the source that have cancer RBCs determined on a 12-rolling month basis, compliance must be maintained monthly, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit;

(B) For chronic noncancer risk, total or separated for each target organ or organ system, using the annual actual toxic air contaminant emission rates emitted by the source that contribute to each chronic noncancer risk determined on a 12-rolling month basis, compliance must be maintained monthly, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit; and

(C) For acute noncancer risk, total or separated for each target organ or organ system, using the maximum daily actual toxic air contaminant emission rates emitted by the source that contribute to each acute noncancer risk determined for the preceding day, compliance must be maintained daily, unless less frequent compliance requirements are specified in a source's Toxic Air Contaminant Permit Addendum or operating permit;

(b) Compliance records maintenance method.

(A) If the Source Risk Limit is based on emissions, production activities, or other limits on source operation, the owner or operator must monitor emissions, production activities, or other limits on source operation, using one or more of the following methods:

(i) Continuous emissions monitors;

- (ii) Material balance calculations;
- (iii) Emissions calculations using approved emission factors and process information;
- (iv) Production activity or process parameter monitoring; and
- (v) Other methods approved by DEQ;

(B) If the Source Risk Limit is based on risk, the owner or operator must calculate ongoing risk in a manner specified in the source's Toxic Air Contaminant Permit Addendum or operating permit.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

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340-245-0120

Community Engagement

(1) The purpose of community engagement is to inform the community and provide a mechanism for input to DEQ's work with sources that are called into the program. The requirements of this rule are intended to ensure that consideration of environmental justice is appropriately emphasized throughout implementation of this division.

(2) Notification. When DEQ holds a public meeting under subsection (3)(a), DEQ will, at a minimum, notify persons with an address in the notification area. DEQ will provide a 30 day notice of any public meeting held under subsection (3)(a) by sending an email through GovDelivery or mailing written notice via U.S. mail to such persons. DEQ may enhance the public notice procedures at its discretion. DEQ may determine notice requirements for any additional public meetings held under subsection (3)(c).

(3) Public meetings.

(a) DEQ may hold one or more public meetings to gather community input prior to drafting proposed permit conditions for new, reconstructed, modified and existing sources if the owner or operator requests Source Risk Limits greater than any of the Community Engagement Levels except as allowed by OAR 340-245-0130(6). DEQ, in consultation with persons who live or spend time within the notification area, may determine that another forum for communication, as listed in section (4), in lieu of or in addition to a public meeting, is appropriate;

(b) If DEQ does not hold a public meeting as specified in subsection (a), DEQ will provide written notice via U.S. mail to all persons with an address in the notification area that the owner or operator has requested Source Risk Limits greater than any of the Community Engagement Levels except as allowed by OAR 340-245-0130(6);

(c) DEQ may, at its discretion, also hold one or more public meetings for any other reporting, monitoring or permitting action associated with activities under this division with advanced notice;

(d) In planning and holding public meetings, DEQ will consider:

(A) A location that is Americans with Disabilities Act compliant, is convenient for community members to attend and can be accessed by public transportation, if available;

(B) The timing of the meeting, scheduling in a manner that is convenient to the majority of attendees;

(C) Whether translation services are necessary, and may provide such services;

(D) Whether childcare is necessary, and when feasible, may work with providers to render such services;

(E) Best practices for public and community meetings as identified in resources published by the State of Oregon Environmental Justice Task Force and OHA;

(e) When DEQ determines to hold a public meeting under subsection (3)(a) regarding a source, then the owner or operator must pay the applicable community engagement fee specified in OAR 340-216-8030 Table 3, and at least one representative of the owner or operator must appear at the public meeting.

(4) Other forums for communication. Other forums for communication may include any or all of the following:

(a) Notifying the community of information and reports submitted by an applicant required by this division by sending an email through GovDelivery or mailing written notice via U.S. mail;

(b) Posting all information and reports submitted by an applicant on the DEQ website;

(c) Attending community forums or other local meetings when relevant or requested by the community. The representative of the owner or operator is not required to attend this type of meeting;

(d) Electronic meeting forums such as webinars or conference calls; and

(e) Other activities as determined necessary by DEQ.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, ORS 468A.337, ORS 468A.343

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337, ORS 468A.343

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0130

Risk Reduction Requirements

(1) A Risk Reduction Plan for an existing source must do the following within the specified period of time under OAR 340-245-0030, as applicable:

(a) Reduce risk to less than or equal to the TBACT Level;

(b) Require the owner or operator to meet TBACT on all significant TEUs;

(c) Reduce risk to less than or equal to the Risk Reduction Level; or

(d) Reduce risk to less than or equal to the Community Engagement Level if the owner or operator voluntarily agrees to do so.

(2) Risk Reduction Plan Requirements. The owner or operator that is requesting approval of a Risk Reduction Plan must submit to DEQ the following:

(a) Two air contaminant emissions inventories:

(A) The emissions inventory for the source submitted under OAR 340-245-0040(1) before implementation of the proposed Risk Reduction Plan measures; and

(B) A projected emissions inventory for the source submitted under OAR 340-245-0040(1) and OAR 340-245-0040(3)(b)(B)(ii)(I) after implementation of the proposed Risk Reduction Plan measures;

(b) The results of a risk assessment performed under OAR 340-245-0050(10) or (11) including the risk calculations before and after full implementation of the Risk Reduction Plan using the emissions inventories required in subsection (a);

(c) An analysis of pollution prevention measures under OAR 340-245-0140, and a description of those measures that the owner or operator has undertaken and included as part of its Toxic Air Contaminant Permit Addendum application;

(d) Identification of each TEU for which an action will be taken to reduce risk, how the risk will be reduced, and for TEUs that are required to meet TBACT:

(A) A demonstration that all significant TEUs at the source meet TBACT under OAR 340-245-0220; or

(B) The TBACT analysis under OAR 340-245-0220 that demonstrates that all significant TEUs at the source will meet TBACT when the plan is fully implemented;

(e) A schedule for implementing the proposed Risk Reduction Plan measures within the time frames allowed under section (4), if not sooner. The schedule must specify:

(A) The dates by which the source will implement the proposed Risk Reduction Plan measures;

(B) The dates for submittal of periodic reports showing progress toward completion of the proposed Risk Reduction Plan measures. Progress reports should include achievement of significant milestones, including but not limited to dates of equipment delivery and construction progress; and

(C) The dates for submittal of applications for permits to construct or modify, which must be no later than 90 days after DEQ approval of the Risk Reduction Plan, or other time period approved by DEQ;

(f) The proposed Source Risk Limits.

(3) The owner or operator may request a postponement of risk reduction for excess cancer and chronic noncancer risk under OAR 340-245-0150.

(4) Risk Reduction Plan implementation deadlines.

(a) Chronic risk. The owner or operator of a source that has either or both an excess cancer or chronic noncancer source risk that is greater than the TBACT Level must complete implementation of the Risk Reduction Plan within two years from the effective date of the Toxic Air Contaminant Permit Addendum or the operating permit with conditions in compliance with this division, or at an earlier time as required by DEQ in such addendum or operating permit;

(A) Except as provided in paragraph (B), the owner or operator may apply for a permit modification as specified under OAR 340-245-0100(8) to request additional time to complete implementation of risk reductions measures. If the owner or operator, in such application, shows good cause for the modification based on unreasonable hardship to the source, then DEQ may allow the owner or operator not more than two additional years beyond the timeline established in subsection (4)(a).

(B) DEQ may not grant a request under paragraph (A) to an owner or operator that has previously received approval for a postponement of risk reduction under OAR 340-245-0150;

(b) Acute risk. The owner or operator of a source that has acute risk that is greater than the TBACT Level must complete implementation of the Risk Reduction Plan on the following timeline:

(A) Within one month from the effective date of the Toxic Air Contaminant Permit Addendum or the operating permit with conditions in compliance with this division; or

(B) If the owner or operator requests additional time in its Toxic Air Contaminant Permit Addendum application and shows good cause based on unreasonable hardship to the source and an evaluation of health factors, including but not limited to severity of acute health effect, degree of scientific certainty, and averaging time of the acute TRV used to develop the RBC, then DEQ may allow the owner or operator up to and not more than 12 months to complete implementation of the Risk Reduction Plan.

(5) Reporting Requirements.

(a) The owner or operator of a source that has been issued a Toxic Air Contaminant Permit Addendum or operating permit that includes a Risk Reduction Plan must submit twice-annual progress reports to DEQ describing the source's progress in reducing toxic air contaminant emissions and risk by implementing the Risk Reduction Plan. The progress reports are due to DEQ on or before February 15 and July 31 of each year that the Risk Reduction Plan is in effect, or other dates specified in the Toxic Air Contaminant Permit Addendum or operating permit. The progress reports must include all information required by the Toxic Air Contaminant Permit Addendum or operating permit, including but not limited to:

(A) The increments of progress achieved in implementing the risk reduction measures specified in the Risk Reduction Plan;

(B) A schedule indicating dates for future increments of progress;

(C) A description of any increases or decreases in emissions of toxic air contaminants that have occurred at the source since approval of the Risk Reduction Plan; and

(D) An estimate of when all Risk Reduction Plan elements will be completed;

(b) The owner or operator must submit a Risk Reduction Plan completion report to DEQ no later than 60 days after completing all Risk Reduction Plan requirements. The report must include:

(A) The final increments of progress achieved in fully implementing the risk reduction measures specified in the Risk Reduction Plan and the date the final increments of progress were achieved;

(B) A summary of the actions taken to implement the Risk Reduction Plan;

(C) The results of the demonstration of the effectiveness of the Risk Reduction Plan measures, including verification of the modeling parameters for all of the TEUs for which risk was reduced; and

(D) The remaining source risk after completion of all risk reduction measures.

(6) Voluntary Risk Reductions. DEQ will not conduct community engagement public meetings, as described in OAR 340-245-0120(3), for the owner or operator of an existing source whose risk is less than or equal to the TBACT Level and that agrees to voluntarily reduce risk to below the Community Engagement Level in compliance with the following requirements:

(a) Voluntary Risk Reduction Plan. An owner or operator must submit for DEQ approval a Voluntary Risk Reduction Plan that follows the requirements and procedures in this rule for submittal of a Risk Reduction Plan to reduce risk to below the Community Engagement Level;

(b) The owner or operator must complete implementation of the Voluntary Risk Reduction Plan within the following timelines:

(A) Chronic risk.

(i) Two years from the effective date of the Toxic Air Contaminant Permit Addendum, or at an earlier time as required by DEQ for excess cancer and noncancer chronic risk; and

(ii) If additional time is needed to implement the risk reduction measures, the owner or operator must apply for a permit modification as specified under OAR 340-245-0100(8). If the owner or operator shows good cause for the modification based on unreasonable hardship to the source then DEQ may allow the owner or operator not more than two additional years beyond the initial two years to complete implementation of the voluntary risk reduction measures.

(B) Acute risk.

(i) One month from the effective date of the Toxic Air Contaminant Permit Addendum for acute risk; and

(ii) If additional time is needed to implement the risk reduction measures, the owner or operator must apply for a permit modification as specified under OAR 340-245-0100(8). If the owner or operator shows good cause based on unreasonable hardship to the source and an evaluation of health factors, including but not limited to severity of acute health effect, degree of scientific certainty, and averaging time of the acute TRV used to develop the RBC, then DEQ may allow the owner or operator up to and not more than 12 months to complete implementation of the voluntary risk reduction measures; and

(c) If the owner or operator does not complete implementation of the Voluntary Risk Reduction Plan within the approved time, DEQ may initiate the community engagement requirements under OAR 340-245-0120.

(7) Immediate Curtailment Risk Reduction Plan. If the results of the DEQ approved Level 3 or Level 4 Risk Assessment, submitted under OAR 340-245-0050, demonstrate source risk is greater than the Immediate Curtailment Level in OAR 340-245-8010 Table 1, the owner or operator must:

(a) Submit to DEQ, by the deadline provided in OAR 340-245-0030(1)(e), an Immediate Curtailment Risk Reduction Plan that describes the actions the source will take to immediately reduce risk below the Immediate Curtailment Level. The Immediate Curtailment Risk Reduction Plan must include:

(A) Specific actions to immediately reduce risk from Significant TEUs, which may include:

(i) Production activity reductions or process modifications;

(ii) Material substitution or product reformulation;

(iii) Additional operations and maintenance; and

(iv) Improvements to, or installation of, pollution control devices;

(B) The amount of risk reduction anticipated from the actions included under paragraph (A) and all supporting estimation methods and calculations; and

(C) Monitoring procedures to ensure the anticipated reduction amounts in paragraph (B) are achieved;

(b) Fully implement the Immediate Curtailment Risk Reduction Plan within ten days of DEQ approval of the plan.

(8) If the owner or operator submits an incomplete Immediate Curtailment Risk Reduction Plan or if DEQ determines that the Immediate Curtailment Risk Reduction Plan is inadequate, then in addition to any other remedies available to DEQ, including authority pursuant to ORS 468.115, if applicable, DEQ may modify the Immediate Curtailment Risk Reduction Plan and order the owner or operator to comply with such plan. The owner or operator must fully implement the modified Immediate Curtailment Risk Reduction Plan within 10 days of receipt.

(9) The owner or operator must comply with the Immediate Curtailment Risk Reduction Plan until:

(a) DEQ issues a Toxic Air Contaminant Permit Addendum under OAR 340-245-0100 with an approved Risk Reduction Plan; and

(b) The owner or operator implements the approved Risk Reduction Plan.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0140

Pollution Prevention

(1) The owner or operator of a source whose risk is greater than the TBACT Level, before any additional risk reduction measures are considered, is required to do an analysis of pollution prevention measures as provided in this rule.

(2) The owner or operator must evaluate pollution prevention measures that are likely to reduce or eliminate emissions of toxic air contaminants. If the owner or operator chooses to implement any such measures, the owner or operator must include that information in the Toxic Air Contaminant Permit Addendum application.

(3) An analysis of pollution prevention measures must include the following:

(a) A detailed review of source data, including TEU and process level data related to the toxic air contaminants of concern emitted by the source, including:

(A) A process flow diagram depicting all production steps, showing all chemical and material inputs and all processes through which material passes to form a product, and showing the point at which toxic air contaminants enter the system and leave the production unit, with identification of the inputs and outputs relevant to generation of toxic air contaminants; and

(B) Materials accounting which quantifies the total chemical inputs and outputs of a particular toxic air contaminant from each process, and ultimately, source-wide usage and emissions;

(b) The identification of pollution prevention options that includes measures focused on the toxic air contaminants, by-products (outputs, not inputs) and processes that have been mapped and quantified. The categories of toxic air contaminant pollution prevention options include, but are not limited to, the following:

(A) Chemical input alternatives evaluated for hazard characteristics, technical performance, cost and availability, and exposure;

(B) Product reformulation;

(C) Production process redesign or modification;

(D) Production process modernization;

(E) Improved operations and maintenance;

(F) In-process recycling; and

(G) Inventory management controls;

(c) The technical screening and feasibility evaluation of toxic air contaminant pollution prevention options include, but are not limited to, the following:

(A) Performance needs for the application, process or product that contains the toxic air contaminant for which the pollution prevention option is being sought;

(B) Identification of the option as favorable with respect to performance by other industries;

(C) Availability as “off-the-shelf” technology with demonstrated successful use;

(D) Compatibility of the option with existing process technology;

(E) Effects on product quality and compliance with customer specifications; and

(F) Long term viability of the option;

(d) The economic feasibility evaluation of toxic air contaminant pollution prevention options to determine all of the costs and savings associated with implementing the option, include, but are not limited to, the following:

(A) Direct costs or savings (e.g., capital investment, operations and maintenance, annual chemical costs vs. per unit cost);

(B) Indirect costs or savings (e.g., reduced worker health and safety costs, compliance cost reductions, and lower waste and by-product management costs);

(C) Effects on future liability (e.g., liability insurance premium reductions);

(D) Non-monetized costs or benefits (e.g., improved company public image and community relations); and

(E) New revenue sources associated with this option (e.g., will there be new markets for modified products).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

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340-245-0150

Postponement of Risk Reduction

(1) Postponement of risk reduction is only available for existing sources for excess cancer and noncancer chronic risk, and cannot be approved if risk is over the Immediate Curtailment Level. An owner or operator may request postponement of risk reduction for one five year period. After that five year period, the owner or operator must reduce risk in accordance with OAR 340-245-0130.

(2) An owner or operator of an existing source requesting postponement of the requirement to reduce risk for one or more significant TEUs must submit a request to DEQ that includes the following:

(a) Information proving inability to pay as described in section (4);

(b) The TEUs for which the postponement is being requested;

(c) An analysis of:

(A) All risk reduction measures that the owner or operator is required to undertake to reduce risk; and

(B) The cost to install, operate and maintain each risk reduction measure identified in paragraph (A) for which a postponement is being requested;

(d) A description of any other interim risk reduction measures, including a pollution prevention analysis under OAR 340-245-0140, that will be taken to reduce risk in lieu of implementing each risk reduction measure identified in paragraph (c)(A) for which a postponement is being requested and when those interim risk reduction measures will be implemented; and

(e) The number of employees at the source.

(3) An owner or operator must include a postponement request in the source's Toxic Air Contaminant Permit Addendum application under OAR 340-245-0100.

(4) The owner or operator making a request to postpone risk reduction:

(a) Must use the applicable U.S. Environmental Protection Agency's ABEL, INDIPAY or MUNIPAY computer model, or a substantially equivalent analysis approved by DEQ, to evaluate financial condition or ability to pay the full cost of reducing risk or meeting TBACT in accordance with EPA standards for determining ability to pay. The models' standard input values are presumed to apply unless the owner or operator can demonstrate that the standard values do not reflect the owner's or operator's actual circumstances. DEQ may generally determine that the owner or operator is able to pay if the model results show that the owner or operator has a 70% probability of being able to absorb the cost of meeting TBACT or implementing other physical, operational or process changes that could be made to reduce risk; and

(b) Is required to provide DEQ, on a confidential basis if the information meets the requirements of OAR 340-214-0130, audited financial information about the source. The information must include federal tax returns for the most recent three years, the most current year's audited financial statement, a signed auditor's statement provided by a certified public accountant, the source's latest income statement and balance sheet, and other information regarding the owner's or operator's financial condition on a form required by DEQ. The information will be held as confidential to the extent consistent with the Oregon Public Records Law, ORS 192.311 through 192.478.

(5) Negotiation and consultation.

(a) DEQ may negotiate alternatives to the postponement with the owner or operator, and may consider such alternatives in the final determination regarding whether to approve the postponement; and

(b) DEQ will consult with OHA, local elected officials, local Tribal governing bodies, and relevant state and federal agencies that have jurisdiction in the notification area before making a final determination regarding the postponement.

(6) DEQ may grant a request for postponement of risk reduction in full or in part and impose any conditions, implementation of reasonable alternative measures, and implementation schedules that DEQ determines are appropriate based on the following:

(a) Evaluating the following at exposure locations where risk will exceed an applicable Risk Action Level:

(A) The presence of sensitive populations, including people with low income, members of a minority group, and residents under five years old; and

(B) The total population that lives within the notification area of the source;

(b) Considering both the potential economic harm to the owner or operator of the source of requiring that the owner or operator make the identified risk reductions against the burden of risk to the exposed population if the risk reductions are postponed.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

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340-245-0200

Risk Estimates

(1) When a risk assessment is required under this division, the risk assessment must consider the toxic air contaminants and the Risk-Based Concentrations listed in OAR 340-245-8010 Table 2 to assess excess cancer and noncancer risk.

(2) Directions for using the Level 1 Risk Assessment Dispersion Factor Tables.

(a) An owner or operator that chooses to perform a Level 1 Risk Assessment under OAR 340-245-0050, must calculate a separate sum of risk for each of the following categories: excess cancer risk, chronic noncancer risk, and acute noncancer risk for the applicable exposure scenarios;

(b) When making this calculation, the owner or operator must use the emissions inventory submitted under OAR 340-245-0040(1) for:

(A) Excess cancer risk and chronic noncancer risk, the average annual emission rates; and

(B) Acute noncancer risk, the maximum daily emission rates.

(c) The owner or operator must perform each of the following calculations in paragraphs (A) and (B), except as allowed in paragraph (C):

(A) For excess cancer risk and chronic noncancer risk:

(i) For each TEU with emissions from a stack, vent, duct, or equivalent opening, use the stack height and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-8010 Table 3A. If the TEU is a volume fugitive source that is not emitted from a stack, vent, duct, or equivalent opening, use the area and height of the building and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-8010 Table 3C;

(ii) For each TEU and each toxic air contaminant emitted from the TEU, multiply the annual emission rate by the dispersion factor identified under subparagraph (i) to calculate an air concentration at the nearest exposure location;

(iii) For each TEU, divide the air concentration of each toxic air contaminant calculated under subparagraph (ii) by the appropriate RBC of that toxic air contaminant under OAR 340-245-8010 Table 2;

(iv) For each TEU, add up the risk from each toxic air contaminant calculated under subparagraph (iii); and

(v) For all TEUs, add up all of the risks calculated under subparagraph (iv) to obtain the total excess cancer risk in one million or the total chronic noncancer Hazard Index for the entire source. For chronic noncancer risk, Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ;

(vi) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-245-8010, Table 2 and OAR 240-245-8010, Table 2, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule.

(B) For acute noncancer risk:

(i) For each TEU with emissions from a stack, vent, duct, or equivalent opening, use the stack height and distance to the nearest exposure location to identify the appropriate dispersion factor under OAR 340-245-8010 Table 3B. If the TEU is a volume fugitive source that is not emitted from a stack, vent, duct, or equivalent opening, use the area and height of the building and distance to the nearest exposure locations to identify the appropriate dispersion factor under OAR 340-245-8010 Table 3D;

(ii) For each TEU and each toxic air contaminant emitted from the TEU, multiply the maximum daily emission rate by the dispersion factor identified under subparagraph (i) to calculate an air concentration at the nearest exposure location;

(iii) For each TEU, divide the air concentration of each toxic air contaminant calculated under subparagraph (ii) by the acute RBC for that toxic air contaminant under OAR 340-245-8010 Table 2

(iv) For each TEU, add up the risk from each toxic air contaminant calculated under subparagraph (iii); and

(v) For all TEUs, add up all of the risks calculated under subparagraph (iv) to obtain the total acute noncancer Hazard Index for the entire source. Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ;

(vi) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-247-8010, Table 2 and OAR 340-245-8010, Table 2, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule.

(C) Instead of using stack height and distance or area and height of the building and distance to the nearest exposure locations to obtain the appropriate dispersion factor under OAR 340-245-8010 Table 3, the owner or operator may instead use, as a default, the most conservative dispersion factor;

(i) For emissions from a stack, vent, duct, or equivalent opening, use the dispersion factor associated with a stack height of five meters and an exposure location distance of 50 meters, which is listed in the upper-left corner of OAR 340-245-8010 Table 3A and 3B;

(ii) For volume fugitive emissions that are not emitted from a stack, vent, duct, or equivalent opening, use the dispersion factor associated with an area of less than or equal to 3,000 square feet, a building height of less than or equal to 20 feet, and an exposure location distance of 50 meters, which is listed in the upper-left corner of OAR 340-245-8010 Table 3C and 3D; and

(iii) Using these default dispersion factors will result in protective calculations of risk. If the risks calculated using these default dispersion factors are less than or equal to the applicable Risk Action Levels, the owner or operator may choose to use the risks calculated in this manner to show compliance with the Source Risk Limits. However, if the actual source characteristics such as terrain features, exposure location distances less than 50m, unusual stack or building configurations, or other factors, invalidate the assumptions used to develop the Level 1 Risk Assessment Dispersion Factor Tables, DEQ at its discretion, may disapprove the Level 1 assessment, as described in OAR 340-245-0050 (8)(c).

(3) Sum of Risk calculation procedure for Level 2, Level 3 and Level 4 Risk Assessments.

(a) An owner or operator that chooses to perform a Level 2, Level 3 or Level 4 Risk Assessment under OAR 340-245-0050, must calculate a separate sum of risks for each of the following risk categories: excess cancer risk, chronic noncancer risk, and acute noncancer risk for the applicable exposure locations;

(b) When making this calculation, the owner or operator must use the following modeled ambient concentrations for each toxic air contaminant at all exposure locations:

(A) For excess cancer risk and chronic noncancer risk, the annual average concentrations must be used; and

(B) For acute noncancer risk, the maximum daily concentrations must be used;

(c) The owner or operator must perform the following calculations for each of the risk categories listed in subsection (a) and using the concentrations in subsection (b):

(A) For each TEU, divide the modeled concentration of each toxic air contaminant by the appropriate RBC of that toxic air contaminant under OAR 340-245-8010 Table 2 ensuring that the concentration is expressed in micrograms per cubic meter;

(B) For each TEU, add up the risk from each toxic air contaminant calculated under paragraph (A); and

(C) For all TEUs at each exposure location, add up all of the risks calculated under paragraph (B) to obtain the total excess cancer risk in one million, the total chronic noncancer Hazard Index, or the total acute noncancer Hazard Index for the entire source. For noncancer risk, Hazard Indices may be calculated by noncancer target organ or organ systems in consultation with DEQ.

(D) When an existing source emits a mixture of toxic air contaminants assigned noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5 as identified in OAR 340-247-8010, Table 2 and OAR 340-245-8010, Table 2, and the combined Hazard Index for all TACs is greater than 3, the owner or operator must calculate a Risk Determination Ratio using the formula in section (5) of this rule

(4) Significant figures and rounding. When a risk is calculated for comparison to a Risk Action Level or Source Risk Limit:

(a) The final risk calculation must be rounded off as follows:

(A) For comparison to the Aggregate TEU Level, Risk Determination Ratio, and the Source Permit Level, round off to one decimal place; and

(B) For comparison to other Risk Action Levels or Source Risk Limits, round off to a whole number;

(b) Round up if the last figure to be rounded off is 5 or greater, otherwise round down.

(c) Use of rounded numbers in making final risk calculations is not allowed. Only the final risk number may be rounded as described in this section.

(5) Calculating a Risk Determination Ratio. The formula for calculating a Risk Determination Ratio is:

Combined Noncancer Risk for HI3 chemicals =

(Concentration of HI3 chemical #1 / Risk-Based Concentration for chemical #1) + (Concentration of HI3

chemical #2 / Risk-Based Concentration for chemical #2) + continue for all HI3 chemicals emitted

Combined Noncancer Risk for HI5 chemicals =

(Concentration of HI5 chemical #1 / Risk-Based Concentration for chemical #1) + (Concentration of HI5 chemical #2 / Risk-Based Concentration for chemical #2) + continue for all HI5 chemicals emitted

Risk Determination Ratio = (Combined Risk for HI3 chemicals / 3) + (Combined Risk for HI5 chemicals / 5)

HI3 = Toxic air contaminants assigned noncancer TBACT Risk Action Level of 3 (OAR 340-247-8010, Table 2 and OAR 340-245-8010, Table 2.

HI5 = Toxic air contaminants assigned noncancer TBACT Risk Action Level of 5 (OAR 340-247-8010, Table 2 and OAR 340-245-8010, Table 2.

Concentration = monitored or modeled concentrations of toxic air contaminant at exposure location for use in risk assessment.

RBC = risk-based concentrations in OAR 340-245-8010 Table 2.

Statutory/Other Authority: ORS 468.020, ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 & Or Laws 2018, ch. 102, § 7

History:

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DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0210

Modeling and Risk Assessment Work Plan Requirements

The owner or operator of a source must follow the applicable procedures in this rule when required to perform a risk assessment under OAR 340-245-0050 or 340-245-0060.

(1) Modeling Requirements. All modeled estimates of ambient concentrations required under this division must be based on the applicable air quality models and other requirements as specified in 40 CFR part 51, Appendix W, "Guidelines on Air Quality Models (Revised)," or a substantially equivalent model or requirement approved by DEQ. Any change or substitution from models and procedures specified in 40 CFR part 51, Appendix W must be approved by DEQ in advance and incorporated in the modeling protocol. AERSCREEN and AERMOD are examples of approved air quality models.

(a) When choosing to perform a Level 1 Risk Assessment or modeling for a Level 2, Level 3 or Level 4 Risk Assessment, the owner or operator of a source must first submit a modeling protocol that must be approved by DEQ as required in OAR 340-245-0030. The necessary information to perform any modeling will depend on the risk assessment level and the model being used, if any, and may include but is not limited to:

(A) Toxic air contaminant emission rates based on the emissions inventory submitted under OAR 340-245-0040(1);

(B) Stack parameter and building data, including stack height above ground, stack orientation and configuration, exit diameter, exit velocity, and exit temperature, for all existing and proposed emission points from the source, and dimension data of buildings;

(C) Meteorological and topographical data;

(D) Information about the dispersion models and modeling parameters used;

(E) Exposure locations where ambient concentrations will be modeled;

(F) For determining exposure locations where ambient concentrations will be modeled, an owner or operator may provide documentation to demonstrate an area is not being used in the manner allowed by the land use zoning at the time the modeling is to be performed, and may request that the land use zoning classification of these areas be excluded in determining chronic exposure locations. If DEQ approves an exclusion under this paragraph, then:

(i) The owner or operator must model the approved locations based on their actual use;

(ii) The owner or operator must annually submit to DEQ documentation showing the areas subject to the excluded land use zoning classification continue to not be used in the manner allowed by the land use zoning applicable to the area; and

(iii) If the annual documentation provided under subparagraph (ii) shows the area is being used in the manner allowed by the land use zoning and results in potential exposure to toxic air contaminants from the source, the owner or operator must update the risk assessment based on the change in use and apply for a Toxic Air Contaminant Permit Addendum modification under OAR 340-245-0100(8) or for an operating permit modification under OAR 340 division 216 or 218 using the procedures in this division, if applicable;

(G) Use of other exposure locations where DEQ determines, based on documented evidence, that an area is not being used in the manner allowed by the land use zoning at the time the modeling is to be performed, such area should be considered an exposure location based on its actual use; and

(H) Other information that may be necessary to estimate air quality concentrations and risk at exposure locations;

(b) For the purpose of any risk assessment undertaken by DEQ, the owner or operator of any permitted or unpermitted source must submit the information in subsection (a) within 30 days of the written request from DEQ. DEQ shall use the procedures in OAR 340-245-0030 to review the information in determining its completeness, consider extensions requests, and request additional information, if needed.

(2) Risk assessment work plan requirements. When choosing to conduct a Level 3 or Level 4 Risk Assessment, the owner or operator of a source must submit a risk assessment work plan that must be approved by DEQ as required in OAR 340-245-0030. The work plan must be developed in consultation with DEQ and include but is not limited to:

(a) A problem formulation step ending with development of a conceptual site model identifying TEUs and exposure locations;

(b) An exposure assessment that models or measures toxic air contaminant concentrations at exposure locations;

(c) A risk characterization presenting a quantitative calculation of excess cancer, chronic noncancer and acute noncancer health risks associated with human exposure to toxic air contaminant emissions from the source;

(d) A quantitative or qualitative uncertainty evaluation of appropriate elements of the risk assessment;

(e) A Level 4 Risk Assessment must also include a toxicity assessment evaluating the carcinogenic effects, noncarcinogenic chronic effects, and noncarcinogenic acute effects of toxic air contaminants to which human populations may be exposed, and determining persistence and bioaccumulation potential. Sources may not consider Toxicity Reference Values other than those listed in OAR 340-247-8010 Table 2; and

(f) In a Level 4 Risk Assessment, the owner or operator may propose modifications to default exposure assumptions, including but not limited to:

(A) Exposure times, frequencies, and durations;

(B) Relative bioavailability of chemicals; and

(C) Multipathway considerations for persistent, and bioaccumulative and toxic chemicals.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

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340-245-0220

TBACT and TLAER Procedures

(1) If required to meet TBACT or TLAER on any significant TEU, the owner or operator of a source must perform a TBACT or TLAER analysis.

(a) The owner or operator of an existing source must conduct a case-by-case TBACT analysis under section (3), except as provided in section (2);

(b) The owner or operator of a new or reconstructed source must conduct a case-by-case TLAER analysis under section (4);

(c) The owner or operator must submit the TBACT or TLAER analysis to DEQ for approval, and the owner or operator must pay the case-by-case TBACT or TLAER fee, as applicable, specified in OAR 340-216-8030 Table 3 and OAR 340-245-0400;

(d) A TEU is determined to meet TBACT if DEQ approves the TBACT analysis for the TEU and the owner or operator has implemented all operational or source modifications required to meet TBACT, or will implement them on an enforceable compliance schedule included in its Toxic Air Contaminant Permit Addendum or operating permit; and

(e) A TEU is determined to meet TLAER if DEQ approves the TLAER analysis for the TEU and the owner or operator has implemented all operational or source modifications required to meet TLAER upon beginning operation of the new or reconstructed source.

(2) Presumptive TBACT. For an existing TEU, compliance with emission control requirements, work practices or limitations established by a major source NESHAP adopted by the EPA after 1993 and before April 10, 2018 is deemed to be TBACT, provided that:

(a) The emission control requirements, work practices or limitations result in an actual reduction to the emissions of the hazardous air pollutants regulated under the NESHAP; and

(b) There are no other toxic air contaminants emitted by the source that:

(A) Are not controlled by the emission control requirements, work practices or limitations established by a major source NESHAP; and

(B) Materially contribute to public health risks;

(c) TEUs that are subject to and comply with OAR 340-244-9000 through 340-244-9090, Colored Art Glass Manufacturing rules, or OAR 340-245-9000 through 340-245-9080, Colored Art Glass Manufacturing rules, meet TBACT and a case-by-case determination is not required for such TEUs.

(3) Case-by-Case TBACT determination. The owner or operator of the TEU must submit a proposed case-by-case TBACT analysis to DEQ for review and approval.

(a) TBACT must be a toxic air contaminant emissions limitation or emissions control measure based on the maximum degree of reduction of toxic air contaminants that is feasible considering:

(A) What has been achieved in practice for:

(i) Sources in the same class as the source to which the toxic air contaminant emissions limitation or control measure will apply, as classified under ORS 468A.050; or

(ii) Processes or emissions similar to the processes or emissions of the source;

(B) Energy, health, and environmental impacts not related to air quality; and

(C) Economic impacts and cost-effectiveness, including the costs of changing existing processes or equipment or adding equipment or controls to existing processes and equipment;

(b) TBACT may be based on a design standard, equipment standard, work practice standard or other operational standard, or a combination thereof; and

(c) In assessing the cost-effectiveness of any measure for purposes of determining TBACT for a source, DEQ will assess only the economic impacts and benefits associated with controlling toxic air contaminants.

(4) Case-by-Case TLAER determination. The owner or operator of the TEU must submit a proposed case-by-case TLAER analysis to DEQ for review and approval.

(a) DEQ will review a case-by-case TLAER analysis and ensure that it is a toxic air contaminant emissions limitation or emissions control measure that is the maximum degree of reduction technically feasible without regard to energy impacts, health and environmental impacts, or economic impacts; and

(b) TLAER is not considered achievable if the cost of control is so great that a new source could not be built or operated because it was rendered economically infeasible. If some other facility in the same or a

comparable industry uses that control technology, then such use constitutes evidence that the cost to the industry of that control is not prohibitive.

(5) Periodic TBACT or TLAER Reviews. If the owner or operator is required to meet TBACT or TLAER, the owner or operator must perform and submit periodic TBACT or TLAER reviews in a TBACT or TLAER update report as follows:

(a) For all significant TEUs for which the most recent TBACT or TLAER determination concluded that no toxic air contaminant emission limits or additional control measure was required, submit a TBACT or TLAER review to DEQ with each permit renewal;

(b) For all significant TEUs that currently meet TBACT or TLAER through toxic air contaminant emission limits or control measures, submit a TBACT or TLAER review when notified by DEQ. If DEQ learns of new technologies, devices or practices that could reduce toxic air contaminant emissions or improve on control measures, DEQ will notify the owner or operator in writing that a TBACT or TLAER review is required and may specify a submittal deadline in the notification;

(c) The TBACT or TLAER update reports must include the following:

(A) A review identifying all new or improved emissions control measures, if any, that can apply to any of the significant TEUs at the source, whether they are currently controlled or not; and

(B) For each new or improved emissions control measure identified, a statement whether or not the owner or operator intends to apply the control measure;

(i) If the owner or operator intends to apply the control measure, then the owner or operator must provide an estimated date by which the control measure will be applied; or

(ii) If the owner or operator does not intend to apply the control method, then the owner or operator must provide justification for not applying it, including at a minimum, a review following the procedures of OAR 340-245-0220(3) or (4);

(d) When a new or improved emissions control measure is identified under subsection (c), DEQ must review the control measure and any justification provided by the owner or operator for not applying the control measure, and will make a preliminary determination with regard to whether or not the owner or operator must apply the control measure

(A) If DEQ's preliminary determination is that the owner or operator must apply the control measure, DEQ shall provide the owner or operator with notice and opportunity to provide input on a final determination. In making the final determination, DEQ shall take into consideration the following:

(i) The remaining service life of any existing emission control system that would be replaced;

(ii) The relative effectiveness of the new or improved control measure to reduce the source risk as compared to the risk using the existing control measure;

(iii) The cost of installation and operation of the new or improved control measure, including the cost of removing any existing control measure; and

(iv) Any other factors that DEQ finds are relevant;

(B) If DEQ's final determination is that the owner or operator must apply the control measure, then DEQ may:

(i) After consultation with the owner or operator, determine the date by which the owner or operator must apply the control measure; and

(ii) Determine a new Source Risk Limit based on information on the amount of toxic air contaminants removed by the control measure and issue a modified Toxic Air Contaminant Permit Addendum or operating permit.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0230

Toxic Air Contaminant Monitoring Requirements

(1) An owner or operator of a source that chooses to perform toxic air contaminant monitoring under OAR 340-245-0050 must submit an application for a Toxic Air Contaminant Permit Addendum and a Toxic Air Contaminant Monitoring Plan, developed in consultation with and approved by DEQ in a Toxic Air Contaminant Permit Addendum, before beginning toxic air contaminant monitoring. Toxic air contaminant monitoring must be conducted for a period of not less than 12 months with at least 12 months of valid data with greater than 75 percent data completeness per quarter.

(2) Public involvement requirements. DEQ shall work with the owner or operator to develop public information concerning an approved Toxic Air Contaminant Monitoring Plan and the timeline for the approved Toxic Air Contaminant Monitoring Plan.

(3) Toxic air contaminant monitoring requirements. The owner or operator must submit a Toxic Air Contaminant Monitoring Plan in accordance with OAR 340-245-0030 that includes but is not limited to:

(a) Identification of all toxic air contaminants that will be monitored;

(b) A description of all proposed monitoring locations;

(c) A description of the monitoring and analysis protocols for each toxic air contaminant to be monitored, including at a minimum:

(A) The monitoring equipment and methods to be used for each toxic air contaminant;

(B) The sampling methods, including sample handling and custody storage requirements;

(C) The frequency of sampling at each monitoring location; the duration of each sample (i.e., the length of time in hours that each sample runs), and time of year;

(D) Analytical methods and the analytical method detection limits and reporting limits to be used for each toxic air contaminant;

(E) Quality assurance and quality control measures to be taken and who will be performing these measures; and

(F) Descriptions of security measures to protect the monitoring equipment;

(d) A description of how to determine and account for the ambient concentration of each toxic air contaminant being monitored that results from all causes other than the source under consideration, including natural and unknown causes;

(e) A description of how and where meteorological monitoring will be performed and the meteorology equipment used; and

(f) A description of how the data will be reduced and how often the results will be reported to DEQ.

(4) Reporting Requirements. The owner or operator of a source that has been issued a Toxic Air Contaminant Permit Addendum or operating permit that includes air monitoring requirements must report to DEQ the following information:

(a) Monthly monitoring result reports, no more than 30 days after all monitoring data becomes available for the month to which the data applies. The reports must include but is not limited to:

(A) Ambient toxic air contaminant concentrations, all daily risks and all monthly average risks from all monitoring locations specified in the Air Monitoring Plan;

(B) Meteorological data summary;

(C) Daily production data; and

(D) A description of any excess emissions or upset conditions that may have affected the ambient toxic air contaminant concentrations monitored, including conditions outside the property boundary that may affect ambient air (i.e., forest fires, house fires, train derailments, accidental spills, etc.);

(b) An air monitoring final report, no more than 60 calendar days after completing all Toxic Air Contaminant Monitoring Plan requirements that also includes a description of any process changes that have occurred during the air monitoring period that may affect the results of the monitoring.

(5) Air monitoring results.

(a) Upon completion of the air monitoring, the owner or operator must submit to DEQ an assessment of risk based on the air monitoring data and other relevant information;

(b) For all toxic air contaminants that are not monitored, or for which monitoring results were inconclusive, the owner or operator must use the modeled concentrations of those toxic air contaminants and add the risk from the modeled concentrations to the risk from the monitored concentrations to arrive at a total risk from the source; and

(c) Upon receipt of air monitoring data and assessment of risk under subsections (a) and (b), DEQ will review the submittal and approve or deny it in accordance with the procedures OAR 340-245-0100(4).

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155,

468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0310

Process for Updating Risk-Based Concentrations for Toxic Air Contaminants

(1) Purpose.

As risk assessment and toxicological sciences advance, it is important that health risk-based standards for air quality continue to reflect the latest practices and science. The list of toxic air contaminants that are regulated and their RBCs represent one area where regulations will need regular updating to accommodate advancing science and practices to ensure that impacts to public health from industrial air emissions are minimized.

(2) Process for updating risk-based concentrations.

(a) DEQ will propose, through a public rulemaking process, to revise, add, or remove risk-based concentrations for toxic air contaminants whenever changes are proposed to their toxicity reference values in OAR 340-247-8010 Table 2.

(b) As needed, DEQ will propose, through a public rulemaking process, to revise risk-based concentrations if new information indicates the need to adjust exposure factors or other adjustment factors for individual toxic air contaminants or groups of toxic air contaminants.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.135, ORS 468A.337

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035, ORS 468A.335, ORS 468A.337 3

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-245-0320

Standards and Criteria for Noncancer Risk Action Levels for Existing Contamination Sources

(1) The noncancer Risk Action Levels for existing sources are identified in OAR 340-245-8010, Table 1.

(2) The toxic air contaminants for which an adjusted noncancer Risk Action Level will apply are identified in OAR 340-247-8010, Table 2, and OAR 340-245-8010, Table 2 in the column named “Noncancer TBACT RAL.”

(3) An adjusted Risk Action Level will be applied to existing sources that emit one or more toxic air contaminants identified in OAR 340-247-8010, Table 2, or OAR 340-245-8010, Table 2 with a noncancer TBACT RAL of a Hazard Index of 3. For sources that emit a mixture of toxic air contaminants with noncancer TBACT Risk Action Levels of both a Hazard Index of 3 and a Hazard Index of 5, the Risk Determination Ratio calculation expresses the degree to which the applicable Risk Action Level may be adjusted for each source.

Statutory/Other Authority: ORS 468.020 & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: Or Laws 2018, ch. 102, §7

History:

DEQ 8-2020, adopt filed 04/24/2020, effective 04/24/2020

340-245-0400

Cleaner Air Oregon Fees

(1) Any owner or operator that has been issued or applies for an Oregon Title V Operating Permit under OAR chapter 340, division 218 must submit the annual CAO base fees to DEQ as specified in OAR 340-220-0050(4).

(2) Any owner or operator that has been issued or applies for a Basic, General, Simple or Standard Air Contaminant Discharge Permit under OAR chapter 340, division 216 must submit the annual CAO base fee to DEQ as specified in OAR 340-216-8020 Table 2 Part 3.

(3) When notified in writing by DEQ, the owner or operator of an existing source that must perform a risk assessment is required to pay the applicable existing source call-in fee in OAR 340-216-8030 Table 3 within 30 days of receiving DEQ notification.

(4) Owners or operators of new or reconstructed sources must pay the applicable new source consulting fee and the applicable specific activity fees in OAR 340-216-8030 Table 3 with the permit application.

(5) Any owner or operator required to apply for a Toxic Air Contaminant Permit Addendum must also submit the applicable Cleaner Air Oregon Specific Activity Fees specified in OAR 340-216-8030 Table 3 to DEQ in accordance with OAR 340-245-0030.

(a) The fees in OAR 340-216-8030 Table 3 are additive in most cases;

(b) A TBACT/TLAER Review fee will be due to DEQ per TEU. When reviewing multiple similar TEUs, DEQ may elect to waive additional TEU review fees for multiple similar TEU reviews if the TEUs have similar emissions and emission rates;

(c) If one TEU requires two different air pollution control devices because it emits different types of toxic air contaminants (e.g., particulate matter and volatile organic compounds), then two TBACT/TLAER Review fees will be due and payable to DEQ;

(d) The individual TEU fees can be additive or charged individually, depending on the situation. If an owner or operator is constructing or modifying multiple, identical TEUs, then one TEU Risk Assessment fee may be charged. If the TEUs were not identical, then multiple TEU Risk Assessment fees will be due and payable to DEQ;

(e) A community engagement fee of high, medium, or low for each meeting, will be due to DEQ based on DEQ's determination of the complexity and nature of the needed outreach and engagement activities; and

(f) A source test fee is required when an owner or operator submits a source test report for DEQ review under this division.

(A) The complex source test review fee is for multiple TEUs and multiple toxic air contaminant test methods;

(B) The moderate source test review fee is for a single TEU and multiple toxic air contaminant test methods; and

(C) The simple source test review fee is for a single TEU and a single toxic air contaminant test method.

Statutory/Other Authority: ORS 468.020, 468.065, 468A.135, 468A.315 & Or Laws 2018, ch. 102, § 13

Statutes/Other Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155, 468A.315 & Or Laws 2018, ch. 102, §§ 13 and 14

History:

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

[340-245-8010](#)

Tables

(1) Table 1 - Risk Action Levels

(2) Table 2 - Risk-Based Concentrations

(3) Table 3 - Level 1 Risk Assessment Dispersion Factors

[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]

Statutory/Other Authority: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.135 & 468A.155

Statutes/Other Implemented: 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015 & 468A.035

History:

DEQ 3-2019, minor correction filed 01/23/2019, effective 01/23/2019

DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

Other Air Quality Divisions – Draft Rules

Division 200 GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0020

General Air Quality Definitions

As used in OAR 340 divisions 200 through 268, unless specifically defined otherwise:

- (1) "Act" or "FCAA" means the Federal Clean Air Act, 42 U.S.C.A. § 7401 to 7671q.
- (2) "Activity" means any process, operation, action, or reaction (e.g., chemical) at a source that emits a regulated pollutant.
- (3) "Actual emissions" means the mass emissions of a regulated pollutant from an emissions source during a specified time period as set forth in OAR 340 divisions 214, 220 and 222.
- (4) "Adjacent", as used in the definitions of major source and source and in OAR 340-216-0070, means interdependent facilities that are nearby to each other.
- (5) "Affected source" means a source that includes one or more affected units that are subject to emission reduction requirements or limitations under Title IV of the FCAA.
- (6) "Affected states" means all states:
 - (a) Whose air quality may be affected by a proposed permit, permit modification, or permit renewal and that are contiguous to Oregon; or
 - (b) That are within 50 miles of the permitted source.
- (7) "Aggregate insignificant emissions" means the annual actual emissions of any regulated pollutant from one or more designated activities at a source that are less than or equal to the lowest applicable level specified in this section. The total emissions from each designated activity and the aggregate emissions from all designated activities must be less than or equal to the lowest applicable level specified:
 - (a) One ton for total reduced sulfur, hydrogen sulfide, sulfuric acid mist, any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA, and each criteria pollutant, except lead;
 - (b) 120 pounds for lead;
 - (c) 600 pounds for fluorides;
 - (d) 500 pounds for PM10 in a PM10 nonattainment area;
 - (e) 500 pounds for direct PM2.5 in a PM2.5 nonattainment area;
 - (f) The lesser of the amount established in 40 C.F.R. 68.130 or 1,000 pounds;
 - (g) An aggregate of 5,000 pounds for all hazardous air pollutants;
 - (h) 2,756 tons CO₂e for greenhouse gases.

(8) "Air contaminant" means a dust, fume, gas, mist, odor, smoke, vapor, pollen, soot, carbon, acid, particulate matter, regulated pollutant, or any combination thereof.

(9) "Air Contaminant Discharge Permit" or "ACDP" means written authorization issued, renewed, amended, or revised by DEQ, under OAR 340 division 216.

(10) "Alternative method" means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to DEQ's satisfaction to, in specific cases, produce results adequate for determination of compliance. The alternative method must comply with the intent of the rules, is at least equivalent in objectivity and reliability to the uniform recognized procedures, and is demonstrated to be reproducible, selective, sensitive, accurate, and applicable to the program. An alternative method used to meet an applicable federal requirement for which a reference method is specified must be approved by EPA unless EPA has delegated authority for the approval to DEQ.

(11) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

(12) "Applicable requirement" means all of the following as they apply to emissions units in an Oregon Title V Operating Permit program source or ACDP program source, including requirements that have been promulgated or approved by the EPA through rule making at the time of issuance but have future-effective compliance dates:

(a) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by the EPA through rulemaking under Title I of the FCAA that implements the relevant requirements of the FCAA, including any revisions to that plan promulgated in 40 C.F.R. part 52;

(b) Any standard or other requirement adopted under OAR 340-200-0040 of the State of Oregon Clean Air Act Implementation Plan that is more stringent than the federal standard or requirement which has not yet been approved by the EPA, and other state-only enforceable air pollution control requirements;

(c) Any term or condition in an ACDP, OAR 340 division 216, including any term or condition of any preconstruction permits issued under OAR 340 division 224, New Source Review, until or unless DEQ revokes or modifies the term or condition by a permit modification;

(d) Any term or condition in a Notice of Construction and Approval of Plans, OAR 340-210-0205 through 340-210-0240, until or unless DEQ revokes or modifies the term or condition by a Notice of Construction and Approval of Plans or a permit modification;

(e) Any term or condition in a Notice of Approval, OAR 340-218-0190, issued before July 1, 2001, until or unless DEQ revokes or modifies the term or condition by a Notice of Approval or a permit modification;

(f) Any term or condition of a PSD permit issued by the EPA until or unless the EPA revokes or modifies the term or condition by a permit modification;

(g) Any standard or other requirement under section 111 of the FCAA, including section 111(d);

(h) Any standard or other requirement under section 112 of the FCAA, including any requirement concerning accident prevention under section 112(r)(7) of the FCAA;

(i) Any standard or other requirement of the acid rain program under Title IV of the FCAA or the regulations promulgated thereunder;

(j) Any requirements established under section 504(b) or section 114(a)(3) of the FCAA;

- (k) Any standard or other requirement under section 126(a)(1) and(c) of the FCAA;
- (l) Any standard or other requirement governing solid waste incineration, under section 129 of the FCAA;
- (m) Any standard or other requirement for consumer and commercial products, under section 183(e) of the FCAA;
- (n) Any standard or other requirement for tank vessels, under section 183(f) of the FCAA;
- (o) Any standard or other requirement of the program to control air pollution from outer continental shelf sources, under section 328 of the FCAA;
- (p) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the Administrator has determined that such requirements need not be contained in an Oregon Title V Operating Permit; and
- (q) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the FCAA, but only as it would apply to temporary sources permitted under section 504(e) of the FCAA.
- (13) "Attainment area" or "unclassified area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment areas or unclassified areas may also be referred to as sustainment or maintenance areas as designated in OAR 340 division 204. Any particular location may be part of an attainment area or unclassified area for one regulated pollutant while also being in a different type of designated area for another regulated pollutant.
- (14) "Attainment pollutant" means a pollutant for which an area is designated an attainment or unclassified area.
- (15) "Baseline emission rate" means the actual emission rate during a baseline period as determined under OAR 340 division 222.
- (16) "Baseline period" means the period used to determine the baseline emission rate for each regulated pollutant under OAR 340 division 222.
- (17) "Best Available Control Technology" or "BACT" means an emission limitation, including, but not limited to, a visible emission standard, based on the maximum degree of reduction of each air contaminant subject to regulation under the FCAA which would be emitted from any proposed major source or major modification which, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such air contaminant. In no event may the application of BACT result in emissions of any air contaminant that would exceed the emissions allowed by any applicable new source performance standard or any standard for hazardous air pollutant. If an emission limitation is not feasible, a design, equipment, work practice, or operational standard, or combination thereof, may be required. Such standard must, to the degree possible, set forth the emission reduction achievable and provide for compliance by prescribing appropriate permit conditions.
- (18) "Biomass" means non-fossilized and biodegradable organic material originating from plants, animals, and microorganisms, including products, byproducts, residues and waste from agriculture, forestry, and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic matter.

- (19) "Capacity" means the maximum regulated pollutant emissions from a stationary source under its physical and operational design.
- (20) "Capture efficiency" means the amount of regulated pollutant collected and routed to an air pollution control device divided by the amount of total emissions generated by the process being controlled.
- (21) "Capture system" means the equipment, including but not limited to hoods, ducts, fans, and booths, used to contain, capture and transport a regulated pollutant to a control device.
- (22) "Carbon dioxide equivalent" or "CO₂e" means an amount of a greenhouse gas or gases expressed as the equivalent amount of carbon dioxide, and is computed by multiplying the mass of each of the greenhouse gases by the global warming potential published for each gas at 40 C.F.R. part 98, subpart A, Table A-1-Global Warming Potentials, and adding the resulting value for each greenhouse gas to compute the total equivalent amount of carbon dioxide.
- (23) "Categorically insignificant activity" means any of the following listed regulated pollutant emitting activities principally supporting the source or the major industrial group. Categorically insignificant activities must comply with all applicable requirements.
- (a) Constituents of a chemical mixture present at less than 1 percent by weight of any chemical or compound regulated under divisions 200 through 268 excluding divisions 248 and 262 of this chapter, or less than 0.1 percent by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year;
- (b) Evaporative and tailpipe emissions from on-site motor vehicle operation;
- (c) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified as categorically insignificant do not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as categorically insignificant with the remainder not categorically insignificant. The following equipment may never be included as categorically insignificant:
- (A) Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour;
- (B) Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour.
- (d) Distillate oil, kerosene, gasoline, natural gas or propane burning equipment brought on site for six months or less for maintenance, construction or similar purposes, such as but not limited to generators, pumps, hot water pressure washers and space heaters, provided that any such equipment that performs the same function as the permanent equipment, must be operated within the source's existing PSEL;
- (e) Office activities;
- (f) Food service activities;
- (g) Janitorial activities;
- (h) Personal care activities;
- (i) Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance;

- (j) On-site laundry activities;
- (k) On-site recreation facilities;
- (l) Instrument calibration;
- (m) Maintenance and repair shop;
- (n) Automotive repair shops or storage garages;
- (o) Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;
- (p) Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems;
- (q) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities;
- (r) Temporary construction activities;
- (s) Warehouse activities;
- (t) Accidental fires;
- (u) Air vents from air compressors;
- (v) Air purification systems;
- (w) Continuous emissions monitoring vent lines;
- (x) Demineralized water tanks;
- (y) Pre-treatment of municipal water, including use of deionized water purification systems;
- (z) Electrical charging stations;
- (aa) Fire brigade training;
- (bb) Instrument air dryers and distribution;
- (cc) Process raw water filtration systems;
- (dd) Pharmaceutical packaging;
- (ee) Fire suppression;
- (ff) Blueprint making;
- (gg) Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking;
- (hh) Electric motors;
- (ii) Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids;

- (jj) On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles;
- (kk) Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment;
- (ll) Pressurized tanks containing gaseous compounds;
- (mm) Vacuum sheet stacker vents;
- (nn) Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities;
- (oo) Log ponds;
- (pp) Stormwater settling basins;
- (qq) Fire suppression and training;
- (rr) Paved roads and paved parking lots within an urban growth boundary;
- (ss) Hazardous air pollutant emissions in fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils;
- (tt) Health, safety, and emergency response activities;
- (uu) Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency, provided that the aggregate horsepower rating of all stationary emergency generator and pump engines is not more than 3,000 horsepower. If the aggregate horsepower rating of all stationary emergency generator and pump engines is more than 3,000 horsepower, then no emergency generators and pumps at the source may be considered categorically insignificant;
- (vv) Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems;
- (ww) Non-contact steam condensate flash tanks;
- (xx) Non-contact steam vents on condensate receivers, deaerators and similar equipment;
- (yy) Boiler blowdown tanks;
- (zz) Industrial cooling towers that do not use chromium-based water treatment chemicals;
- (aaa) Ash piles maintained in a wetted condition and associated handling systems and activities;
- (bbb) Uncontrolled oil/water separators in effluent treatment systems, excluding systems with a throughput of more than 400,000 gallons per year of effluent located at the following sources:
 - (A) Petroleum refineries;
 - (B) Sources that perform petroleum refining and re-refining of lubricating oils and greases including asphalt production by distillation and the reprocessing of oils and/or solvents for fuels; or
 - (C) Bulk gasoline plants, bulk gasoline terminals, and pipeline facilities;
- (ccc) Combustion source flame safety purging on startup;

(ddd) Broke beaters, pulp and repulping tanks, stock chests and pulp handling equipment, excluding thickening equipment and repulpers;

(eee) Stock cleaning and pressurized pulp washing, excluding open stock washing systems; and

(fff) White water storage tanks.

(24) "Certifying individual" means the responsible person or official authorized by the owner or operator of a source who certifies the accuracy of the emission statement.

(25) "Class I area" or "PSD Class I area" means any Federal, State or Indian reservation land which is classified or reclassified as a Class I area under OAR 340-204-0050 and 340-204-0060.

(26) "Class II area" or "PSD Class II area" means any land which is classified or reclassified as a Class II area under OAR 340-204-0050 and 340-204-0060.

(27) "Class III area" or "PSD Class III area" means any land which is reclassified as a Class III area under OAR 340-204-0060.

(28) "Commence" or "commencement" means that the owner or operator has obtained all necessary preconstruction approvals required by the FCAA and either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction of the source to be completed in a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed in a reasonable time.

(29) "Commission" or "EQC" means Environmental Quality Commission.

(30) "Constant process rate" means the average variation in process rate for the calendar year is not greater than plus or minus ten percent of the average process rate.

(31) "Construction":

(a) Except as provided in subsection (b) means any physical change including, but not limited to, fabrication, erection, installation, demolition, or modification of a source or part of a source;

(b) As used in OAR 340 division 224 means any physical change including, but not limited to, fabrication, erection, installation, demolition, or modification of an emissions unit, or change in the method of operation of a source which would result in a change in actual emissions.

(32) "Continuous compliance determination method" means a method, specified by the applicable standard or an applicable permit condition, which:

(a) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and

(b) Provides data either in units of the standard or correlated directly with the compliance limit.

(33) "Continuous monitoring systems" means sampling and analysis, in a timed sequence, using techniques which will adequately reflect actual emissions or concentrations on a continuing basis as specified in the DEQ Continuous Monitoring Manual, found in OAR 340-200-0035, and includes continuous emission monitoring systems, continuous opacity monitoring system (COMS) and continuous parameter monitoring systems.

(34) "Control device" means equipment, other than inherent process equipment that is used to destroy or remove a regulated pollutant prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices, such as carbon beds, condensers, scrubbers, such as wet collection and gas absorption devices, selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems, such as water, steam, ammonia, sorbent or limestone injection, and combustion devices independent of the particular process being conducted at an emissions unit, e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters. For purposes of OAR 340-212-0200 through 340-212-0280, a control device does not include passive control measures that act to prevent regulated pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of regulated pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular regulated pollutant-specific emissions unit, then that definition will be binding for purposes of OAR 340-212-0200 through 340-212-0280.

(35) "Control efficiency" means the product of the capture and removal efficiencies.

(36) "Criteria pollutant" means any of the following regulated pollutants: nitrogen oxides, volatile organic compounds, particulate matter, PM10, PM2.5, sulfur dioxide, carbon monoxide, and lead.

(37) "Data" means the results of any type of monitoring or method, including the results of instrumental or non-instrumental monitoring, emission calculations, manual sampling procedures, recordkeeping procedures, or any other form of information collection procedure used in connection with any type of monitoring or method.

(38) "Day" means a 24-hour period beginning at 12:00 a.m. midnight or a 24-hour period as specified in a permit.

(39) "De minimis emission level" means the level for the regulated pollutants listed below:

(a) Greenhouse Gases (CO₂e) = 2,756 tons per year.

(b) CO = 1 ton per year.

(c) NO_x = 1 ton per year.

(d) SO₂ = 1 ton per year.

(e) VOC = 1 ton per year.

(f) PM = 1 ton per year.

(g) PM₁₀ (except Medford AQMA) = 1 ton per year.

(h) PM₁₀ (Medford AQMA) = 0.5 ton per year and 5.0 pounds/day.

(i) Direct PM_{2.5} = 1 ton per year.

(j) Lead = 0.1 ton per year.

(k) Fluorides = 0.3 ton per year.

(l) Sulfuric Acid Mist = 0.7 ton per year.

- (m) Hydrogen Sulfide = 1 ton per year.
- (n) Total Reduced Sulfur (including hydrogen sulfide) = 1 ton per year.
- (o) Reduced Sulfur = 1 ton per year.
- (p) Municipal waste combustor organics (dioxin and furans) = 0.0000005 ton per year.
- (q) Municipal waste combustor metals = 1 ton per year.
- (r) Municipal waste combustor acid gases = 1 ton per year.
- (s) Municipal solid waste landfill gases (measured as nonmethane organic compounds) = 1 ton per year
- (t) Single HAP = 1 ton per year
- (u) Combined HAP (aggregate) = 1 ton per year
- (40) "Department" or "DEQ":
 - (a) Means Department of Environmental Quality; except
 - (b) As used in OAR 340 divisions 218 and 220 means Department of Environmental Quality, or in the case of Lane County, LRAPA.
- (41) "DEQ method [#]" means the sampling method and protocols for measuring a regulated pollutant as described in the DEQ Source Sampling Manual, found in OAR 340-200-0035.
- (42) "Designated area" means an area that has been designated as an attainment, unclassified, sustainment, nonattainment, reattainment, or maintenance area under OAR 340 division 204 or applicable provisions of the FCAA.
- (43) "Destruction efficiency" means removal efficiency.
- (44) "Device" means any machine, equipment, raw material, product, or byproduct at a source that produces or emits a regulated pollutant.
- (45) "Direct PM2.5" has the meaning provided in the definition of PM2.5.
- (46) "Director" means the Director of DEQ or the Director's designee.
- (47) "Draft permit" means the version of an Oregon Title V Operating Permit for which DEQ or LRAPA offers public participation under OAR 340-218-0210 or the EPA and affected State review under 340-218-0230.
- (48) "Dry standard cubic foot" means the amount of gas that would occupy a volume of one cubic foot, if the gas were free of uncombined water at standard conditions.
- (49) "Effective date of the program" means the date that the EPA approves the Oregon Title V Operating Permit program submitted by DEQ on a full or interim basis. In case of a partial approval, the "effective date of the program" for each portion of the program is the date of the EPA approval of that portion.
- (50) "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(51) "Emission" means a release into the atmosphere of any regulated pollutant or any air contaminant.

(52) "Emission estimate adjustment factor" or "EEAF" means an adjustment applied to an emission factor to account for the relative inaccuracy of the emission factor.

(53) "Emission factor" means an estimate of the rate at which a regulated pollutant is released into the atmosphere, as the result of some activity, divided by the rate of that activity (e.g., production or process rate).

(54) "Emission limitation" or "Emission standard" or "Emission limitation or standard" means:

(a) Except as provided in subsection (b), a requirement established by a state, local government, or the EPA which limits the quantity, rate, or concentration of emissions of regulated pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

(b) As used in OAR 340-212-0200 through 340-212-0280, any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the FCAA. An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate or concentration of emissions, e.g., pounds of SO₂ per hour, pounds of SO₂ per million British thermal units of fuel input, kilograms of VOC per liter of applied coating solids, or parts per million by volume of SO₂, or as the relationship of uncontrolled to controlled emissions, e.g., percentage capture and destruction efficiency of VOC or percentage reduction of SO₂. An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement. For purposes of 340-212-0200 through 340-212-0280, an emission limitation or standard does not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, operate and maintain sources using good air pollution control practices, develop and maintain a malfunction abatement plan, keep records, submit reports, or conduct monitoring.

(55) "Emission Reduction credit banking" means to presently reserve, subject to requirements of OAR 340 division 268, Emission Reduction Credits, emission reductions for use by the reserver or assignee for future compliance with air pollution reduction requirements.

(56) "Emission reporting form" means a paper or electronic form developed by DEQ that must be completed by the permittee to report calculated emissions, actual emissions, or permitted emissions for interim emission fee assessment purposes.

(57) "Emissions unit" means any part or activity of a source that emits or has the potential to emit any regulated pollutant.

(a) A part of a source is any machine, equipment, raw material, product, or byproduct that produces or emits regulated pollutants. An activity is any process, operation, action, or reaction, e.g., chemical, at a stationary source that emits regulated pollutants. Except as described in subsection (d), parts and activities may be grouped for purposes of defining an emissions unit if the following conditions are met:

(A) The group used to define the emissions unit may not include discrete parts or activities to which a distinct emissions standard applies or for which different compliance demonstration requirements apply; and

(B) The emissions from the emissions unit are quantifiable.

(b) Emissions units may be defined on a regulated pollutant by regulated pollutant basis where applicable.

(c) The term emissions unit is not meant to alter or affect the definition of the term "unit" under Title IV of the FCAA.

(d) Parts and activities cannot be grouped for determining emissions increases from an emissions unit under OAR 340 divisions 210 and 224, or for determining the applicability of any New Source Performance Standard.

(58) "EPA" or "Administrator" means the Administrator of the United States Environmental Protection Agency or the Administrator's designee.

(59) "EPA Method 9" means the method for Visual Determination of the Opacity of Emissions From Stationary Sources described in 40 C.F.R. part 60, Appendix A-4.

(60) "Equivalent method" means any method of sampling and analyzing for a regulated pollutant that has been demonstrated to DEQ's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions. An equivalent method used to meet an applicable federal requirement for which a reference method is specified must be approved by EPA unless EPA has delegated authority for the approval to DEQ.

(61) "Event" means excess emissions that arise from the same condition and occur during a single calendar day or continue into subsequent calendar days.

(62) "Exceedance" means a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions, or opacity, are greater than the applicable emission limitation or standard, or less than the applicable standard in the case of a percent reduction requirement, consistent with any averaging period specified for averaging the results of the monitoring.

(63) "Excess emissions" means emissions in excess of a permit or permit attachment limit, in excess of a risk limit under OAR chapter 340, division 245, or in violation of any applicable air quality rule.

(64) "Excursion" means a departure from an indicator range established for monitoring under OAR 340-212-0200 through 340-212-0280 and 340-218-0050(3)(a), consistent with any averaging period specified for averaging the results of the monitoring.

(65) "Federal Land Manager" means with respect to any lands in the United States, the Secretary of the federal department with authority over such lands.

(66) "Federal Major Source" means any source listed in subsections (a) or (d) below:

(a) A source with potential to emit:

(A) 100 tons per year or more of any individual regulated pollutant, excluding greenhouse gases and hazardous air pollutants listed in OAR 340 division 244 if in a source category listed in subsection (c), or

(B) 250 tons per year or more of any individual regulated pollutant, excluding greenhouse gases and hazardous air pollutants listed in OAR 340 division 244, if not in a source category listed in subsection (c).

(b) Calculations for determining a source's potential to emit for purposes of subsections (a) and (d) must include the following:

(A) Fugitive emissions and insignificant activity emissions; and

(B) Increases or decreases due to a new or modified source.

(c) Source categories:

- (A) Fossil fuel-fired steam electric plants of more than 250 million BTU/hour heat input;
 - (B) Coal cleaning plants with thermal dryers;
 - (C) Kraft pulp mills;
 - (D) Portland cement plants;
 - (E) Primary zinc smelters;
 - (F) Iron and steel mill plants;
 - (G) Primary aluminum ore reduction plants;
 - (H) Primary copper smelters;
 - (I) Municipal incinerators capable of charging more than 50 tons of refuse per day;
 - (J) Hydrofluoric acid plants;
 - (K) Sulfuric acid plants;
 - (L) Nitric acid plants;
 - (M) Petroleum refineries;
 - (N) Lime plants;
 - (O) Phosphate rock processing plants;
 - (P) Coke oven batteries;
 - (Q) Sulfur recovery plants;
 - (R) Carbon black plants, furnace process;
 - (S) Primary lead smelters;
 - (T) Fuel conversion plants;
 - (U) Sintering plants;
 - (V) Secondary metal production plants;
 - (W) Chemical process plants, excluding ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
 - (X) Fossil fuel fired boilers, or combinations thereof, totaling more than 250 million BTU per hour heat input;
 - (Y) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - (Z) Taconite ore processing plants;
 - (AA) Glass fiber processing plants;
 - (BB) Charcoal production plants.
- (d) A major stationary source as defined in part D of Title I of the FCAA, including:

(A) For ozone nonattainment areas, sources with the potential to emit 100 tons per year or more of VOCs or oxides of nitrogen in areas classified as "marginal" or "moderate," 50 tons per year or more in areas classified as "serious," 25 tons per year or more in areas classified as "severe," and 10 tons per year or more in areas classified as "extreme"; except that the references in this paragraph to 100, 50, 25, and 10 tons per year of nitrogen oxides do not apply with respect to any source for which the Administrator has made a finding, under section 182(f)(1) or (2) of the FCAA, that requirements under section 182(f) of the FCAA do not apply;

(B) For ozone transport regions established under section 184 of the FCAA, sources with the potential to emit 50 tons per year or more of VOCs;

(C) For carbon monoxide nonattainment areas that are classified as "serious" and in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the Administrator, sources with the potential to emit 50 tons per year or more of carbon monoxide.

(D) For PM10 nonattainment areas classified as "serious," sources with the potential to emit 70 tons per year or more of PM10.

(67) "Final permit" means the version of an Oregon Title V Operating Permit issued by DEQ or LRAPA that has completed all review procedures required by OAR 340-218-0120 through 340-218-0240.

(68) "Form" means a paper or electronic form developed by DEQ.

(69) "Fuel burning equipment" means equipment, other than internal combustion engines, the principal purpose of which is to produce heat or power by indirect heat transfer.

(70) "Fugitive emissions":

(a) Except as used in subsection (b), means emissions of any air contaminant which escape to the atmosphere from any point or area that is not identifiable as a stack, vent, duct, or equivalent opening.

(b) As used to define a major Oregon Title V Operating Permit program source, means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(71) "General permit":

(a) Except as provided in subsection (b), means an Oregon Air Contaminant Discharge Permit established under OAR 340-216-0060;

(b) As used in OAR 340 division 218 means an Oregon Title V Operating Permit established under OAR 340-218-0090.

(72) "Generic PSEL" means the levels for the regulated pollutants listed below:

(a) Greenhouse Gases (CO₂e) = 74,000 tons per year

(b) CO = 99 tons per year

(c) NO_x = 39 tons per year

(d) SO₂ = 39 tons per year

(e) VOC = 39 tons per year

(f) PM = 24 tons per year

(g) PM₁₀ (except Medford AQMA) = 14 tons per year

- (h) PM10 (Medford AQMA) = 4.5 tons per year and 49 pounds per day
- (i) PM2.5 = 9 tons per year
- (j) Lead = 0.5 tons per year
- (k) Fluorides = 2 tons per year
- (l) Sulfuric Acid Mist = 6 tons per year
- (m) Hydrogen Sulfide = 9 tons per year
- (n) Total Reduced Sulfur (including hydrogen sulfide) = 9 tons per year
- (o) Reduced Sulfur = 9 tons per year
- (p) Municipal waste combustor organics (Dioxin and furans) = 0.0000030 tons per year
- (q) Municipal waste combustor metals = 14 tons per year
- (r) Municipal waste combustor acid gases = 39 tons per year
- (s) Municipal solid waste landfill gases (measured as nonmethane organic compounds) = 49 tons per year
- (t) Single HAP = 9 tons per year
- (u) Combined HAPs (aggregate) = 24 tons per year

(73)(a) "Greenhouse gases" or "GHGs" means the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Each gas is also individually a greenhouse gas.

(b) The definition of greenhouse gases in subsection (a) of this section does not include, for purposes of division 216, 218, and 224, carbon dioxide emissions from the combustion or decomposition of biomass except to the extent required by federal law.

(74) "Growth allowance" means an allocation of some part of an airshed's capacity to accommodate future proposed sources and modifications of sources.

(75) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(76) "Hazardous Air Pollutant" or "HAP" means an air contaminant listed by the EPA under section 112(b) of the FCAA or determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health or the environment.

(77) "Immediately" means as soon as possible but in no case more than one hour after a source knew or should have known of an excess emission period.

(78) "Indian governing body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(79) "Indian reservation" means any federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(80) "Inherent process equipment" means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must

be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of OAR 340-212-0200 through 340-212-0280, inherent process equipment is not considered a control device.

(81) "Insignificant activity" means an activity or emission that DEQ has designated as categorically insignificant, or that meets the criteria of aggregate insignificant emissions.

(82) "Insignificant change" means an off-permit change defined under OAR 340-218-0140(2)(a) to either a significant or an insignificant activity which:

(a) Does not result in a re-designation from an insignificant to a significant activity;

(b) Does not invoke an applicable requirement not included in the permit; and

(c) Does not result in emission of regulated pollutants not regulated by the source's permit.

(83) "Internal combustion engine" means stationary gas turbines and reciprocating internal combustion engines.

(84) "Late payment" means a fee payment which is postmarked after the due date.

(85) "Liquefied petroleum gas" has the meaning given by the American Society for Testing and Materials in ASTM D1835-82, "Standard Specification for Liquid Petroleum Gases."

(86) "Lowest Achievable Emission Rate" or "LAER" means that rate of emissions which reflects: the most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable; or the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent. The application of this term cannot permit a proposed new or modified source to emit any air contaminant in excess of the amount allowable under applicable New Source Performance Standards (NSPS) or standards for hazardous air pollutants.

(87) "Maintenance area" means any area that was formerly nonattainment for a criteria pollutant but has since met the ambient air quality standard, and EPA has approved a maintenance plan to comply with the standards under 40 C.F.R. 51.110. Maintenance areas are designated by the EQC according to division 204.

(88) "Maintenance pollutant" means a regulated pollutant for which a maintenance area was formerly designated a nonattainment area.

(89) "Major Modification" means any physical change or change in the method of operation of a source that results in satisfying the requirements of OAR 340-224-0025.

(90) "Major New Source Review" or "Major NSR" means the new source review process and requirements under OAR 340-224-0010 through 340-224-0070 and 340-224-0500 through 340-224-0540 based on the location and regulated pollutants emitted.

(91) "Major source":

(a) Except as provided in subsection (b) of this section, means a source that emits, or has the potential to emit, any regulated air pollutant at a Significant Emission Rate. The fugitive emissions and insignificant activity emissions of a stationary source are considered in determining whether it is a major source. Potential to emit calculations must include emission increases due to a new or modified source and may include emission decreases.

(b) As used in OAR 340 division 210, Stationary Source Notification Requirements, OAR 340 division 218, Oregon Title V Operating Permits, OAR 340 division 220, Oregon Title V Operating Permit Fees, 340-216-0066, Standard ACDPs, and OAR 340 division 236, Emission Standards for Specific Industries, means any stationary source or any group of stationary sources that are located on one or more contiguous or adjacent properties and are under common control of the same person or persons under common control belonging to a single major industrial grouping or supporting the major industrial group and that is described in paragraphs (A), (B), or (C). For the purposes of this subsection, a stationary source or group of stationary sources is considered part of a single industrial grouping if all of the regulated pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same major group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual (U.S. Office of Management and Budget, 1987) or support the major industrial group.

(A) A major source of hazardous air pollutants, which means:

(i) For hazardous air pollutants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, 10 tons per year or more of any hazardous air pollutants that has been listed under OAR 340-244-0040; 25 tons per year or more of any combination of such hazardous air pollutants, or such lesser quantity as the Administrator may establish by rule. Emissions from any oil or gas exploration or production well, along with its associated equipment, and emissions from any pipeline compressor or pump station will not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources; or

(ii) For radionuclides, "major source" will have the meaning specified by the Administrator by rule.

(B) A major stationary source of regulated pollutants, as defined in section 302 of the FCAA, that directly emits or has the potential to emit 100 tons per year or more of any regulated pollutant, except greenhouse gases, including any major source of fugitive emissions of any such regulated pollutant. The fugitive emissions of a stationary source are not considered in determining whether it is a major stationary source for the purposes of section 302(j) of the FCAA, unless the source belongs to one of the following categories of stationary sources:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cement plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than 50 tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or nitric acid plants;

(x) Petroleum refineries;

(xi) Lime plants;

(xii) Phosphate rock processing plants;

- (xiii) Coke oven batteries;
- (xiv) Sulfur recovery plants;
- (xv) Carbon black plants (furnace process);
- (xvi) Primary lead smelters;
- (xvii) Fuel conversion plants;
- (xviii) Sintering plants;
- (xix) Secondary metal production plants;
- (xx) Chemical process plants, excluding ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (xxi) Fossil-fuel boilers, or combination thereof, totaling more than 250 million British thermal units per hour heat input;
- (xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (xxiii) Taconite ore processing plants;
- (xxiv) Glass fiber processing plants;
- (xxv) Charcoal production plants;
- (xxvi) Fossil-fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or
- (xxvii) Any other stationary source category, that as of August 7, 1980 is being regulated under section 111 or 112 of the FCAA.

(C) From July 1, 2011 through November 6, 2014, a major stationary source of regulated pollutants, as defined by Section 302 of the FCAA, that directly emits or has the potential to emit 100 tons per year or more of greenhouse gases and directly emits or has the potential to emit 100,000 tons per year or more CO₂e, including fugitive emissions.

(92) "Material balance" means a procedure for determining emissions based on the difference in the amount of material added to a process and the amount consumed and/or recovered from a process.

(93) "Modification," except as used in the terms "major modification" "permit modification" and "Title I modification," means any physical change to, or change in the method of operation of, a source or part of a source that results in an increase in the source or part of the source's potential to emit any regulated pollutant on an hourly basis. Modifications do not include the following:

- (a) Increases in hours of operation or production rates that do not involve a physical change or change in the method of operation;
- (b) Changes in the method of operation due to using an alternative fuel or raw material that the source or part of a source was physically capable of accommodating during the baseline period; and
- (c) Routine maintenance, repair and like-for-like replacement of components unless they increase the expected life of the source or part of a source by using component upgrades that would not otherwise be necessary for the source or part of a source to function.

(94) "Monitoring" means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Monitoring may include record keeping if the records are used to determine or assess compliance with an emission limitation or standard such as records of raw material content and usage, or records documenting compliance with work practice requirements. Monitoring may include conducting compliance method tests, such as the procedures in appendix A to 40 C.F.R. part 60, on a routine periodic basis. Requirements to conduct such tests on a one-time basis, or at such times as a regulatory authority may require on a non-regular basis, are not considered monitoring requirements for purposes of this definition. Monitoring may include one or more than one of the following data collection techniques as appropriate for a particular circumstance:

- (a) Continuous emission or opacity monitoring systems.
- (b) Continuous process, capture system, control device or other relevant parameter monitoring systems or procedures, including a predictive emission monitoring system.
- (c) Emission estimation and calculation procedures (e.g., mass balance or stoichiometric calculations).
- (d) Maintaining and analyzing records of fuel or raw materials usage.
- (e) Recording results of a program or protocol to conduct specific operation and maintenance procedures.
- (f) Verifying emissions, process parameters, capture system parameters, or control device parameters using portable or in situ measurement devices.
- (g) Visible emission observations and recording.
- (h) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device parameters or other factors relevant to assessing compliance with emission limitations or standards.

(95) "Natural gas" means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal component is methane.

(96) "Netting basis" means an emission rate determined as specified in OAR 340-222-0046.

(97) "Nitrogen oxides" or "NO_x" means all oxides of nitrogen except nitrous oxide.

(98) "Nonattainment area" means a geographical area of the state, as designated by the EQC or the EPA, that exceeds any state or federal primary or secondary ambient air quality standard. Nonattainment areas are designated by the EQC according to division 204.

(99) "Nonattainment pollutant" means a regulated pollutant for which an area is designated a nonattainment area. Nonattainment areas are designated by the EQC according to division 204.

(100) "Normal source operation" means operation that does not include such conditions as forced fuel substitution, equipment malfunction, or highly abnormal market conditions.

(101) "Odor" means that property of an air contaminant that affects the sense of smell.

(102) "Offset" means an equivalent or greater emission reduction that is required before allowing an emission increase from a source that is subject to Major NSR or State NSR.

(103) "Opacity" means the degree to which emissions, excluding uncombined water, reduce the transmission of light and obscure the view of an object in the background as measured by EPA Method 9 or other method, as specified in each applicable rule.

(104) "Oregon Title V operating permit" or "Title V permit" means written authorization issued, renewed, amended, or revised under OAR 340 division 218.

(105) "Oregon Title V operating permit program" or "Title V program" means the Oregon program described in OAR 340 division 218 and approved by the Administrator under 40 C.F.R. part 70.

(106) "Oregon Title V operating permit program source" or "Title V source" means any source subject to the permitting requirements, OAR 340 division 218.

(107) "Ozone precursor" means nitrogen oxides and volatile organic compounds.

(108) "Ozone season" means the contiguous 3 month period during which ozone exceedances typically occur, i.e., June, July, and August.

(109) "Particleboard" means matformed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(110) "Particulate matter" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by the test method specified in each applicable rule, or where not specified by rule, in the permit.

(111) "Permit" means an Air Contaminant Discharge Permit or an Oregon Title V Operating Permit, permit attachment and any amendments or modifications thereof.

(112) "Permit modification" means a permit revision that meets the applicable requirements of OAR 340 division 216, OAR 340 division 224, or OAR 340-218-0160 through 340-218-0180.

(113) "Permit revision" means any permit modification or administrative permit amendment.

(114) "Permitted emissions" as used in OAR 340 division 220 means each regulated pollutant portion of the PSEL, as identified in an ACDP, Oregon Title V Operating Permit, review report, or by DEQ under OAR 340-220-0090.

(115) "Permittee" means the owner or operator of a source, authorized to emit regulated pollutants under an ACDP or Oregon Title V Operating Permit.

(116) "Person" means individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the State of Oregon and any agencies thereof, and the federal government and any agencies thereof.

(117) "Plant Site Emission Limit" or "PSEL" means the total mass emissions per unit time of an individual regulated pollutant specified in a permit for a source. The PSEL for a major source may consist of more than one permitted emission for purposes of Oregon Title V Operating Permit Fees in OAR 340 division 220.

(118) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(119) "PM10":

(a) When used in the context of emissions, means finely divided solid or liquid material, including condensable particulate, other than uncombined water, with an aerodynamic diameter less than or equal to a nominal 10 micrometers, emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit;

(b) When used in the context of ambient concentration, means airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured under 40 C.F.R. part 50, Appendix J or an equivalent method designated under 40 C.F.R. part 53.

(120) "PM2.5":

(a) When used in the context of direct PM2.5 emissions, means finely divided solid or liquid material, including condensable particulate, other than uncombined water, with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers, emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit.

(b) When used in the context of PM2.5 precursor emissions, means sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emitted to the ambient air as measured by the test method specified in each applicable rule or, where not specified by rule, in each individual permit.

(c) When used in the context of ambient concentration, means airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured under 40 C.F.R. part 50, Appendix L, or an equivalent method designated under 40 C.F.R. part 53.

(121) "PM2.5 fraction" means the fraction of PM2.5 in relation to PM10 for each emissions unit that is included in the netting basis and PSEL.

(122) "Pollutant-specific emissions unit" means an emissions unit considered separately with respect to each regulated pollutant.

(123) "Portable" means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(124) "Potential to emit" or "PTE" means the lesser of:

(a) The regulated pollutant emissions capacity of a stationary source; or

(b) The maximum allowable regulated pollutant emissions taking into consideration any physical or operational limitation, including use of control devices and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, if the limitation is enforceable by the Administrator.

(c) This definition does not alter or affect the use of this term for any other purposes under the FCAA or the term "capacity factor" as used in Title IV of the FCAA and the regulations promulgated thereunder. Secondary emissions are not considered in determining the potential to emit.

(125) "ppm" means parts per million by volume unless otherwise specified in the applicable rule or an individual permit. It is a dimensionless unit of measurement for gases that expresses the ratio of the volume of one component gas to the volume of the entire sample mixture of gases.

(126) "Predictive emission monitoring system" or "PEMS" means a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard.

(127) "Press/cooling vent" means any opening through which particulate and gaseous emissions from plywood, particleboard, or hardboard manufacturing are exhausted, either by natural draft or powered fan, from the building housing the process. Such openings are generally located immediately above the board press, board unloader, or board cooling area.

(128) "Process upset" means a failure or malfunction of a production process or system to operate in a normal and usual manner.

(129) "Proposed permit" means the version of an Oregon Title V Operating Permit that DEQ or LRAPA proposes to issue and forwards to the Administrator for review in compliance with OAR 340-218-0230.

(130) "Reattainment area" means an area that is designated as nonattainment and has three consecutive years of monitoring data that shows the area is meeting the ambient air quality standard for the regulated pollutant for which the area was designated a nonattainment area, but a formal redesignation by EPA has not yet been approved. Reattainment areas are designated by the EQC according to division 204.

(131) "Reattainment pollutant" means a regulated pollutant for which an area is designated a reattainment area.

(132) "Reference method" means any method of sampling and analyzing for a regulated pollutant as specified in 40 C.F.R. part 52, 60, 61 or 63.

(133) "Regional agency" means Lane Regional Air Protection Agency.

(134) "Regulated air pollutant" or "Regulated pollutant":

(a) Except as provided in subsections (b), (c) and (d), means:

(A) Nitrogen oxides or any VOCs;

(B) Any pollutant for which an ambient air quality standard has been promulgated, including any precursors to such pollutants;

(C) Any pollutant that is subject to any standard promulgated under section 111 of the FCAA;

(D) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA;

(E) Any pollutant listed under OAR 340-244-0040 or 40 C.F.R. 68.130;

(F) Greenhouse gases; and

(G) Toxic Air Contaminants.

(b) As used in OAR 340 division 220, Oregon Title V Operating Permit Fees, regulated pollutant means particulate matter, volatile organic compounds, oxides of nitrogen and sulfur dioxide.

(c) As used in OAR 340 division 222, Plant Site Emission Limits and division 224, New Source Review, regulated pollutant does not include any pollutant listed in OAR 340 divisions 244 and 246.

(d) As used in OAR 340 division 202 Ambient Air Quality Standards And PSD Increments division 208 Visible Emissions and Nuisance Requirements; division 215 Greenhouse Reporting Requirements; division 222 Stationary Source Plant Site Emission Limits through division 244 Oregon Federal Hazardous Air Pollutant Program; and division 248 Asbestos Requirements through division 268 Emission Reduction Credits; regulated pollutant means only the air contaminants listed under paragraphs (a)(A) through (F).

(135) "Removal efficiency" means the performance of an air pollution control device in terms of the ratio of the amount of the regulated pollutant removed from the airstream to the total amount of regulated pollutant that enters the air pollution control device.

(136) "Renewal" means the process by which a permit is reissued at the end of its term.

(137) "Responsible official" means one of the following:

(a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(A) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(B) The delegation of authority to such representative is approved in advance by DEQ or LRAPA.

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(c) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this division, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of EPA (e.g., a Regional Administrator of the EPA); or

(d) For affected sources:

(A) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated there under are concerned; and

(B) The designated representative for any other purposes under the Oregon Title V Operating Permit program.

(138) "Secondary emissions" means emissions that are a result of the construction and/or operation of a source or modification, but that do not come from the source itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the source associated with the secondary emissions. Secondary emissions may include, but are not limited to:

(a) Emissions from ships and trains coming to or from a facility;

(b) Emissions from off-site support facilities that would be constructed or would otherwise increase emissions as a result of the construction or modification of a source.

(139) "Section 111" means section 111 of the FCAA, 42 U.S.C. § 7411, which includes Standards of Performance for New Stationary Sources (NSPS).

(140) "Section 111(d)" means subsection 111(d) of the FCAA, 42 U.S.C. § 7411(d), which requires states to submit to the EPA plans that establish standards of performance for existing sources and provides for implementing and enforcing such standards.

(141) "Section 112" means section 112 of the FCAA, 42 U.S.C. § 7412, which contains regulations for Hazardous Air Pollutants.

(142) "Section 112(b)" means subsection 112(b) of the FCAA, 42 U.S.C. § 7412(b), which includes the list of hazardous air pollutants to be regulated.

(143) "Section 112(d)" means subsection 112(d) of the FCAA, 42 U.S.C. § 7412(d), which directs the EPA to establish emission standards for sources of hazardous air pollutants. This section also defines the criteria to be used by the EPA when establishing the emission standards.

(144) "Section 112(e)" means subsection 112(e) of the FCAA, 42 U.S.C. § 7412(e), which directs the EPA to establish and promulgate emissions standards for categories and subcategories of sources that emit hazardous air pollutants.

(145) "Section 112(r)(7)" means subsection 112(r)(7) of the FCAA, 42 U.S.C. § 7412(r)(7), which requires the EPA to promulgate regulations for the prevention of accidental releases and requires owners or operators to prepare risk management plans.

(146) "Section 114(a)(3)" means subsection 114(a)(3) of the FCAA, 42 U.S.C. § 7414(a)(3), which requires enhanced monitoring and submission of compliance certifications for major sources.

(147) "Section 129" means section 129 of the FCAA, 42 U.S.C. § 7429, which requires the EPA to establish emission standards and other requirements for solid waste incineration units.

(148) "Section 129(e)" means subsection 129(e) of the FCAA, 42 U.S.C. § 7429(e), which requires solid waste incineration units to obtain Oregon Title V Operating Permits.

(149) "Section 182(f)" means subsection 182(f) of the FCAA, 42 U.S.C. § 7511a(f), which requires states to include plan provisions in the SIP for NO_x in ozone nonattainment areas.

(150) "Section 182(f)(1)" means subsection 182(f)(1) of the FCAA, 42 U.S.C. § 7511a(f)(1), which requires states to apply those plan provisions developed for major VOC sources and major NO_x sources in ozone nonattainment areas.

(151) "Section 183(e)" means subsection 183(e) of the FCAA, 42 U.S.C. § 7511b(e), which requires the EPA to study and develop regulations for the control of certain VOC sources under federal ozone measures.

(152) "Section 183(f)" means subsection 183(f) of the FCAA, 42 U.S.C. § 7511b(f), which requires the EPA to develop regulations pertaining to tank vessels under federal ozone measures.

(153) "Section 184" means section 184 of the FCAA, 42 U.S.C. § 7511c, which contains regulations for the control of interstate ozone air pollution.

(154) "Section 302" means section 302 of the FCAA, 42 U.S.C. § 7602, which contains definitions for general and administrative purposes in the FCAA.

(155) "Section 302(j)" means subsection 302(j) of the FCAA, 42 U.S.C. § 7602(j), which contains definitions of "major stationary source" and "major emitting facility."

(156) "Section 328" means section 328 of the FCAA, 42 U.S.C. § 7627, which contains regulations for air pollution from outer continental shelf activities.

(157) "Section 408(a)" means subsection 408(a) of the FCAA, 42 U.S.C. § 7651g(a), which contains regulations for the Title IV permit program.

(158) "Section 502(b)(10) change" means a change which contravenes an express permit term but is not a change that:

(a) Would violate applicable requirements;

(b) Would contravene federally enforceable permit terms and conditions that are monitoring, recordkeeping, reporting, or compliance certification requirements; or

(c) Is a FCAA Title I modification.

(159) "Section 504(b)" means subsection 504(b) of the FCAA, 42 U.S.C. § 7661c(b), which states that the EPA can prescribe by rule procedures and methods for determining compliance and for monitoring.

(160) "Section 504(e)" means subsection 504(e) of the FCAA, 42 U.S.C. § 761c(e), which contains regulations for permit requirements for temporary sources.

(161) "Significant emission rate" or "SER," except as provided in subsections (v) and (w), means an emission rate equal to or greater than the rates specified for the regulated pollutants below:

(a) Greenhouse gases (CO₂e) = 75,000 tons per year

(b) Carbon monoxide = 100 tons per year except in a serious nonattainment area = 50 tons per year, provided DEQ has determined that stationary sources contribute significantly to carbon monoxide levels in that area.

(c) Nitrogen oxides (NO_x) = 40 tons per year.

(d) Particulate matter = 25 tons per year.

(e) PM₁₀ = 15 tons per year.

(f) Direct PM_{2.5} = 10 tons per year.

(g) PM_{2.5} precursors (SO₂ or NO_x) = 40 tons per year.

(h) Sulfur dioxide (SO₂) = 40 tons per year.

(i) Ozone precursors (VOC or NO_x) = 40 tons per year except:

(I) In a serious or severe ozone nonattainment area = 25 tons per year.

(II) In an extreme ozone nonattainment area = any emissions increase.

(j) Lead = 0.6 tons per year.

(k) Fluorides = 3 tons per year.

(l) Sulfuric acid mist = 7 tons per year.

(m) Hydrogen sulfide = 10 tons per year.

(n) Total reduced sulfur (including hydrogen sulfide) = 10 tons per year.

(o) Reduced sulfur compounds (including hydrogen sulfide) = 10 tons per year.

(p) Municipal waste combustor organics (measured as total tetra- through octa- chlorinated dibenzo-p-dioxins and dibenzofurans) = 0.0000035 tons per year.

(q) Municipal waste combustor metals (measured as particulate matter) = 15 tons per year.

(r) Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride) = 40 tons per year.

(s) Municipal solid waste landfill emissions (measured as nonmethane organic compounds) = 50 tons per year.

(t) Ozone depleting substances in aggregate = 100 tons per year.

(u) For the Medford-Ashland Air Quality Maintenance Area, the SER for PM₁₀ is defined as 5 tons per year on an annual basis and 50.0 pounds per day on a daily basis.

(v) For regulated pollutants not listed in subsections (a) through (u), the SER is zero unless DEQ determines the rate that constitutes a SER.

(w) Any new source or modification with an emissions increase less than the rates specified above and that is located within 10 kilometers of a Class I area, and would have an impact on such area equal to or greater than 1 $\mu\text{g}/\text{m}^3$ (24 hour average) is emitting at a SER. This subsection does not apply to greenhouse gas emissions.

(162) "Significant impact" means an additional ambient air quality concentration equal to or greater than the significant impact level. For sources of VOC or NO_x, a source has a significant impact if it is located within the ozone impact distance defined in OAR 340 division 224.

(163) "Significant impact level" or "SIL" means the ambient air quality concentrations listed below. The threshold concentrations listed below are used for comparison against the ambient air quality standards and PSD increments established under OAR 340 division 202, but do not apply for protecting air quality related values, including visibility.

(a) For Class I areas:

(A) PM_{2.5}:

(i) Annual = 0.06 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.07 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.30 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 0.10 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 0.20 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide: annual = 0.10 $\mu\text{g}/\text{m}^3$.

(b) For Class II areas:

(A) PM_{2.5}:

(i) Annual = 0.3 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.2 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 5.0 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 25.0 $\mu\text{g}/\text{m}^3$.

(iv) 1-hour = 8.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 1-hour = 8.0 $\mu\text{g}/\text{m}^3$.

(E) Carbon monoxide:

(i) 8-hour = 0.5 mg/m^3 .

(ii) 1-hour = 2.0 mg/m^3 .

(c) For Class III areas:

(A) PM_{2.5}:

(i) Annual = 0.3 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.2 $\mu\text{g}/\text{m}^3$.

(B) PM₁₀:

(i) Annual = 0.20 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 1.0 $\mu\text{g}/\text{m}^3$.

(C) Sulfur dioxide:

(i) Annual = 1.0 $\mu\text{g}/\text{m}^3$.

(ii) 24-hour = 5.0 $\mu\text{g}/\text{m}^3$.

(iii) 3-hour = 25.0 $\mu\text{g}/\text{m}^3$.

(D) Nitrogen dioxide: annual = 1.0 $\mu\text{g}/\text{m}^3$

(E) Carbon monoxide:

(i) 8-hour = 0.5 mg/m^3 .

(ii) 1-hour = 2.0 mg/m^3 .

(164) "Significant impairment" occurs when DEQ determines that visibility impairment interferes with the management, protection, preservation, or enjoyment of the visual experience within a Class I area. DEQ will make this determination on a case-by-case basis after considering the recommendations of the Federal Land Manager and the geographic extent, intensity, duration, frequency, and time of visibility impairment. These factors will be considered along with visitor use of the Class I areas, and the frequency and occurrence of natural conditions that reduce visibility.

(165) "Small scale local energy project" means:

(a) A system, mechanism or series of mechanisms located primarily in Oregon that directly or indirectly uses or enables the use of, by the owner or operator, renewable resources including, but not limited to, solar, wind, geothermal, biomass, waste heat or water resources to produce energy, including heat, electricity and substitute fuels, to meet a local community or regional energy need in this state;

- (b) A system, mechanism or series of mechanisms located primarily in Oregon or providing substantial benefits to Oregon that directly or indirectly conserves energy or enables the conservation of energy by the owner or operator, including energy used in transportation;
- (c) A recycling project;
- (d) An alternative fuel project;
- (e) An improvement that increases the production or efficiency, or extends the operating life, of a system, mechanism, series of mechanisms or project otherwise described in this section of this rule, including but not limited to restarting a dormant project;
- (f) A system, mechanism or series of mechanisms installed in a facility or portions of a facility that directly or indirectly reduces the amount of energy needed for the construction and operation of the facility and that meets the sustainable building practices standard established by the State Department of Energy by rule; or
- (g) A project described in subsections (a) to (f), whether or not the existing project was originally financed under ORS 470, together with any refinancing necessary to remove prior liens or encumbrances against the existing project.
- (h) A project described in subsections (a) to (g) that conserves energy or produces energy by generation or by processing or collection of a renewable resource.
- (166) "Source" means any building, structure, facility, installation or combination thereof that emits or is capable of emitting air contaminants to the atmosphere, is located on one or more contiguous or adjacent properties and is owned or operated by the same person or by persons under common control. The term includes all air contaminant emitting activities that belong to a single major industrial group, i.e., that have the same two-digit code, as described in the Standard Industrial Classification Manual, U.S. Office of Management and Budget, 1987, or that support the major industrial group.
- (167) "Source category":
- (a) Except as provided in subsection (b), means all the regulated pollutant emitting activities that belong to the same industrial grouping, i.e., that have the same two-digit code, as described in the Standard Industrial Classification Manual, U.S. Office of Management and Budget, 1987.
- (b) As used in OAR 340 division 220, Oregon Title V Operating Permit Fees, means a group of major sources that DEQ determines are using similar raw materials and have equivalent process controls and pollution control device.
- (168) "Source test" means the average of at least three test runs conducted under the DEQ Source Sampling Manual found in 340-200-0035.
- (169) "Standard conditions" means a temperature of 68° Fahrenheit (20° Celsius) and a pressure of 14.7 pounds per square inch absolute (1.03 Kilograms per square centimeter).
- (170) "Startup" and "shutdown" means that time during which a source or control device is brought into normal operation or normal operation is terminated, respectively.
- (171) "State Implementation Plan" or "SIP" means the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040 and approved by EPA.
- (172) "State New Source Review" or "State NSR" means the new source review process and requirements under OAR 340-224-0010 through 340-224-0038, 340-224-0245 through 340-224-0270 and 340-224-0500 through 340-224-0540 based on the location and regulated pollutants emitted.

- (173) "Stationary source" means any building, structure, facility, or installation at a source that emits or may emit any regulated pollutant. Stationary source includes portable sources that are required to have permits under OAR 340 division 216.
- (174) "Substantial underpayment" means the lesser of 10 percent of the total interim emission fee for the major source or five hundred dollars.
- (175) "Sustainment area" means a geographical area of the state for which DEQ has ambient air quality monitoring data that shows an attainment or unclassified area could become a nonattainment area but a formal redesignation by EPA has not yet been approved. The presumptive geographic boundary of a sustainment area is the applicable urban growth boundary in effect on the date this rule was last approved by the EQC, unless superseded by rule. Sustainment areas are designated by the EQC according to division 204.
- (176) "Sustainment pollutant" means a regulated pollutant for which an area is designated a sustainment area.
- (177) "Synthetic minor source" means a source that would be classified as a major source under OAR 340-200-0020, but for limits on its potential to emit regulated pollutants contained in an ACDP or Oregon Title V permit issued by DEQ.
- (178) "Title I modification" means one of the following modifications under Title I of the FCAA:
- (a) A major modification subject to OAR 340-224-0050, Requirements for Sources in Nonattainment Areas or OAR 340-224-0055, Requirements for Sources in Reattainment Areas;
 - (b) A major modification subject to OAR 340-224-0060, Requirements for Sources in Maintenance Areas;
 - (c) A major modification subject to OAR 340-224-0070, Prevention of Significant Deterioration Requirements for Sources in Attainment or Unclassified Areas or 340-224-0045 Requirements for Sources in Sustainment Areas;
 - (d) A modification that is subject to a New Source Performance Standard under Section 111 of the FCAA; or,
 - (e) A modification under Section 112 of the FCAA.
- (179) "Total reduced sulfur" or "TRS" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides present expressed as hydrogen sulfide (H₂S).
- (180) "Toxic air contaminant" means an air pollutant that has been determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health and is listed in OAR 340-245-8020 Table 2.
- (181) "Type A State NSR" means State NSR as specified in OAR 340-224-0010(2)(a).
- (182) "Type B State NSR" means State NSR that is not Type A State NSR.
- (183) "Typically Achievable Control Technology" or "TACT" means the emission limit established on a case-by-case basis for a criteria pollutant from a particular emissions unit under OAR 340-226-0130.
- (184) "Unassigned emissions" means the amount of emissions that are in excess of the PSEL but less than the netting basis.

(185) "Unavoidable" or "could not be avoided" means events that are not caused entirely or in part by design, operation, maintenance, or any other preventable condition in either process or control device.

(186) "Unclassified area" or "attainment area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment areas or unclassified areas may also be referred to as sustainment or maintenance areas as designated in OAR 340 division 204. Any particular location may be part of an attainment area or unclassified area for one regulated pollutant while also being in a different type of designated area for another regulated pollutant.

(187) "Upset" or "Breakdown" means any failure or malfunction of any pollution control device or operating equipment that may cause excess emissions.

(188) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

(189) "Veneer dryer" means equipment in which veneer is dried.

(190) "Visibility impairment" means any humanly perceptible change in visual range, contrast or coloration from that which existed under natural conditions. Natural conditions include fog, clouds, windblown dust, rain, sand, naturally ignited wildfires, and natural aerosols.

(191) "Volatile organic compounds" or "VOC" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions.

(a) This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity:

(A) Methane;

(B) Ethane;

(C) Methylene chloride (dichloromethane);

(D) 1,1,1-trichloroethane (methyl chloroform);

(E) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);

(F) Trichlorofluoromethane (CFC-11);

(G) Dichlorodifluoromethane (CFC-12);

(H) Chlorodifluoromethane (HCFC-22);

(I) Trifluoromethane (HFC-23);

(J) 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114);

(K) Chloropentafluoroethane (CFC-115);

(L) 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123);

(M) 1,1,1,2-tetrafluoroethane (HFC-134a);

(N) 1,1-dichloro 1-fluoroethane (HCFC-141b);

(O) 1-chloro 1,1-difluoroethane (HCFC-142b);

(P) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
(Q) Pentafluoroethane (HFC-125);
(R) 1,1,2,2-tetrafluoroethane (HFC-134);
(S) 1,1,1-trifluoroethane (HFC-143a);
(T) 1,1-difluoroethane (HFC-152a);
(U) Parachlorobenzotrifluoride (PCBTF);
(V) Cyclic, branched, or linear completely methylated siloxanes;
(W) Acetone;
(X) Perchloroethylene (tetrachloroethylene);
(Y) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
(Z) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
(AA) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
(BB) Difluoromethane (HFC-32);
(CC) Ethylfluoride (HFC-161);
(DD) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
(EE) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
(FF) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
(GG) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
(HH) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
(II) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
(JJ) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
(KK) chlorofluoromethane (HCFC-31);
(LL) 1 chloro-1-fluoroethane (HCFC-151a);
(MM) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
(NN) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C4 F9 OCH3 or HFE-7100);
(OO) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2 CF2 OCH3);
(PP) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C4 F9 OC2 H5 or HFE-7200);
(QQ) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2 CF2 OC2 H5);
(RR) Methyl acetate;
(SS) 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C3F7OCH3, HFE-7000);
(TT) 3-ethoxy- 1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500);

- (UU) 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea);
- (VV) Methyl formate (HCOOCH₃);
- (WW) 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);
- (XX) Propylene carbonate;
- (YY) Dimethyl carbonate;
- (ZZ) Trans -1,3,3,3-tetrafluoropropene (also known as HFO-1234ze);
- (AAA) HCF₂ OCF₂ H (HFE-134);
- (BBB) HCF₂ OCF₂ OCF₂ H (HFE-236cal2);
- (CCC) HCF₂ OCF₂ CF₂ OCF₂ H (HFE-338pcc13);
- (DDD) HCF₂ OCF₂ OCF₂ CF₂ OCF₂ H (H-Galden 1040x or H-Galden ZT 130 (or 150 or 180));
- (EEE) Trans 1-chloro-3,3,3-trifluoroprop-1-ene (also known as SolsticeTM 1233zd(E));
- (FFF) 2,3,3,3-tetrafluoropropene (also known as HFO-1234yf);
- (GGG) 2-amino-2-methyl-1-propanol; and
- (HHH) perfluorocarbon compounds which fall into these classes:
- (i) Cyclic, branched, or linear, completely fluorinated alkanes;
 - (ii) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
 - (iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
 - (iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- (b) For purposes of determining compliance with emissions limits, VOC will be measured by an applicable reference method in the DEQ Source Sampling Manual referenced in OAR 340-200-0035. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as VOC if the amount of such compounds is accurately quantified, and DEQ approves the exclusion.
- (c) DEQ may require an owner or operator to provide monitoring or testing methods and results demonstrating, to DEQ's satisfaction, the amount of negligibly-reactive compounds in the source's emissions.
- (d) The following compounds are VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOC and must be uniquely identified in emission reports, but are not VOC for purposes of VOC emissions limitations or VOC content requirements: t-butyl acetate.
- (192) "Wood fired veneer dryer" means a veneer dryer, that is directly heated by the products of combustion of wood fuel in addition to or exclusive of steam or natural gas or propane combustion.
- (193) "Wood fuel-fired device" means a device or appliance designed for wood fuel combustion, including cordwood stoves, woodstoves and fireplace stove inserts, fireplaces, wood fuel-fired cook stoves, pellet stoves and combination fuel furnaces and boilers that burn wood fuels.

(194) "Year" means any consecutive 12 month period of time.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan that EQC adopted under OAR 340-200-0040 with the exception of all references to toxic air contaminants and OAR chapter 340, division 245.

[NOTE: Referenced publications not linked to below are available from the agency.]

[NOTE: View a PDF of referenced tables and EPA Methods by clicking on "Tables" link below.]

[\[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.\]](#)

Statutory/Other Authority: ORS 468.020 & 468A

Statutes/Other Implemented: ORS 468A.025, 468A.035, 468A.040, 468A.050, 468A.055, 468A.070, 468A.075, 468A.085, 468A.105, 468A.135, 468A.140, 468A.155, 468A.280, 468A.310, 468A.315, 468A.360, 468A.363, 468A.380, 468A.385, 468A.420, 468A.495, 468A.500, 468A.505, 468A.515, 468A.575, 468A.595, 468A.600, 468A.610, 468A.612, 468A.620, 468A.635, 468A.707, 468A.740, 468A.745, 468A.750, 468A.775, 468A.780, 468A.797, 468A.799, 468A.803, 468A.820 & & Or. Laws 2009, chapter 754

Division 216 AIR CONTAMINANT DISCHARGE PERMITS

340-216-0090

Sources Subject to ACDPs and Fees

(1) All air contaminant discharge sources listed in OAR 340-216-8010 must obtain a permit from DEQ and are subject to fees in OAR 340-216-8020.

(2) An owner or operator of a source that is required to demonstrate compliance with Cleaner Air Oregon rules under OAR 340-245-0005 through 340-245-8010 must pay the fees specified in OAR 340-216-8030.

Division 218 OREGON TITLE V OPERATING PERMITS

340-218-0020

Applicability

(1) Except as provided in section (4), this division applies to the following sources:

(a) Any major source;

(b) Any source, including an area source, subject to a standard, limitation, or other requirement under section 111 of the FCAA;

(c) Any source, including an area source, subject to a standard or other requirement under section 112 of the FCAA, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under section 112(r) of the FCAA;

(d) Any affected source under Title IV; and

(e) Any source in a source category designated by the EQC under this rule.

(2) The owner or operator of a source with an Oregon Title V Operating Permit whose potential to emit later falls below the emission level that causes it to be a major source, and which is not otherwise required to have an Oregon Title V Operating Permit, may submit a request for revocation of the Oregon Title V Operating Permit. Granting of the request for revocation does not relieve the source from compliance with all applicable requirements or ACDP requirements.

(3) Synthetic minor sources.

(a) A source which would otherwise be a major source subject to this division may choose to become a synthetic minor source by limiting its emissions below the emission level that causes it to be a major source through limits contained in an ACDP issued by DEQ under 340 division 216.

(b) The reporting and monitoring requirements of the emission limiting conditions contained in the ACDPs of synthetic minor sources issued by DEQ under OAR 340-216 must meet the requirements of OAR 340-212-0010 through 340-212-0150 and division 214.

(c) Synthetic minor sources who request to increase their potential to emit above the major source emission rate thresholds will become subject to this division and must submit a permit application under OAR 340-218-0040 and obtain an Oregon Title V Operating Permit before increasing emissions above the major source emission rate thresholds.

(d) Synthetic minor sources that exceed the limitations on potential to emit are in violation of OAR 340-218-0020(1)(a).

(4) Source category exemptions.

(a) All sources listed in 340-218-0020(1) that are not major sources, affected sources, or solid waste incineration units required to obtain a permit under section 129(e) of the FCAA are not required to obtain a Title V permit, except non-major sources subject to a standard under section 111 or section 112 of the FCAA promulgated after July 21, 1992 are required to obtain a Title V permit unless specifically exempted from the requirement to obtain a Title V permit in section 111 or 112 standards.

(b) The following source categories are exempted from the obligation to obtain an Oregon Title V Operating Permit:

(A) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 C.F.R. part 60, subpart AAA — Standards of Performance for New Residential Wood Heaters; and

(B) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 C.F.R. part 61, subpart M — National Emission Standard for Hazardous Air Pollutants for Asbestos, section 61.145, Standard for Demolition and Renovation.

(c) Any source listed in OAR 340-218-0020(1) exempt from the requirement to obtain a permit under this rule may opt to apply for an Oregon Title V Operating Permit.

(5) Sources subject to this division may also be subject to OAR 340-245-0005 through 340-245-8010.

[340-218-0110](#)
Permit Shield

(1) Except as provided in this division, DEQ must expressly include in an Oregon Title V Operating Permit a provision stating that compliance with the conditions of the permit will be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

(a) Such applicable requirements are included and are specifically identified in the permit; or

(b) DEQ, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(2) An Oregon Title V Operating Permit that does not expressly state that a permit shield exists will be presumed not to provide such a shield.

(3) Changes made to a permit using OAR 340-218-0150(1)(h) and 340-218-0180 will be shielded.

(4) Nothing in this rule or in any Oregon Title V Operating Permit may alter or affect the following:

(a) The provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035;

(b) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(c) The applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or

(d) The ability of DEQ to obtain information from a source under ORS 468.095 (investigatory authority, access to records).

(5) The permit shield does not apply to conditions and requirements included in a Toxic Air Contaminant Permit Addendum or included in an Oregon Title V Operating Permit under OAR 340-245-0005 through 340-245-8010.

Proposed Rules: Division 246

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

June 2021



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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



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Division 246 Draft Rules – Edits Highlighted

Last revised: Apr. 15, 2021

Key to Identifying Changed Text:

~~Deleted Text~~

New/inserted text

Division 246

OREGON STATE ~~AIR-TOXICS~~ AIR CONTAMINANT PROGRAM

340-246-0010

Policy and Purpose

The purpose of Oregon's state ~~air-toxics~~ Toxic Air Contaminant Program is to address threats to public health and the environment from toxic air pollutants that remain after implementing the state delegated technology-based strategies of the federal Hazardous Air Pollutants ~~air-toxics~~ P program in OAR 340-244-0010 through 340-244-0252, Cleaner Air Oregon in OAR 340-245-0005 through 340-245-8050, and OAR 340-244-9000 through 340-244-9090. ~~Oregon's program meets the goals of the federal Urban Air Toxics Strategy by using a community-based effort that focuses on geographic areas of concern.~~ It also addresses cases of elevated health risks from ~~air-toxic~~ air contaminants emissions at stationary sources and source categories of ~~air-toxic~~ air contaminants emissions. In the future, it is also intended to address human exposures to toxic air contaminant emissions from stationary sources that are not addressed by other regulatory programs or the Geographic Program through a Safety Net Program. It is expected that the Safety Net Program will apply only rarely.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & ~~ORS 468A.135~~

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, & 468A.025 & 468A.135

History:

DEQ 197-2018, amend filed 11/16/2018, effective 11/16/2018

DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0030

Definitions

The definitions in OAR 340-200-0020, 340-218-0030, 340-244-~~0030~~ 0030, OAR 340-247-0020 and this rule apply to this division. If the same term is defined in this division and elsewhere, the definition in this division applies.

~~(1) "Air toxics" means those pollutants known or suspected to cause cancer or other serious health effects, including but not limited to "hazardous air pollutants" or "HAPs" listed by the EPA under section 112(b) of the Federal Clean Air Act.~~

(12) "Ambient benchmark concentration" means the concentration of an ~~air-toxic~~ toxic air contaminant in outdoor air that would result in an excess lifetime cancer risk level of one in a million (1 x 10⁻⁶) or a non-

cancer hazard quotient of one and is numerically equivalent to the “Toxicity Reference Value” as defined under OAR 340 247-0020.

~~(3) "Bio-accumulation" means the net accumulation of a substance by an organism as a result of uptake from all routes of exposure (e.g., ingestion of food, intake of drinking water, direct contact, or inhalation).~~

(4) "Geographic area" means an area identified by DEQ where ~~air-toxic~~toxic air contaminants concentrations are estimated or measured at levels that exceed ambient benchmark concentrations.

(5) "Hazard quotient" means the ratio of the potential exposure to a single ~~air-toxic~~toxic air contaminant to the reference concentration for that pollutant. If the hazard quotient is calculated to be less than or equal to 1, then no adverse health effects are expected as a result of exposure. If the hazard quotient is greater than 1, then adverse health effects are possible.

(6) "High priority geographic area" means an area identified by DEQ where ~~air-toxic~~toxic air contaminants concentrations are estimated or measured at levels that exceed ambient benchmark concentrations and pose excess cancer risk above ten in a million, or non-cancer risk above a hazard quotient of one with the potential for serious adverse health effects.

(7) "Public receptor" means any outdoor area where members of the public have unrestricted access, including but not limited to residences, institutions (e.g. schools, hospitals), industrial, commercial, or office buildings, parks, recreational areas, public lands, streets or sidewalks.

(8) "Reference concentration" means an estimate of a continuous exposure or a daily exposure to the human population (including sensitive populations) that is likely to be without an appreciable risk of adverse non-cancer effects during a lifetime. The reference concentration can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

(9) "Sensitive human populations" means humans with increased susceptibility to the adverse effects of ~~air-toxic~~toxic air contaminants, including humans in prenatal or postnatal periods of development.

~~(10)~~ "Source" means:

(a) An activity conducted by a person at a point, area, on-road mobile, or off-road mobile operation that emits ~~air-toxic~~toxic air contaminants; or

(b) Any building, structure, facility, installation or combination thereof that emits or is capable of emitting air contaminants to the atmosphere, is located on one or more contiguous or adjacent properties and is owned or operated by the same person or by persons under common control. The term includes all pollutant emitting activities that belong to a single major industrial group (i.e., that have the same two-digit code) as described in the **Standard Industrial Classification Manual**, (U.S. Office of Management and Budget, 1987) or that support the major industrial group.

~~(11)~~ "Source Category" means:

(a) A source or group of sources that emit ~~air-toxic~~toxic air contaminants due to the use of the same or similar processes, including commercial, residential, public or private processes, which as a group can reduce ~~air-toxic~~toxic air contaminants emissions by employing similar control or prevention strategies or;

(b) All the pollutant emitting activities that belong to the same industrial grouping (i.e., that have the same two-digit code) as described in the **Standard Industrial Classification Manual**, (U.S. Office of Management and Budget, 1987).

~~(12) "Toxics Best Available Retrofit Technology", or "TBART" means an air toxics emissions limitation based on the maximum degree of reduction of air toxics, determined on a case-by-case basis, that is feasible taking into consideration:~~

~~(a) What has been achieved in practice for that source category, or for similar processes or emissions;~~

~~(b) Energy and non-air quality health or environmental impacts; and~~

~~(c) Economic impacts, including the costs of changing existing processes or equipment or adding equipment or controls to existing processes and equipment. Such limitation may be based on a design, equipment, work practice or other operational standard, or combination thereof.~~

[Publications: Publications referenced are available from the agency.]

[Statutory/Other Authority: ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

[Statutes/Other Implemented: ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

~~[468A.135](#) [Statutory/Other Authority: ORS 468.035, 468A.010\(1\) & 468A.015](#)~~

~~[Statutes/Other Implemented: ORS 468A.015 & 468A.025](#)~~

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

[340-246-0050](#)

Pollution Prevention

The Environmental Quality Commission encourages the use of pollution prevention for all sources of ~~air toxie~~toxic air contaminants statewide. The Commission encourages use of the following hierarchy to reduce ~~air toxie~~toxic air contaminants:

(1) Modify the process, raw materials, or product to reduce the quantity and toxicity of air contaminants generated;

(2) Capture and reuse air contaminants;

(3) Treat to reduce the quantity and toxicity of air contaminants released; or

(4) Otherwise control ~~air toxie~~toxic air contaminants emissions.

[Statutory/Other Authority: ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

[Statutes/Other Implemented: ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

~~[468A.135](#) [Statutory/Other Authority: ORS 468.035, 468A.010\(1\) & 468A.015](#)~~

~~[Statutes/Other Implemented: ORS 468A.015 & 468A.025](#)~~

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0070

~~Air Toxics Science Advisory Committee~~

~~(1) Purpose. The Commission recognizes the many scientific uncertainties associated with the effects of air toxics, and the continuing development of new information in this field. An Air Toxics Science Advisory Committee (ATSAC), will advise DEQ, and in its jurisdiction, the Lane Regional Air Pollution Authority, on technical issues and evaluation of the state air toxics program. The ATSAC will provide advice on the technical aspects of risk assessment. It will not provide risk management or policy recommendations. The ATSAC will perform the following functions:~~

~~(a) Review ambient benchmarks for the state air toxics program;~~

~~(b) Advise DEQ on developing a risk assessment methodology to be used in the Safety Net Program in OAR 340-246-0190 (5) and (6);~~

~~(c) Advise DEQ on selecting sources for the Safety Net program. The ATSAC will evaluate potential Safety Net sources identified by DEQ to determine whether they qualify for the Safety Net Program, as specified in OAR 340-246-0190 through 0230;~~

~~(d) Evaluate overall progress in reducing emissions of and exposure to air toxics by considering trends in emissions and ambient concentrations of air toxics. The ATSAC will periodically advise DEQ on air toxics program effectiveness and make technical recommendations for program development concerning the possible adverse environmental effects of air toxics and risk from exposure to multiple air toxics; and~~

~~(e) Provide advisory opinions on questions requiring scientific expertise, as requested by DEQ.~~

~~(2) Membership. The ATSAC will be composed of highly qualified members with experience relevant to air toxics. There will be at least five but no more than seven members. The following disciplines will be represented on the ATSAC:~~

~~(a) Toxicology;~~

~~(b) Environmental Science or Environmental Engineering;~~

~~(c) Risk Assessment;~~

~~(d) Epidemiology/Biostatistics;~~

~~(e) Medicine (Physician) with training or experience in Public Health; and~~

~~(f) Air Pollution Modeling, Monitoring, Meteorology or Engineering.~~

~~(3) Appointment. DEQ's Air Quality Division Administrator will nominate potential members to the Director. Before making these nominations, the Administrator will develop a list of candidates by consulting with government, public, and private organizations involved in work relevant to air toxics. The Director will appoint ATSAC members with concurrence by the Commission.~~

~~(4) Term. Air Toxics Science Advisory Committee members will serve a three year term. Initial terms will be staggered for continuity and transfer of work so that members of the first ATSAC may serve more or less than three years.~~

~~(5) Operation.~~

~~(a) No member may have an actual or potential conflict of interest, as those terms are defined by ORS 244.020.~~

~~(b) The ATSAC will meet as necessary.~~

~~(6) Procedures, Bylaws, and Decision-making Process. At a minimum, the ATSAC will observe the procedures specified below. The ATSAC will develop other necessary procedures and bylaws in consultation with DEQ.~~

~~(a) Final decisions must be made by a quorum of members, based on consensus when possible. If consensus is not possible, decisions will be made by majority vote with a quorum present.~~

~~(b) If necessary, DEQ may obtain a facilitator to assist the ATSAC.~~

~~(c) The bylaws will include provisions for removing a member for cause, with concurrence by the Commission.~~

~~Statutory/Other Authority: ORS 468.035, 468A.010(1) & 468A.015~~

~~Statutes/Other Implemented: ORS 468A.015 & 468A.025~~

~~History:~~

~~DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018~~

~~DEQ 15-2003, f. & cert. ef. 11-3-03~~

340-246-0090

Ambient Benchmark Concentrations for ~~Air~~ Toxic Air Contaminants

(1) Purpose. Ambient benchmark concentrations are concentrations of ~~air-toxic~~toxic air contaminants that serve as goals in the Oregon ~~Air~~ Toxic Air Contaminants Program. They are based on human health risk and hazard levels considering sensitive populations. Ambient benchmark concentrations are not regulatory standards, but reference values by which ~~air-toxic~~toxic air contaminants problems can be identified, addressed and evaluated and are numerically equivalent to the “Toxicity Reference Value” as defined under OAR 340 247-0020. DEQ will use ambient benchmark concentrations as indicated in these rules, to implement the Geographic and, Source Category, ~~and Safety Net~~ Programs. Ambient benchmark concentrations set by the procedures described in this rule apply throughout Oregon, including that area within the jurisdiction of the Lane Regional Air Protection Agency. ~~In OAR 340-245-0300, ambient benchmarks may also be considered in the risk-based concentration hierarchy used to determine risk-based concentrations for purposes of Cleaner Air Oregon regulations in OAR 340-245-0005 through 240-245-8050. Ambient benchmarks are subject to public notice and comment before adoption by the Environmental Quality Commission as administrative rules.~~

~~(2) Establishing Ambient Benchmarks~~

~~(a) DEQ will consult with the ATSAC to prioritize air toxics for ambient benchmark development. Highest priority air toxics are those that pose the greatest risk to public health.~~

~~(b) To prioritize air toxics, DEQ will apply the criteria described in OAR 340-246-0090(2)(c) to modeling, monitoring, and emissions inventory data.~~

~~(c) Ambient benchmark prioritization criteria will include at least the following:~~

~~(A) Toxicity or potency of a pollutant;~~

~~(B) Exposure and number of people at risk;~~

~~(C) Impact on sensitive human populations;~~

~~(D) The number and degree of predicted ambient benchmark exceedances; and~~

~~(E) Potential to cause harm through persistence and bio-accumulation.~~

~~(d) DEQ will develop ambient benchmarks for proposal to the ATSAC based upon a protocol that uses reasonable estimates of plausible upper bound exposures that neither grossly underestimate nor grossly overestimate risks.~~

~~(e) Within three months of the first meeting of the ATSAC, DEQ will propose ambient benchmark concentrations for the highest priority air toxics for review by the ATSAC. DEQ will propose additional and revised air toxics ambient benchmarks for review by the ATSAC based on the prioritization criteria in OAR 340-246-0090(2)(e). Once the ATSAC has completed review of each set of proposed ambient benchmarks, DEQ will, within 60 days, begin the process to propose ambient benchmarks as administrative rules for adoption by the Environmental Quality Commission.~~

~~(f) If DEQ is unable to propose ambient benchmarks to the ATSAC by the deadlines specified in OAR 340-246-0090(2)(e), the ATSAC will review the most current EPA ambient benchmarks. If EPA ambient benchmarks are not available, the ATSAC will review the best available information from other states and local air authorities.~~

~~(g) The ATSAC will consider proposed ambient benchmarks and evaluate their adequacy for meeting risk and hazard levels, considering human health, including sensitive human populations, scientific uncertainties, persistence, bio-accumulation, and, to the extent possible, multiple exposure pathways. The ATSAC will conduct this review consistent with the criteria in OAR 340-246-0090(2)(e) and (d). The ATSAC will report these findings to DEQ. If the ATSAC unanimously disagrees with DEQ's recommendation, DEQ will re-consider and re-submit its recommendation at a later date.~~

~~(h) The ATSAC will complete review of and report findings on each set of ambient benchmarks as quickly as possible, but no later than 12 months after DEQ has proposed them. If the ATSAC is unable to complete review of ambient benchmarks within 12 months after DEQ's proposal, DEQ will initiate rulemaking to propose ambient benchmarks.~~

~~(i) DEQ will review all ambient benchmarks at least every five years and, if necessary, propose revised or additional ambient benchmarks to the ATSAC. At its discretion, DEQ may review and propose a benchmark for review by the ATSAC at any time when new information is available.~~

~~(3) Ambient Benchmarks. Benchmark concentrations are in units of micrograms of air toxic per cubic meter of ambient air, on an average annual basis. The Chemical Abstract Service Registry Number (CASRN) is shown in parentheses.~~

~~(a) The ambient benchmark for acetaldehyde (75-07-0) is 0.45 micrograms per cubic meter.~~

~~(b) The ambient benchmark for acrolein (107-02-8) is 0.35 micrograms per cubic meter.~~

~~(c) The ambient benchmark for acrylonitrile (107-13-1) is 0.01 micrograms per cubic meter.~~

- ~~(d) The ambient benchmark for ammonia (7664-41-7) is 500 micrograms per cubic meter.~~
- ~~(e) The ambient benchmark for arsenic (7440-38-2) is 0.0002 micrograms per cubic meter.~~
- ~~(f) The ambient benchmark for benzene (71-43-2) is 0.13 micrograms per cubic meter.~~
- ~~(g) The ambient benchmark for beryllium (7440-41-7) is 0.0004 micrograms per cubic meter.~~
- ~~(h) The ambient benchmark for 1,3-butadiene (106-99-0) is 0.03 micrograms per cubic meter.~~
- ~~(i) The ambient benchmark for cadmium and cadmium compounds (7440-43-9) is 0.0006 micrograms per cubic meter.~~
- ~~(j) The ambient benchmark for carbon disulfide (75-15-0) is 800 micrograms per cubic meter.~~
- ~~(k) The ambient benchmark for carbon tetrachloride (56-23-5) is 0.2 micrograms per cubic meter.~~
- ~~(l) The ambient benchmark for chlorine (7782-50-5) is 0.1 micrograms per cubic meter.~~
- ~~(m) The ambient benchmark for chloroform (67-66-3) is 300 micrograms per cubic meter.~~
- ~~(n) The ambient benchmark for chromium, hexavalent (18540-29-9) is 0.00008 micrograms per cubic meter.~~
- ~~(o) The ambient benchmark for cobalt and cobalt compounds (7440-48-4) is 0.1 micrograms per cubic meter.~~
- ~~(p) The ambient benchmark for 1,4-dichlorobenzene (106-46-7) is 0.09 micrograms per cubic meter.~~
- ~~(q) The ambient benchmark for 1,3-dichloropropene (542-75-6) is 0.25 micrograms per cubic meter.~~
- ~~(r) The ambient benchmark for diesel particulate matter (none) is 0.1 micrograms per cubic meter. The benchmark for diesel particulate matter applies only to such material from diesel-fueled internal combustion sources.~~
- ~~(s) The ambient benchmark for dioxins and furans (1746-01-6) is 0.00000003 micrograms per cubic meter. The benchmark for dioxin is for total chlorinated dioxins and furans expressed as 2,3,7,8-TCDD toxicity equivalents.~~
- ~~(t) The ambient benchmark for ethyl benzene (100-41-4) is 0.4 micrograms per cubic meter.~~
- ~~(u) The ambient benchmark for ethylene dibromide (106-93-4) is 0.002 micrograms per cubic meter.~~
- ~~(v) The ambient benchmark for ethylene dichloride (107-06-2) is 0.04 micrograms per cubic meter.~~
- ~~(w) The ambient benchmark for ethylene oxide (75-21-8) is 0.0003 micrograms per cubic meter.~~
- ~~(x) The ambient benchmark for formaldehyde (50-00-0) is 0.2 micrograms per cubic meter.~~
- ~~(y) The ambient benchmark for n-hexane (110-54-3) is 700 micrograms per cubic meter.~~
- ~~(z) The ambient benchmark for hydrogen chloride (7647-01-0) is 20 micrograms per cubic meter.~~

- (aa) The ambient benchmark for hydrogen cyanide (74-90-8) is 0.8 micrograms per cubic meter.
- (bb) The ambient benchmark for fluoride anion (7664-39-3) is 13 micrograms per cubic meter.
- (cc) The ambient benchmark for lead and lead compounds (7439-92-1) is 0.15 micrograms per cubic meter.
- (dd) The ambient benchmark for manganese and manganese compounds (7439-96-5) is 0.09 micrograms per cubic meter.
- (ee) The ambient benchmark for elemental mercury (7439-97-6) is 0.3 micrograms per cubic meter.
- (ff) The ambient benchmark for methyl bromide (74-83-9) is 5 micrograms per cubic meter.
- (gg) The ambient benchmark for methyl chloride (74-87-3) is 90 micrograms per cubic meter.
- (hh) The ambient benchmark for methyl chloroform (71-55-6) is 5,000 micrograms per cubic meter.
- (ii) The ambient benchmark for methylene chloride (75-09-2) is 100 micrograms per cubic meter.
- (jj) The ambient benchmark for naphthalene (91-20-3) is 0.03 micrograms per cubic meter.
- (kk) The benchmark for soluble nickel compounds (various) is 0.01 micrograms per cubic meter, where soluble nickel compounds include nickel acetate (373-20-4), nickel chloride (7718-54-9), nickel carbonate (3333-39-3), nickel carbonyl (13463-39-3), nickel hydroxide (12054-48-7), nickelocene 1271-28-9), nickel sulfate 7786-81-4), nickel sulfate hexahydrate 10101-97-0), nickel nitrate hexahydrate (13478-00-7), and nickel carbonate hydroxide (12607-70-4).
- (ll) The ambient benchmark for insoluble nickel compounds (various) is 0.004 micrograms per cubic meter, where insoluble nickel compounds include nickel subsulfide (12035-72-2), nickel oxide (1313-99-1), nickel sulfide (11113-75-0), and nickel metal (7440-02-0).
- (mm) The ambient benchmark for phosphine (7803-51-2) is 0.8 micrograms per cubic meter.
- (nn) The ambient benchmark for phosphoric acid (7664-38-2) is 10 micrograms per cubic meter.
- (oo) The ambient benchmark for total (as the sum of congeners) polychlorinated biphenyls (1336-36-3) is 0.01 micrograms per cubic meter.
- (pp) The ambient benchmark for total polycyclic aromatic hydrocarbons (none) is 0.002 micrograms per cubic meter, where total polycyclic aromatic hydrocarbons are the sum of the toxicity equivalency factor (with respect to benzo(a)pyrene (50-32-8)) adjusted concentrations for all of the following individual 26 polycyclic aromatic hydrocarbons: 5-methylchrysene (3697-24-3); 6-nitrochrysene (7496-02-8); acenaphthene (83-32-9); acenaphthylene (208-96-8); anthanthrene (191-26-4); anthracene (120-12-7); benz(a)anthracene (56-55-3); benzo(a)pyrene (50-32-8); benzo(b)fluoranthene (205-99-6); benzo(c)fluoranthene (243-17-4); benzo(e)pyrene (192-97-2); benzo(g,h,i)perylene (191-24-2); benzo(j)fluoranthene (205-82-3); benzo(k)fluoranthene (207-08-9); chrysene (218-01-9); cyclopenta(e,d)pyrene (27208-37-3); dibenz(a,h)anthracene (226-36-8); dibenzo(a,e)pyrene (192-65-4); dibenzo(a,h)pyrene (189-64-0); dibenzo(a,i)pyrene (189-55-9); dibenzo(a,l)pyrene (191-30-0); fluoranthene (206-44-0); fluorene (86-73-7); indeno(1,2,3-c,d)pyrene (193-39-5); phenanthrene (85-01-8); and pyrene (129-00-0).

~~(qq) The ambient benchmark for tetrachloroethylene (127-18-4) is 4 micrograms per cubic meter.~~

~~(rr) The ambient benchmark for toluene (108-88-3) is 5,000 micrograms per cubic meter.~~

~~(ss) The ambient benchmark for 2,4- & 2,6-toluene diisocyanate, mixture (26471-62-5) is 0.02 micrograms per cubic meter.~~

~~(tt) The ambient benchmark for trichloroethylene (79-01-6) is 0.2 micrograms per cubic meter.~~

~~(uu) The ambient benchmark for vinyl chloride (75-01-4) is 0.1 micrograms per cubic meter.~~

~~(vv) The ambient benchmark for white phosphorus (7723-14-0) is 9 micrograms per cubic meter.~~

~~(ww) The ambient benchmark for xylenes, mixed (1330-20-7) is 200 micrograms per cubic meter.~~

~~(xx) The ambient benchmark for hydrogen sulfide (7783-06-4) is 2.0 micrograms per cubic meter.~~

~~(yy) The ambient benchmark for methanol (67-56-1) is 4,000 micrograms per cubic meter.~~

~~(zz) The ambient benchmark for phosgene (75-44-5) is 0.3 micrograms per cubic meter.~~

~~(aaa) The ambient benchmark for n-propyl bromide (106-94-5) is 0.5 micrograms per cubic meter.~~

~~(bbb) The ambient benchmark concentration for styrene (100-42-5) is 1,000 micrograms per cubic meter.~~

Statutory/Other Authority: [ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

Statutes/Other Implemented: [ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

[468A.135](#) ~~Statutory/Other Authority:~~ [ORS 468.035, 468A.010\(1\) & 468A.015](#)

~~Statutes/Other Implemented:~~ [ORS 468A.015 & 468A.025](#)

History:

[DEQ 197-2018, amend filed 11/16/2018, effective 11/16/2018](#)

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

[DEQ 151-2018, minor correction filed 04/12/2018, effective 04/12/2018](#)

DEQ 11-2010, f. & cert. ef. 10-19-10

DEQ 9-2010, f. & cert. ef. 8-31-10

DEQ 12-2006, f. & cert. ef. 8-15-06

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0110

Source Category Rules and Strategies

(1) DEQ may identify the need for source category rules and strategies through the following methods:

(a) The emissions inventory, modeling or monitoring, shows ~~air toxie~~[toxic air contaminants](#) emissions from point, area, or mobile sources associated with public health risk at public receptors;

(b) Development of a local ~~air toxie~~[toxic air contaminants](#) reduction plan provides source category controls that could be effectively applied to sources existing in other parts of the state; or

~~(c) When implementing the Safety Net Program, DEQ establishes air toxics emissions reductions for a source and determines that there are other similar sources in the state to which the reductions must apply.~~

(2) Subject to the requirements in this rule, the Lane Regional Air Pollution Authority is designated by the Commission as the agency responsible for implementing Source Category Rules and Strategies within its area of jurisdiction. The requirements and procedures contained in this rule must be used by the Regional Authority to implement Source Category Rules and Strategies unless the Regional Authority adopts superseding rules that are at least as restrictive as the rules adopted by the Commission.

(3) DEQ will consider the following criteria in determining whether to propose source category strategies under this division:

(a) Whether ~~air-toxic~~[toxic air contaminants](#) emissions from the source category are not, or will not, be addressed by other regulations or strategies, including emissions reduction requirements under the Geographic Program (OAR 340-246-0130 through 340-246-0170), ~~or the Safety Net Program (OAR 340-246-0190 through 340-246-0230);~~

(b) Whether ~~air-toxic~~[toxic air contaminant](#) emissions from the source category can be effectively reduced through regulations or voluntary strategies; and

(c) Whether the source category contributes to ambient benchmark [concentration](#) exceedances at public receptors statewide, in multiple geographic areas, or in multiple counties.

Statutory/Other Authority: [ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

Statutes/Other Implemented: [ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

~~[468A.135](#)~~**Statutory/Other Authority:** ~~[ORS 468.035, 468A.010\(1\) & 468A.015](#)~~

~~**Statutes/Other Implemented:** [ORS 468A.015 & 468A.025](#)~~

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

[340-246-0130](#)

Geographic Program (0130 through 0170)

(1) Purpose. The Geographic Program addresses emissions from multiple sources of ~~air-toxic~~[toxic air contaminants](#). It requires prioritizing and selecting geographic areas of concern, forming a local advisory committee, developing a specific local plan to control ~~air-toxic~~[toxic air contaminants](#), a public participation and comment process, EQC adoption or approval, implementing reduction strategies, and periodically evaluating the effectiveness by DEQ.

(2) Subject to the requirements in OAR 340-246-0130 through 0170, the Lane Regional Air Pollution Authority is designated by the Commission as the agency to implement the Geographic Program within its area of jurisdiction. The requirements and procedures contained in this rule must be used by the Regional Authority to implement the Geographic Program unless the Regional Authority adopts superseding rules which are at least as restrictive as state rules. The Regional Authority will address geographic areas as resources allow, considering the prioritization criteria in 340-246-0150.

Statutory/Other Authority: [ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

Statutes/Other Implemented: [ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

~~[468A.135](#)~~**Statutory/Other Authority:** ~~[ORS 468.035, 468A.010\(1\) & 468A.015](#)~~

~~**Statutes/Other Implemented:** [ORS 468A.015 & 468A.025](#)~~

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0150

Prioritizing and Selecting Geographic Areas

(1) DEQ will prioritize geographic areas by considering the total cancer and non-cancer risk from ~~air toxic~~ toxic air contaminants to the population in the area, as indicated by:

- (a) The number and degree of ~~ambient benchmark~~ ambient benchmark concentration exceedances;
- (b) The toxicity or potency of ~~air toxic~~ toxic air contaminants exceeding ~~ambient benchmark~~ ambient benchmark concentrations;
- (c) The level of exposure and number of people at risk in areas of concern;
- (d) The presence of sensitive populations;
- (e) The effectiveness of local control strategies; and
- (f) To the extent known, the risk posed by multiple pollutants and pollutant mixtures.

(2) Not later than 18 months after the first set of benchmarks is adopted, DEQ will select the first geographic area for ~~air toxic~~ toxic air contaminants reduction planning. DEQ will base selection on representative monitoring compared to the ambient benchmark concentrations at public receptors. To the extent possible, geographic areas will be identified using monitoring data generated following EPA monitoring guidelines. Subsequent geographic areas will be selected after completion of monitoring. A geographic area is formally selected upon publication of a notice in the Oregon Secretary of State's Bulletin. Once an area is selected for ~~air toxic~~ toxic air contaminants reduction planning, it will retain the status of a selected geographic area until DEQ determines through an evaluation of data that a reduction plan is no longer necessary for the area to meet all ~~air toxic~~ toxic air contaminants ambient benchmark concentrations.

(3) DEQ will first select for emissions reduction planning the high priority geographic areas, where concentrations of ~~air toxic~~ toxic air contaminants are more than ten times above the ~~ambient benchmark~~ ambient benchmark concentrations or above a hazard quotient of one with the potential for serious adverse health effects. DEQ will select all other geographic areas, where ~~air toxic~~ toxic air contaminants concentrations are above benchmarks, after ~~air toxic~~ toxic air contaminants emissions reduction plans have been approved for the high priority geographic areas.

(4) Geographic Area Boundaries. DEQ will establish general geographic area boundaries on a neighborhood or urban area scale. DEQ will consider feasibility of administration when setting the boundaries of a geographic area. In setting geographic area boundaries, DEQ will consider criteria including but not limited to the following:

- (a) Areas of impact (where people are exposed);
- (b) Population density;
- (c) Areas of influence (where sources are located);
- (d) Meteorology;
- (e) Geography and topography;

(f) Including all ~~air-toxic~~toxic air contaminants exceeding ~~ambient benchmark~~ambient benchmark concentrations; and

(g) Coordination with criteria pollutant boundaries for attainment of the National Ambient Air Quality Standards (NAAQS).

[NOTE: Publications referenced are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 &

468A.135~~Statutory/Other Authority: ORS 468.035, 468A.010(1) & 468A.015~~

~~Statutes/Other Implemented: ORS 468A.015 & 468A.025~~

History:

DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019

DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0170

Local ~~Air-Toxic~~Toxic Air Contaminants Emissions Reduction Planning

(1) DEQ will develop ~~air-toxic~~toxic air contaminants reduction plans for selected geographic areas with the advice of local advisory committees. The main role of a local advisory committee is to consider ~~air-toxic~~toxic air contaminants reduction options and to recommend a specific ~~air-toxic~~toxic air contaminants reduction plan for their geographic area. The Director will appoint a local ~~air-toxic~~toxic air contaminants advisory committee.

(a) Local advisory committees will generally be composed of a balanced representation of members from affected local government, local health departments, the public, small businesses (50 or fewer employees), larger businesses (if present in the area), and interest groups represented in the area.

(2) Local Advisory Committee Tasks.

(a) Within 18 months of their first meeting, the committee will evaluate options for reducing emissions of ~~air-toxic~~toxic air contaminants that exceed ~~ambient benchmark~~ambient benchmark concentrations, and recommend a local ~~air-toxic~~toxic air contaminants reduction plan to DEQ.

(b) DEQ may grant an extension of time to the local committee if requested by the committee, if DEQ believes the extension is technically justified and the committee is making reasonable progress in developing a local ~~air-toxic~~toxic air contaminants reduction plan.

(c) If the committee is unable to recommend a local ~~air-toxic~~toxic air contaminants reduction plan to DEQ within 18 months, or the date of an extension, DEQ will formulate a plan for the area within six months.

(d) DEQ and the local advisory committee will seek local government support for the proposed local ~~air-toxic~~toxic air contaminants emissions reduction plan.

(e) The local advisory committee will evaluate the plan's effectiveness as it is implemented and recommend changes to DEQ.

(f) At DEQ's request, the local advisory committee will reconvene to implement contingency planning and recommend contingency measures as specified by OAR 340-246-0170(4)(l).

(g) If the committee is unable to recommend contingency measures within 18 months, DEQ will formulate contingency measures for the area within 6 months.

(3) Public Notice, Comment, Approval and Adoption by the Environmental Quality Commission. DEQ will provide an opportunity for public notice and comment on proposed local emissions reduction plans. After the public notice and comment process is complete, DEQ will present local ~~air-toxic~~toxic air contaminants reduction plans to the Commission for approval, including adoption of appropriate administrative rules. The Environmental Quality Commission may delegate the approval of plans that do not contain administrative rules to the Director of DEQ.

(4) Elements of an ~~Air-Toxic~~Toxic Air Contaminants Reduction Plan:

(a) Local ~~air-toxic~~toxic air contaminants reduction plans must focus on the ~~air-toxic~~toxic air contaminant or ~~air-toxic~~toxic air contaminants measured or modeled above the ~~ambient benchmark~~ambient benchmark concentrations.

(b) Local ~~air-toxic~~toxic air contaminants reduction plans must be based on sound data analysis. This includes developing enhanced emissions inventory information for the local area using source-specific information to the extent possible. This may also include enhanced modeling and monitoring to better characterize ambient concentrations. Plans also must rely on sound analysis of the effectiveness and cost of ~~air-toxic~~toxic air contaminants emissions reduction options. Where needed to fill specific information gaps, DEQ may require ~~air-toxic~~toxic air contaminants emissions reporting for specific sources or source categories within the geographic area on a case-by-case basis.

(c) The emissions reduction goals for individual ~~air-toxic~~toxic air contaminants are ~~ambient benchmark~~ambient benchmark concentrations in local ~~air-toxic~~toxic air contaminants reduction plans.

(d) Local ~~air-toxic~~toxic air contaminants reduction plans must be designed to reduce ~~air-toxic~~toxic air contaminants emissions in a timely manner.

(A) When feasible, local ~~air-toxic~~toxic air contaminants reduction plans will be designed to reach levels that are equal to or below ambient benchmark concentrations. Plans will be designed to achieve emissions reductions within ten years, beginning at the date the Commission approves the plan. Local plans must provide for the timeliest reductions possible for each ~~air-toxic~~toxic air contaminant exceeding ~~ambient benchmark~~ambient benchmark concentrations.

(B) Local ~~air-toxic~~toxic air contaminants reduction plans must include specific three-year milestones that DEQ and the local advisory committee will evaluate every three years, in coordination with DEQ's ~~air-toxic~~toxic air contaminants emissions inventory update.

(e) Every three years, DEQ will assess the effectiveness of local plans and make recommendations for plan revision based on progress meeting milestones or new information. If DEQ finds lack of progress at year three, it will work with the local advisory committee to provide corrective measures. If DEQ finds lack of progress at year six and projects that ten-year goals in OAR 340-246-0170(4)(d)(A) will not be met, it will implement the contingency plan in 340-246-0170(4)(l). If at year nine DEQ projects that ten year goals in 340-246-0170(4)(d)(A) will not be met, it will work with the local advisory committee to propose and seek adoption of measures necessary to reach these goals.

(f) Local ~~air-toxic~~toxic air contaminants reduction plans must evaluate ~~air-toxic~~toxic air contaminants emissions from all types of sources, including point, area, and mobile sources. Plans must require emissions reductions from the most significant sources of ~~air-toxic~~toxic air contaminants. Mandatory

emissions reduction strategies will be commensurate with source contributions, considering relative emissions, toxicity, technical feasibility, cost-effectiveness and equity.

(g) Local ~~air-toxic~~[toxic air contaminants](#) reduction plans must include strategies to reduce high concentrations of ~~air-toxic~~[toxic air contaminants](#) that are limited to smaller portions of a geographic area as well as pollutants causing public health risk throughout the area.

(h) Local ~~air-toxic~~[toxic air contaminants](#) reduction plans may include a variety of mandatory and voluntary approaches to reducing emissions of ~~air-toxic~~[toxic air contaminants](#). Depending on the type of source, local ~~air-toxic~~[toxic air contaminants](#) reduction plans may include public education, pollution prevention alternatives, economic incentives and disincentives, technical assistance and regulatory requirements.

(i) DEQ will ensure the opportunity for public involvement during the plan development process. This includes involving those affected by the ~~air-toxic~~[toxic air contaminants](#) emissions and those affected by the proposals to reduce ~~air-toxic~~[toxic air contaminants](#) emissions. Proposed local ~~air-toxic~~[toxic air contaminants](#) reduction plans must be available for public hearing and comment.

(j) Local ~~air-toxic~~[toxic air contaminants](#) reduction plans must be coordinated with other local, state, and federal requirements to the extent possible. This includes considerations of any ozone or particulate control requirements for the area, any federal standard applicable to sources in the area, any strategies that are federally pre-empted, and any impacts on water or land, such as water pollution or hazardous waste.

(k) Local ~~air-toxic~~[toxic air contaminants](#) reduction plans will include specific recommendations for developing ongoing emissions inventory or ambient air monitoring to track local trends in ~~air-toxic~~[toxic air contaminants](#).

(l) Local ~~air-toxic~~[toxic air contaminants](#) reduction plans must include a contingency plan that will be implemented if evaluation at year six shows that an area is not meeting milestones and will not achieve the ten year goals established under OAR 340-246-0170(4)(d)(A). The contingency plan, like the original plan, must require emissions reductions from the most significant sources of ~~air-toxic~~[toxic air contaminants](#). Mandatory emissions reduction strategies will be commensurate with source contributions, considering relative emissions, toxicity, technical feasibility cost-effectiveness and equity. Contingency plans must include but are not limited to:

(i) Re-evaluation of planning assumptions, such as emissions factors, motor vehicle data and background pollutants;

(ii) Evaluation of existing conditions and effectiveness of emissions reduction strategies, including reasons for success or failure; and

(iii) New or progressively more mandatory strategies that will be considered.

Statutory/Other Authority: [ORS 468.020, 468.035, 468A.010\(1\), 468A.015, 468A.025 & 468A.135](#)

Statutes/Other Implemented: [ORS 468.035, 468A.010\(1\), 468A.015, 468A.025 &](#)

~~[468A.135](#)~~**Statutory/Other Authority:** ~~[ORS 468.035, 468A.010\(1\) & 468A.015](#)~~

~~**Statutes/Other Implemented:** [ORS 468A.015 & 468A.025](#)~~

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

[DEQ 152-2018, minor correction filed 04/12/2018, effective 04/12/2018](#)

[DEQ 15-2003, f. & cert. ef. 11-3-03](#)

340-246-0190 through 340-246-0230

Air Toxics Safety Net Program (0190 through 0230)

Reserved for Safety Net Program.

~~(1) The purpose of the Air Toxics Safety Net Program is to address human exposures at public receptors to air toxics emissions from stationary sources that are not addressed by other regulatory programs or the Geographic Program. It is the Commission's expectation that the Safety Net Program in OAR 340-246-0190 through 340-246-0230 will apply only rarely.~~

~~(2) Subject to the requirements contained in OAR 340-246-0190 through 340-246-0230, the Lane Regional Air Pollution Authority is designated by the Commission as the agency responsible for implementing the Air Toxics Safety Net Program within its area of jurisdiction. The requirements and procedures contained in this rule must be used by the Regional Authority to implement the Air Toxics Safety Net Program unless the Regional Authority adopts superseding rules, which are at least as restrictive as the rules adopted by the Commission.~~

~~(3) Selection of Sources. DEQ will select a source for the Air Toxics Safety Net Program if all of the following criteria are met:~~

~~(a) DEQ has ambient monitoring information, gathered using appropriate EPA or other published international, national, or state standard methods that concentrations of air toxics have caused an exceedance of at least one ambient benchmark at a site representing expected human exposure to air toxics from the source at a public receptor in a location outside of the source's ownership or control.~~

~~(b) DEQ has information that the source's air toxics emissions alone have caused an exceedance of at least one ambient benchmark at a site representing expected human exposure to air toxics from the source at a public receptor, in a location outside of the source's ownership or control. This could be based on emissions inventory, modeling or other information.~~

~~(c) The source is not subject to or scheduled for a federal residual risk assessment under the federal Clean Air Act section 112(f)(2) through (6).~~

~~(d) The source is not subject to the permitting requirements under OAR chapter 340, division 245.~~

~~(e) The source is not subject to an emissions limit or control requirement imposed as the result of modeling or a risk assessment performed or required by DEQ prior to November 1, 2003 for the air toxics that exceed the ambient benchmarks.~~

~~(f) The source is located outside of a selected geographic area, as designated in OAR 340-246-0130 through 0170.~~

~~(4) Air Toxics Science Advisory Committee Review. Before requiring a source to conduct a source-specific risk assessment, DEQ will present its analysis to the ATSAC. Within 120 days, the ATSAC will review the analysis and make a finding. If the ATSAC concurs with DEQ or takes no action, DEQ may proceed under this rule. If the ATSAC objects, DEQ will not proceed until it receives concurrence from the Commission.~~

~~(5) Source Specific Exposure Modeling and Risk Assessment. Upon written notification by DEQ, a source must conduct a risk assessment including exposure modeling for the air toxics measured at levels above ambient benchmarks. The source must use a risk assessment methodology provided by DEQ. This~~

risk assessment will provide the basis for establishing air toxics emissions reductions or demonstrating that at public receptors in areas outside of a source's ownership or control, people are not being exposed to air toxics at levels that exceed the ambient benchmarks.

(6) Risk Assessment Methodology. DEQ will provide guidance on the methods to be used. The risk assessment methodology will be developed in consultation with the ATSAC and will result in a protocol that:

(a) Uses reasonable estimates of plausible upper bound exposures that neither grossly underestimate nor grossly overestimate risks;

(b) Considers the range of probabilities of risks actually occurring, the range of size of the populations likely to be exposed to the risk, and current and reasonably likely future land uses;

(c) Defines the use of high end and central tendency exposure cases and assumptions;

(d) Develops values associated with chronic exposure for carcinogens; and

(e) Addresses both carcinogenic and non-carcinogenic air toxics and allows for detailed exposure assessments to the extent possible.

(7) Review and Acceptance by DEQ. DEQ will evaluate the risk assessment for adequacy and completeness before accepting the results. If the results demonstrate that the source is not causing human exposures to air toxics at levels that exceed the ambient benchmarks at public receptors, in areas outside the source's ownership or control, and DEQ has received concurrence from the ATSAC, DEQ will notify the source that air toxics emissions reductions will not be required under this rule.

Statutory/Other Authority: ORS 468.035, 468A.010(1) & 468A.015

Statutes/Other Implemented: ORS 468A.015 & 468A.025

History:

DEQ 197-2018, amend filed 11/16/2018, effective 11/16/2018

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DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0210

Safety Net Source Air Toxics Emissions Reductions

(1) Air Toxics Emissions Reduction Analysis:

(a) If source-specific exposure modeling and risk assessment show that the source is causing exceedances of ambient benchmarks at public receptors in areas outside the source's ownership or control, the source must perform an analysis showing how air toxics could be reduced to meet ambient benchmarks. DEQ and the safety net source will develop proposed air toxics emissions reduction measures based on modeling and, when available, monitoring information.

(b) As part of the air toxics emissions reduction analysis, the source will analyze pollution prevention options, and is encouraged to use the hierarchy stated in OAR 340-246-0050.

(2) Air Toxics Emissions Reduction Requirements:

(a) A safety net source emitting air toxics causing exposure resulting in excess lifetime cancer risk greater than one in a million (1×10^{-6}) or a hazard quotient of one for non-carcinogens must, as soon as practicable but no later than three years after the effective date of the permit imposing such conditions, meet toxics best available retrofit technology (TBART) for each air toxic that exceeds an ambient benchmark.

(b) A safety net source may use a means of air toxics reduction, other than TBART, if it can demonstrate to DEQ that it will achieve a risk level at or below one in a million, or a hazard quotient at or below one, within three years of using the other means of air toxics emissions reductions.

(c) A safety net source emitting a carcinogenic air toxic causing excess lifetime cancer risk at or above one hundred in a million (1×10^{-4}) must reduce its air toxic emissions to achieve a risk level below one hundred in a million as soon practicable but no later than one year after the effective date of the permit imposing such conditions.

(d) A safety net source emitting a non-carcinogenic air toxic at a level above a hazard quotient of one that DEQ finds to have a potential for causing very serious or irreversible adverse health effects must reduce its air toxic emissions below this level as soon practicable, but no later than one year after the effective date of the permit imposing such conditions.

(3) If a safety net source cannot reach a risk level at or below excess lifetime cancer risk of one in a million, or a hazard quotient at or below one in three years, even though it meets TBART, the TBART determination for the source will be subject to periodic review under this section until the source achieves a risk level at or below one in a million or a hazard quotient at or below one. Upon each renewal of the source's permit, TBART for the source must be reviewed, taking into consideration retrofit costs and the remaining useful life of controls installed or other measures taken to meet a prior TBART determination. Upon renewal of the source's permit, DEQ must include conditions requiring the source to meet TBART as determined for that permit renewal.

Statutory/Other Authority: ORS 468.035, 468A.010(1) & 468A.015

Statutes/Other Implemented: ORS 468A.015 & 468A.025

History:

DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0230

Safety Net Source Air Toxics Emissions Reduction Measures in Permit

(1) **Public Participation.** DEQ will hold public informational meetings to discuss proposed air toxics emissions reduction measures. After the informational meetings, DEQ will provide at least 40 days' notice before holding a public hearing to collect official comments on the proposed air toxics emissions reduction measures.

(2) **Permit or Permit Modification.** After considering public comments, DEQ will propose air toxics emissions reduction measures to be placed in the source's permit, according to the reopening process for Oregon Title V permits in OAR 340-218-0200 or Oregon Title V Permit issuance in 340-218-0120 or Department Initiated Permit Modifications in 340-216-0084 or Air Contaminant Discharge Permit issuance in 340-216-0066.

Statutory/Other Authority: ORS 468.020, 468A.025, 468A.040 & 468A.310

Statutes/Other Implemented: ORS 468A.025, 468A.040 & 468A.310

History:

~~DEQ 153-2018, minor correction filed 04/12/2018, effective 04/12/2018~~

~~DEQ 7-2015, f. & cert. ef. 4-16-15~~

~~DEQ 5-2011, f. 4-29-11, cert. ef. 5-1-11~~

~~DEQ 15-2003, f. & cert. ef. 11-3-03~~

Division 246 Draft Rules – Clean Version

Division 246 OREGON STATE TOXIC AIR CONTAMINANT PROGRAM

340-246-0010

Policy and Purpose

The purpose of Oregon's state Toxic Air Contaminant Program is to address threats to public health and the environment from toxic air pollutants that remain after implementing the state delegated technology-based strategies of the federal Hazardous Air Pollutants Program in OAR 340-244-0010 through 340-244-0252, Cleaner Air Oregon in OAR 340-245-0005 through 340-245-8050, and OAR 340-244-9000 through 340-244-9090. It also addresses cases of elevated health risks from toxic air contaminant emissions at stationary sources and source categories of toxic air contaminant emissions. In the future, it is also intended to address human exposures to toxic air contaminant emissions from stationary sources that are not addressed by other regulatory programs or the Geographic Program through a Safety Net Program. It is expected that the Safety Net Program will apply only rarely.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 197-2018, amend filed 11/16/2018, effective 11/16/2018](#)

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0030

Definitions

The definitions in OAR 340-200-0020, 340-218-0030, 340-244-0030, OAR 340-247-0020 and this rule apply to this division. If the same term is defined in this division and elsewhere, the definition in this division applies.

(1) "Ambient benchmark concentration" means the concentration of a toxic air contaminant in outdoor air that would result in an excess lifetime cancer risk level of one in a million (1×10^{-6}) or a non-cancer hazard quotient of one and is numerically equivalent to the "Toxicity Reference Value" as defined under OAR 340 247-0020.

(2) "Geographic area" means an area identified by DEQ where toxic air contaminant concentrations are estimated or measured at levels that exceed ambient benchmark concentrations.

(3) "Hazard quotient" means the ratio of the potential exposure to a single toxic air contaminant to the reference concentration for that pollutant. If the hazard quotient is calculated to be less than or equal to 1, then no adverse health effects are expected as a result of exposure. If the hazard quotient is greater than 1, then adverse health effects are possible.

(4) "High priority geographic area" means an area identified by DEQ where toxic air contaminant concentrations are estimated or measured at levels that exceed ambient benchmark concentrations and

pose excess cancer risk above ten in a million, or non-cancer risk above a hazard quotient of one with the potential for serious adverse health effects.

(5) "Public receptor" means any outdoor area where members of the public have unrestricted access, including but not limited to residences, institutions (e.g. schools, hospitals), industrial, commercial, or office buildings, parks, recreational areas, public lands, streets or sidewalks.

(6) "Reference concentration" means an estimate of a continuous exposure or a daily exposure to the human population (including sensitive populations) that is likely to be without an appreciable risk of adverse non-cancer effects during a lifetime. The reference concentration can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

(7) "Sensitive human populations" means humans with increased susceptibility to the adverse effects of toxic air contaminants, including humans in prenatal or postnatal periods of development.

(8) "Source" means:

(a) An activity conducted by a person at a point, area, on-road mobile, or off-road mobile operation that emits toxic air contaminants; or

(b) Any building, structure, facility, installation or combination thereof that emits or is capable of emitting air contaminants to the atmosphere, is located on one or more contiguous or adjacent properties and is owned or operated by the same person or by persons under common control. The term includes all pollutant emitting activities that belong to a single major industrial group (i.e., that have the same two-digit code) as described in the **Standard Industrial Classification Manual**, (U.S. Office of Management and Budget, 1987) or that support the major industrial group.

(9) "Source Category" means:

(a) A source or group of sources that emit toxic air contaminants due to the use of the same or similar processes, including commercial, residential, public or private processes, which as a group can reduce toxic air contaminant emissions by employing similar control or prevention strategies or;

(b) All the pollutant emitting activities that belong to the same industrial grouping (i.e., that have the same two-digit code) as described in the **Standard Industrial Classification Manual**, (U.S. Office of Management and Budget, 1987).

[Publications: Publications referenced are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

[340-246-0050](#)

Pollution Prevention

The Environmental Quality Commission encourages the use of pollution prevention for all sources of toxic air contaminants statewide. The Commission encourages use of the following hierarchy to reduce toxic air contaminants:

- (1) Modify the process, raw materials, or product to reduce the quantity and toxicity of air contaminants generated;
- (2) Capture and reuse air contaminants;
- (3) Treat to reduce the quantity and toxicity of air contaminants released; or
- (4) Otherwise control toxic air contaminant emissions.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0090

Ambient Benchmark Concentrations for Toxic Air Contaminants

Purpose. Ambient benchmark concentrations are concentrations of toxic air contaminants that serve as goals in the Oregon Toxic Air Contaminants Program. They are based on human health risk and hazard levels considering sensitive populations. Ambient benchmark concentrations are not regulatory standards, but reference values by which toxic air contaminant problems can be identified, addressed and evaluated and are numerically equivalent to the “Toxicity Reference Value” as defined under OAR 340 247-0020. DEQ will use ambient benchmark concentrations as indicated in these rules, to implement the Geographic and Source Category Programs. Ambient benchmark concentrations set by the procedures described in this rule apply throughout Oregon, including that area within the jurisdiction of the Lane Regional Air Protection Agency.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 197-2018, amend filed 11/16/2018, effective 11/16/2018](#)

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

[DEQ 151-2018, minor correction filed 04/12/2018, effective 04/12/2018](#)

DEQ 11-2010, f. & cert. ef. 10-19-10

DEQ 9-2010, f. & cert. ef. 8-31-10

DEQ 12-2006, f. & cert. ef. 8-15-06

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0110

Source Category Rules and Strategies

- (1) DEQ may identify the need for source category rules and strategies through the following methods:
 - (a) The emissions inventory, modeling or monitoring, shows toxic air contaminant emissions from point, area, or mobile sources associated with public health risk at public receptors;
 - (b) Development of a local toxic air contaminant reduction plan provides source category controls that could be effectively applied to sources existing in other parts of the state; or

(2) Subject to the requirements in this rule, the Lane Regional Air Pollution Authority is designated by the Commission as the agency responsible for implementing Source Category Rules and Strategies within its area of jurisdiction. The requirements and procedures contained in this rule must be used by the Regional Authority to implement Source Category Rules and Strategies unless the Regional Authority adopts superseding rules that are at least as restrictive as the rules adopted by the Commission.

(3) DEQ will consider the following criteria in determining whether to propose source category strategies under this division:

(a) Whether toxic air contaminant emissions from the source category are not, or will not, be addressed by other regulations or strategies, including emissions reduction requirements under the Geographic Program (OAR 340-246-0130 through 340-246-0170);

(b) Whether toxic air contaminant emissions from the source category can be effectively reduced through regulations or voluntary strategies; and

(c) Whether the source category contributes to ambient benchmark concentration exceedances at public receptors statewide, in multiple geographic areas, or in multiple counties.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0130

Geographic Program (0130 through 0170)

(1) Purpose. The Geographic Program addresses emissions from multiple sources of toxic air contaminants. It requires prioritizing and selecting geographic areas of concern, forming a local advisory committee, developing a specific local plan to control toxic air contaminants, a public participation and comment process, EQC adoption or approval, implementing reduction strategies, and periodically evaluating the effectiveness by DEQ.

(2) Subject to the requirements in OAR 340-246-0130 through 0170, the Lane Regional Air Pollution Authority is designated by the Commission as the agency to implement the Geographic Program within its area of jurisdiction. The requirements and procedures contained in this rule must be used by the Regional Authority to implement the Geographic Program unless the Regional Authority adopts superseding rules which are at least as restrictive as state rules. The Regional Authority will address geographic areas as resources allow, considering the prioritization criteria in 340-246-0150.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0150

Prioritizing and Selecting Geographic Areas

(1) DEQ will prioritize geographic areas by considering the total cancer and non-cancer risk from toxic air contaminants to the population in the area, as indicated by:

- (a) The number and degree of ambient benchmark concentration exceedances;
- (b) The toxicity or potency of toxic air contaminants exceeding ambient benchmark concentrations;
- (c) The level of exposure and number of people at risk in areas of concern;
- (d) The presence of sensitive populations;
- (e) The effectiveness of local control strategies; and
- (f) To the extent known, the risk posed by multiple pollutants and pollutant mixtures.

(2) Not later than 18 months after the first set of benchmarks is adopted, DEQ will select the first geographic area for toxic air contaminants reduction planning. DEQ will base selection on representative monitoring compared to the ambient benchmark concentrations at public receptors. To the extent possible, geographic areas will be identified using monitoring data generated following EPA monitoring guidelines. Subsequent geographic areas will be selected after completion of monitoring. A geographic area is formally selected upon publication of a notice in the Oregon Secretary of State's Bulletin. Once an area is selected for toxic air contaminants reduction planning, it will retain the status of a selected geographic area until DEQ determines through an evaluation of data that a reduction plan is no longer necessary for the area to meet all toxic air contaminant ambient benchmark concentrations.

(3) DEQ will first select for emissions reduction planning the high priority geographic areas, where concentrations of toxic air contaminants are more than ten times above the ambient benchmark concentrations or above a hazard quotient of one with the potential for serious adverse health effects. DEQ will select all other geographic areas, where toxic air contaminant concentrations are above benchmarks, after toxic air contaminant emissions reduction plans have been approved for the high priority geographic areas.

(4) Geographic Area Boundaries. DEQ will establish general geographic area boundaries on a neighborhood or urban area scale. DEQ will consider feasibility of administration when setting the boundaries of a geographic area. In setting geographic area boundaries, DEQ will consider criteria including but not limited to the following:

- (a) Areas of impact (where people are exposed);
- (b) Population density;
- (c) Areas of influence (where sources are located);
- (d) Meteorology;
- (e) Geography and topography;
- (f) Including all toxic air contaminants exceeding ambient benchmark concentrations; and
- (g) Coordination with criteria pollutant boundaries for attainment of the National Ambient Air Quality Standards (NAAQS).

[NOTE: Publications referenced are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019](#)

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

[340-246-0170](#)

Local Toxic Air Contaminant Emissions Reduction Planning

(1) DEQ will develop toxic air contaminant reduction plans for selected geographic areas with the advice of local advisory committees. The main role of a local advisory committee is to consider toxic air contaminant reduction options and to recommend a specific toxic air contaminant reduction plan for their geographic area. The Director will appoint a local toxic air contaminants advisory committee.

(a) Local advisory committees will generally be composed of a balanced representation of members from affected local government, local health departments, the public, small businesses (50 or fewer employees), larger businesses (if present in the area), and interest groups represented in the area.

(2) Local Advisory Committee Tasks.

(a) Within 18 months of their first meeting, the committee will evaluate options for reducing emissions of toxic air contaminants that exceed ambient benchmark concentrations, and recommend a local toxic air contaminant reduction plan to DEQ.

(b) DEQ may grant an extension of time to the local committee if requested by the committee, if DEQ believes the extension is technically justified and the committee is making reasonable progress in developing a local toxic air contaminant reduction plan.

(c) If the committee is unable to recommend a local toxic air contaminant reduction plan to DEQ within 18 months, or the date of an extension, DEQ will formulate a plan for the area within six months.

(d) DEQ and the local advisory committee will seek local government support for the proposed local toxic air contaminant emissions reduction plan.

(e) The local advisory committee will evaluate the plan's effectiveness as it is implemented and recommend changes to DEQ.

(f) At DEQ's request, the local advisory committee will reconvene to implement contingency planning and recommend contingency measures as specified by OAR 340-246-0170(4)(1).

(g) If the committee is unable to recommend contingency measures within 18 months, DEQ will formulate contingency measures for the area within 6 months.

(3) Public Notice, Comment, Approval and Adoption by the Environmental Quality Commission. DEQ will provide an opportunity for public notice and comment on proposed local emissions reduction plans. After the public notice and comment process is complete, DEQ will present local toxic air contaminant reduction plans to the Commission for approval, including adoption of appropriate administrative rules. The Environmental Quality Commission may delegate the approval of plans that do not contain administrative rules to the Director of DEQ.

(4) Elements of a Toxic Air Contaminant Reduction Plan:

(a) Local toxic air contaminant reduction plans must focus on the toxic air contaminant or toxic air contaminants measured or modeled above the ambient benchmark concentrations.

(b) Local toxic air contaminant reduction plans must be based on sound data analysis. This includes developing enhanced emissions inventory information for the local area using source-specific information to the extent possible. This may also include enhanced modeling and monitoring to better characterize ambient concentrations. Plans also must rely on sound analysis of the effectiveness and cost of toxic air contaminant emissions reduction options. Where needed to fill specific information gaps, DEQ may require toxic air contaminant emissions reporting for specific sources or source categories within the geographic area on a case-by-case basis.

(c) The emissions reduction goals for individual toxic air contaminants are ambient benchmark concentrations in local toxic air contaminant reduction plans.

(d) Local toxic air contaminant reduction plans must be designed to reduce toxic air contaminant emissions in a timely manner.

(A) When feasible, local toxic air contaminant reduction plans will be designed to reach levels that are equal to or below ambient benchmark concentrations. Plans will be designed to achieve emissions reductions within ten years, beginning at the date the Commission approves the plan. Local plans must provide for the timeliest reductions possible for each toxic air contaminant exceeding ambient benchmark concentrations.

(B) Local toxic air contaminant reduction plans must include specific three-year milestones that DEQ and the local advisory committee will evaluate every three years, in coordination with DEQ's toxic air contaminant emissions inventory update.

(e) Every three years, DEQ will assess the effectiveness of local plans and make recommendations for plan revision based on progress meeting milestones or new information. If DEQ finds lack of progress at year three, it will work with the local advisory committee to provide corrective measures. If DEQ finds lack of progress at year six and projects that ten-year goals in OAR 340-246-0170(4)(d)(A) will not be met, it will implement the contingency plan in 340-246-0170(4)(l). If at year nine DEQ projects that ten year goals in 340-246-0170(4)(d)(A) will not be met, it will work with the local advisory committee to propose and seek adoption of measures necessary to reach these goals.

(f) Local toxic air contaminant reduction plans must evaluate toxic air contaminant emissions from all types of sources, including point, area, and mobile sources. Plans must require emissions reductions from the most significant sources of toxic air contaminants. Mandatory emissions reduction strategies will be commensurate with source contributions, considering relative emissions, toxicity, technical feasibility, cost-effectiveness and equity.

(g) Local toxic air contaminant reduction plans must include strategies to reduce high concentrations of toxic air contaminants that are limited to smaller portions of a geographic area as well as pollutants causing public health risk throughout the area.

(h) Local toxic air contaminant reduction plans may include a variety of mandatory and voluntary approaches to reducing emissions of toxic air contaminants. Depending on the type of source, local toxic air contaminant reduction plans may include public education, pollution prevention alternatives, economic incentives and disincentives, technical assistance and regulatory requirements.

(i) DEQ will ensure the opportunity for public involvement during the plan development process. This includes involving those affected by the toxic air contaminant emissions and those affected by the proposals to reduce toxic air contaminant emissions. Proposed local toxic air contaminant reduction plans must be available for public hearing and comment.

(j) Local toxic air contaminant reduction plans must be coordinated with other local, state, and federal requirements to the extent possible. This includes considerations of any ozone or particulate control requirements for the area, any federal standard applicable to sources in the area, any strategies that are federally pre-empted, and any impacts on water or land, such as water pollution or hazardous waste.

(k) Local toxic air contaminant reduction plans will include specific recommendations for developing ongoing emissions inventory or ambient air monitoring to track local trends in toxic air contaminants.

(l) Local toxic air contaminant reduction plans must include a contingency plan that will be implemented if evaluation at year six shows that an area is not meeting milestones and will not achieve the ten year goals established under OAR 340-246-0170(4)(d)(A). The contingency plan, like the original plan, must require emissions reductions from the most significant sources of toxic air contaminants. Mandatory emissions reduction strategies will be commensurate with source contributions, considering relative emissions, toxicity, technical feasibility cost-effectiveness and equity. Contingency plans must include but are not limited to:

(i) Re-evaluation of planning assumptions, such as emissions factors, motor vehicle data and background pollutants;

(ii) Evaluation of existing conditions and effectiveness of emissions reduction strategies, including reasons for success or failure; and

(iii) New or progressively more mandatory strategies that will be considered.

Statutory/Other Authority: ORS 468.020, 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

Statutes/Other Implemented: ORS 468.035, 468A.010(1), 468A.015, 468A.025 & 468A.135

History:

[DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018](#)

[DEQ 152-2018, minor correction filed 04/12/2018, effective 04/12/2018](#)

DEQ 15-2003, f. & cert. ef. 11-3-03

340-246-0190 through 340-246-0230

Air Toxics Safety Net Program (0190 through 0230)

Reserved for Safety Net Program.

Proposed Rules: Division 247

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

June 2021



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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



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Division 247 Draft Rules – Edits Highlighted

Last revised: Apr. 7, 2021

Key to Identifying Changed Text:

New Text = Black Text

Blue Text = Moved from Division 245

Green Text = Moved from Division 246

Division 247

HEALTH RISK-BASED AIR QUALITY STANDARDS FOR TOXIC AIR CONTAMINANTS

340-247-0010

Purpose and Overview

Purpose and Overview. Division 247 lists air contaminants that are a priority for investigation in Oregon (Table 1), lists health risk-based standards for toxic air contaminants in Oregon (Table 2) and establishes the process for setting and updating these values. These scientific standards, also called toxicity reference values (TRVs), are used to help analyze public health risk from toxic air contaminants. These standards may be used by programs including, but not limited to, Cleaner Air Oregon (OAR-340-245) and the Oregon State Toxic Air Contaminants Program (OAR-340-246). Subject to the requirements in this division and OAR 340-200-0010(3), Lane Regional Air Protection Agency is designated by the EQC to implement the rules in this division within its area of jurisdiction.

Statutory/Other Authority: ORS 468.020, 468A.025 & 468A.135.

Statutes/Other Implemented: ORS 468A.025.

340-247-0020

Definitions

The definitions in OAR 340-200-0020 and 340-245-0020 and this rule apply to this division. If the same term is defined in this division and elsewhere, the definition in this division applies.

(1) “Toxic air contaminant” means an air pollutant that has been determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health and is listed in OAR 340-245-80120 Table 2.

(2) “Toxicity Reference Value” or “TRV” means the following:

(a) For carcinogens, the air concentration corresponding to a one in one million excess cancer risk, calculated by dividing one in one million (0.000001) by the inhalation unit risk specific to that toxic air contaminant as established by the authoritative body that establishes the value, and as approved by the EQC; and

(b) For noncarcinogens, the air concentration above which relevant effects might occur to humans following environmental exposure, and below which it is reasonably expected that effects will not occur.

(c) For the purposes of these rules, DEQ will use the term toxicity reference value when referring to any similarly derived health-based toxicity value developed by other governmental agencies. Examples of names of values that DEQ will refer to as toxicity reference values include, but are not limited to reference concentrations (RfCs), reference exposure levels (RELs), or minimal risk levels (MRLs).

Statutory/Other Authority: ORS 468.020 468A.025 & 468A.135.

Statutes/Other Implemented: ORS 468A.025.

340-247-0030

Toxicity Reference Values

(1) This rule lists sources of toxicity information that the Oregon Health Authority (OHA) and the Department of Environmental Quality (DEQ) consider authoritative in terms of their scientific rigor and methods for producing toxicity information. OHA and DEQ will recommend adoption and use of Toxicity Reference Values from the toxicity information published by the following authoritative sources:

(a) DEQ in consultation with the Air Toxics Science Advisory Committee (ATSAC) ~~Ambient Benchmark Concentrations specified in OAR chapter 340, division 246;~~

~~(b) DEQ and OHA Short term Guideline Concentrations;~~

~~(be) United States Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS) or Office of Superfund Remediation and Technology Innovation (OSRTI);~~

~~(cd) United States Agency for Toxic Substances and Disease Registry (ATSDR); and~~

~~(de) California's Environmental Protection Agency (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA).~~

(2) DEQ will calculate Toxicity Reference Values using one in one million as the target excess cancer risk level or a hazard quotient of one for noncancer Toxicity Reference Values.

Statutory/Other Authority: ORS 468.020, ~~468.065~~, 468A.025, & 468A.135. ~~, 468A.040, 468A.050, 468A.070, 468A.155 & Or Laws 2018, ch. 102, § 3.~~

Statutes/Other Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155 & Or Laws 2018, ch. 102, §§ 2 and 3.

History: DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-247-0040

Process for Updating the Lists of Priority ~~Regulated~~ Toxic Air Contaminants and ~~Their~~ Toxicity Reference Values ~~Risk-Based Concentrations~~

(1) Purpose.

(a) As risk assessment and toxicological sciences advance, it is important ~~that to have~~ TRVs and priority toxic air contaminants ~~rules for Cleaner Air Oregon that allow for air quality regulation to continue to~~ reflect the latest practices and science. ~~The list of toxic air contaminants that are regulated and their RBCs represent one area where regulations will need regular updating to accommodate advancing science and practices;~~

(b) These rules include two lists of toxic air contaminants:

(A) OAR 340-2475-80120 Table 12 contains toxic air contaminants that are considered a priority for investigation in Oregon ~~for emissions reporting~~. The ~~primary~~ purpose of OAR 340-2475-80120 Table 12 is to ~~inform prioritization of RBC development and~~ maintain a current and broad understanding of statewide toxic air contaminant emissions and ambient concentrations ~~as industries and industrial practices change over time. The toxic air contaminants listed OAR 340-245-8020 Table 2 must be addressed in the uncertainty evaluation in a Level 3 or Level 4 Risk Assessment for the toxic air contaminants in OAR 340-245-8020 Table 2 that do not have RBCs; and~~

(B) OAR 340-2475-80230 Table 23 contains toxic air contaminants for which TRVs are readily available ~~and OAR 340-245-8040 Table 4 contains RBCs for regulation as part of air permitting~~. The purpose of OAR 340-2475-80230 Table 23 ~~and OAR 340-245-8040 Table 4~~ is to evaluate the ~~ensure that~~ public health impacts ~~to public health~~ from toxic air contaminants ~~industrial air emissions are minimized~~.

(2) OAR 340-2475-80120 Table 12, Priority Toxic Air Contaminants ~~Reporting~~ List.

(a) The Priority Toxic Air Contaminants ~~Reporting~~ List is comprised of contaminants listed on California Air Resources Board's Toxic Air Contaminant Identification List Appendix A-1; Washington's Table of Acceptable Source Impact Levels ASIL, Small Quantity Emission Rate, ~~SQER~~ and de minimis emission values; Oregon's Toxics Focus list; and EPA's Hazardous Air Pollutants list;

(b) Every three years starting from November 16, 2018, DEQ, in consultation with OHA, will begin review of the four lists in subsection (a) for changes and may propose rule amendments to update the Priority Toxic Air Contaminants ~~Reporting~~ List in OAR 340-2475-80120 Table 12 to capture changes in any of those four lists since the last review ~~over the intervening three years;~~

(c) During the reviews of the Priority Toxic Air Contaminants ~~Reporting~~ List, DEQ may also propose rule amendments to add or remove toxic air contaminants based on information gathered from past reporting, industry types in Oregon that ~~are not~~ differ from those in California or Washington, or OHA's and DEQ's knowledge of toxic air contaminants that may be of potential public health concern in Oregon. ~~and~~

(d) Owners or operators of sources must report emissions of any newly listed toxic air contaminant during the next periodic state wide emissions inventory required in OAR 340-245-0040 following the new listing, or earlier upon request by DEQ.

(3) OAR 340-2475-80230 Table 23, Toxicity Reference Values ~~and OAR 340-245-8040 Table 4, Risk-Based Concentrations~~.

(a) ~~The list of Risk-Based Concentrations is comprised of all toxic air contaminants from the Toxic Air Contaminants Reporting List for which OHA and DEQ were able to establish RBCs;~~

(b) Every three years starting from November 16, 2018, or as necessary, DEQ, in consultation with OHA, will begin review of the toxic air contaminants and Toxicity Reference Values published by the authoritative sources listed in OAR 340-2475-0030 for changes since the last review ~~over the intervening three years~~. DEQ will propose rule amendments to implement one or more of the following actions, as appropriate:

(aA) ~~Revise Toxicity Reference Values and associated Risk Based Concentrations for toxic air contaminants listed in OAR 340-2475-80230 Table 23 and OAR 340-245-8040 Table 4, as applicable, if Toxicity Reference Values have been revised by authoritative sources listed in OAR 340-2475-0030 or if indicated as part of the petition process established in section (4);~~

(bB) ~~Add toxic air contaminants to OAR 340-2475-80230 Table 23 and 340-245-8040 Table 4, as applicable, if Toxicity Reference Values have been generated by authoritative sources listed in OAR 340-2475-0300 for toxic air contaminants on the Priority Toxic Air Contaminants Reporting List in OAR 340-2475-80120 Table 12 from which RBCs can be set; or and~~

(cC) ~~Remove or revise toxic air contaminants from OAR 340-2475-80130 Table 23 and 340-245-8040 Table 4, as applicable, if some or all authoritative sources listed in OAR 340-2475-0300 have rescinded Toxicity Reference Values for that toxic air contaminant without providing a replacement;~~

(e) ~~DEQ will propose updates to OAR 340-2475-80230 Table 23 and 340-245-8040 Table 4, as applicable, through the rulemaking process.~~

(4) Interested parties may submit petitions to DEQ to update the lists of ~~regulated~~ toxic air contaminants to add or remove toxic air contaminants from OAR 340-2475-80120 Table 12 or revise a TRV in OAR 340-2475-80230 Table 23, ~~or revise an RBC in OAR 340-245-8040 Table 4.~~

(a) All petitions must be made in writing and must be received by DEQ by October 31st ~~at least 18 months before the~~ of the applicable triennial review year described in section (2) or (3);

(b) A request to add a toxic air contaminant to the Priority Toxic Air Contaminants ~~Reporting~~ List in OAR 340-02475-80120 Table 12 must include evidence that:

(A) The chemical is emitted in the state of Oregon at a rate of at least 1 pound per year; and

(B) The chemical is toxic;

(c) A request to remove a toxic air contaminant from the Priority Toxic Air Contaminant ~~Reporting~~ List in OAR 340-02475-80120 Table 12, must demonstrate that the chemical is emitted in the state of Oregon at a rate less than 1 pound per year ~~the TRV list in OAR 340-245-8030 Table 3, or the RBC list in OAR 340-245-8040 Table 4 must demonstrate that all authoritative sources listed in OAR 340-245-0300 either do not have or have rescinded Toxicity Reference Values for that toxic air contaminant without providing a replacement;~~

(d) A request to remove a toxic air contaminant from the TRV List in OAR 340-247-8020 Table 2, must demonstrate that all authoritative sources listed in OAR 340-247-0030 have rescinded TRVs for that toxic air contaminant without providing a replacement;

~~(e)~~(A) If the request to add or revise a TRV applies to a toxic air contaminant for which toxicity information is available from one or more of the authoritative sources listed in OAR 340-2475-0300, then only petitions to select a Toxicity Reference Value from one of those authoritative sources will be considered; ~~and~~

(B) If there are no TRVs established by any of the authoritative sources listed in OAR-247-0030 for a toxic air contaminant, then a petitioner may still ~~A request to revise or add a Toxicity Reference Values in OAR 340-2475-80230 Table 23 or an RBC in OAR 340-245-8040 Table 4 must include either.~~ The request must include one or more of the following, in order of preference:

(i) Inhalation Toxicity Reference Values established by a federal agency or by another state; ~~or~~

(ii) Publicly available and peer-reviewed toxicity information for the toxic air contaminant that demonstrates a quantitative dose-response relationship in human or animal studies from which Toxicity Reference Values could be calculated; ~~or~~and

(iii) Publicly available and peer-reviewed new approach methodologies for inferring toxicity information from a well-studied toxic air contaminant to a structurally similar, but less-studied toxic air contaminant on the Priority Toxic Air Contaminants List;

(C) If a toxic air contaminant being requested for review has no available toxicity information as described in paragraph (BA) and is emitted at a rate of at least one pound per year in the state of Oregon, then DEQ will put the toxic air contaminant on a formal “Wait List”, to be held there until toxicity information for that toxic air contaminant becomes available;

~~(f)~~ If DEQ, after consultation with OHA, determines that revisions are warranted as a result of a petition, DEQ will consult with ATSAC and propose rule amendments to revise ~~revisions to TRVs or RBCs or~~ additions or removals of toxic air contaminants to the Priority Toxic Air Contaminants ~~Reporting List in OAR 340-2475-80120 Table 12, or the TRV list in OAR 340-2475-80230 Table 23 or the RBC list in OAR 340-245-8040 Table 4 through the rulemaking process described in (3)(b); and~~

~~(g)~~ If DEQ receives a request to add, remove, or revise a TRV ~~or RBC~~ or add or remove a toxic air contaminant from the Priority Toxic Air Contaminants ~~Reporting List in OAR 340-2475-80120 Table 12, or the TRV list in OAR 340-2475-80230 Table 23 or the RBC list in OAR 340-245-8040 Table 4~~ and the request is received ~~less than 18 months before~~ after October 31st the year of the applicable triennial review described in section (2) or (3), DEQ will review the request ~~will be reviewed~~ during the subsequent triennial review in section (3).

Stat. Auth.: ORS 468.020, 468.065, 468A.025 & 468A.135. ~~, 468A.040, 468A.050, 468A.070, 468A.155 & Or Laws 2018, ch. 102, § 3.~~

Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, 468A.155 & Or Laws 2018, ch. 102, §§ 2 and 3.

History: DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-2476-00570

Air Toxics Science Advisory Committee

(1) Purpose. The Commission recognizes the many scientific uncertainties associated with the effects of ~~air toxics~~ toxic air contaminants, and the continuing development of new information in this field. An Air Toxics Science Advisory Committee (ATSAC), will advise DEQ, ~~and in its jurisdiction, the Lane Regional Air Protection Agency Pollution Authority,~~ on the development of TRVs to be recommended to the Commission for use in ~~technical issues and evaluation of~~ the state's air toxics air contaminant program. The ATSAC will provide advice on the technical aspects of risk assessment. It will not provide risk management or policy recommendations. The ATSAC will perform the following functions:

~~(a) R~~review and provide feedback on TRVs proposed by DEQ ~~ambient benchmarks for the state air toxics program;~~

~~(b) Advise DEQ on developing a risk assessment methodology to be used in the Safety Net Program in OAR 340-246-0190 (5) and (6);~~

~~(c) Advise DEQ on selecting sources for the Safety Net program. The ATSAC will evaluate potential Safety Net sources identified by DEQ to determine whether they qualify for the Safety Net Program, as specified in OAR 340-246-0190 through 0230;~~

~~(d) Evaluate overall progress in reducing emissions of and exposure to air toxics by considering trends in emissions and ambient concentrations of air toxics. The ATSAC will periodically advise DEQ on air toxics program effectiveness and make technical recommendations for program development concerning the possible adverse environmental effects of air toxics and risk from exposure to multiple air toxics; and~~

~~(e) Provide advisory opinions on questions requiring scientific expertise, as requested by DEQ.~~

(2) Staffing. Personnel from both the DEQ and OHA will coordinate the work of ATSAC.

~~(3)~~ Membership. The ATSAC will be composed of highly qualified members with experience relevant to the development and review of ~~air-toxicity's~~ reference values. There will be at least five but no more than seven members. ~~The following disciplines will be represented on the ATSAC:~~ DEQ will evaluate qualifications of each ATSAC member and the capacity of the committee as a whole by seeking skills and experience relevant to:

(a) Toxicology and/or Toxicity Assessment, with additional consideration for experts with specialization in:

(A) Inhalation toxicology;

(B) Reproductive toxicology; or

(C) Developmental toxicology;

~~(b) Environmental Science or~~ Environmental and/or Atmospheric Chemistry ~~Engineering,~~ with additional consideration for experts with specialization in;

(A) Multi-pathway exposure;

(B) Bioaccumulation; and

~~(e) Risk Assessment;~~

~~(c4) Epidemiology/Biostatistics, with additional consideration for experts with specialization in:~~

(A) Environmental public health;

(B) Neonatal and children's health;

(C) Medicine; or

(D) Health of vulnerable populations.

~~(e) Medicine (Physician) with training or experience in Public Health; and~~

~~(f) Air Pollution Modeling, Monitoring, Meteorology or Engineering.~~

(43) Appointment. DEQ's Air Quality Division Administrator will nominate potential members to the Director. Before making these nominations, the Administrator will develop a list of candidates by consulting with government, public, and private organizations involved in work relevant to air toxics air contaminants. The Director will appoint ATSAC members with concurrence by the Commission.

(54) Term. Air Toxics Science Advisory Committee members each will serve a three-year term. Initial terms will be staggered for continuity and transfer of work so that members of the first ATSAC may serve more or less than three years.

~~(65) Operation.~~

(a) No member may have an actual or potential conflict of interest, as those terms are defined by ORS 244.020 and must otherwise comply with government ethics requirements in ORS chapter 244.

(b) The ATSAC will meet as determined necessary by DEQ.

~~(6) Procedures, Bylaws, and Decision-making Process. At a minimum, the ATSAC will observe the procedures specified below. The ATSAC will develop other necessary procedures and bylaws in consultation with DEQ.~~

~~(ca) The ATSAC members will provide DEQ with findings and recommendations that DEQ will report to the Environmental Quality Commission, including consensus, majority, and minority opinions. Final decisions must be made by a quorum of members, based on consensus when possible. If consensus is not possible, decisions will be made by majority vote with a quorum present.~~

~~(db) If necessary, DEQ may obtain a facilitator to assist the ATSAC.~~

~~(ee) The bylaws will include provisions for ATSAC may remove a member for cause, with concurrence by the Commission.~~

Statutory/Other Authority: ORS 468.035, 468A.010(1), 468A.015 & 468A.135.

Statutes/Other Implemented: ORS 468A.015 & 468A.025

History:

DEQ 187-2018, amend filed 05/14/2018, effective 05/14/2018

DEQ 15-2003, f. & cert. ef. 11-3-03

340-2457-80210

Table 21 – Priority Toxic Air Contaminant Reporting List

[\[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.\]](#)

Statutory/Other Authority: ORS 468.020, ~~468.065, 468A.025 & 468A.135. , 468A.040, 468A.050, 468A.070 & 468A.155~~

Statutes/Other Implemented: ~~468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015 & 468A.035~~

History: DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

340-2457-80210

Table 32 - Toxicity Reference Values

[\[ED. NOTE: To view attachments referenced in rule text, click here to view rule.\]](#)

Statutory/Other Authority: ORS 468.020, ~~ORS 468.065, 468A.025 & 468A.135. , 468A.040, 468A.050, 468A.070, 468A.155~~ & Or Laws 2018, ch. 102, § 7

Statutes/Other Implemented: ~~ORS 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155, 468A.010, 468A.015, 468A.035~~ & Or Laws 2018, ch. 102, § 7

History: DEQ 8-2020, amend filed 04/24/2020, effective 04/24/2020 DEQ 197-2018, adopt filed 11/16/2018, effective 11/16/2018

Division 247 Draft Rules – Edits Incorporated

Last revised: Apr. 7, 2021

Division 247

HEALTH RISK-BASED AIR QUALITY STANDARDS FOR TOXIC AIR CONTAMINANTS

340-247-0010

Purpose and Overview

Purpose and Overview. Division 247 lists air contaminants that are a priority for investigation in Oregon (Table 1), lists health risk-based standards for toxic air contaminants in Oregon (Table 2) and establishes the process for setting and updating these values. These scientific standards, also called toxicity reference values (TRVs), are used to help analyze public health risk from toxic air contaminants. These standards may be used by programs including, but not limited to, Cleaner Air Oregon (OAR-340-245) and the Oregon State Toxic Air Contaminants Program (OAR-340-246). Subject to the requirements in this division and OAR 340-200-0010(3), Lane Regional Air Protection Agency is designated by the EQC to implement the rules in this division within its area of jurisdiction.

Stat. Auth.: ORS 468.020 & 468A.025.

Stat. Implemented: ORS 468A.025.

340-247-0020

Definitions

The definitions in OAR 340-200-0020 and 340-245-0020 and this rule apply to this division. If the same term is defined in this division and elsewhere, the definition in this division applies.

- (1) “Toxic air contaminant” means an air pollutant that has been determined by the EQC to cause, or reasonably be anticipated to cause, adverse effects to human health and is listed in OAR 340-247-8010 Table 2.
- (2) “Toxicity Reference Value” or “TRV” means the following:
 - (a) For carcinogens, the air concentration corresponding to a one in one million excess cancer risk, calculated by dividing one in one million (0.000001) by the inhalation unit risk specific to that toxic air contaminant as established by the authoritative body that establishes the value, and as approved by the EQC; and
 - (b) For noncarcinogens, the air concentration above which relevant effects might occur to humans following environmental exposure, and below which it is reasonably expected that effects will not occur.
 - (c) For the purposes of these rules, DEQ will use the term toxicity reference value when referring to any similarly derived health-based toxicity value developed by other governmental agencies. Examples of names of values that DEQ will refer to as toxicity reference values include, but are not limited to reference concentrations (RfCs), reference exposure levels (RELs), or minimal risk levels (MRLs).

Stat. Auth.: ORS 468.020, 468A.025 & 468A.135.

Stat. Implemented: ORS 468A.025.

340-247-0030

Toxicity Reference Values

(1) This rule lists sources of toxicity information that the Oregon Health Authority (OHA) and the Department of Environmental Quality (DEQ) consider authoritative in terms of their scientific rigor and methods for producing toxicity information. OHA and DEQ will recommend adoption and use of Toxicity Reference Values from the toxicity information published by the following authoritative sources:

- (a) DEQ in consultation with the Air Toxics Science Advisory Committee (ATSAC);
- (b) United States Environmental Protection Agency (EPA);
- (c) United States Agency for Toxic Substances and Disease Registry (ATSDR); and
- (d) California Environmental Protection Agency (CalEPA).

(2) DEQ will calculate Toxicity Reference Values using one in one million as the target excess cancer risk level or a hazard quotient of one for noncancer Toxicity Reference Values.

Stat. Auth.: ORS 468.020, 468A.025 & 468A.135.

Stats. Implemented: ORS 468A.025.

340-247-0040

Process for Updating the Lists of Priority Toxic Air Contaminants and Toxicity Reference Values

(1) Purpose.

(a) As risk assessment and toxicological sciences advance, it is important that TRVs and priority toxic air contaminants continue to reflect the latest practices and science;

(b) These rules include two lists of toxic air contaminants:

(A) OAR 340-247-8010 Table 1 contains toxic air contaminants that are considered a priority for investigation in Oregon. The purpose of OAR 340-247-8010 Table 1 is to maintain a current and broad understanding of statewide toxic air contaminant emissions and ambient concentrations over time; and

(B) OAR 340-247-8020 Table 2 contains toxic air contaminants for which TRVs are readily available. The purpose of OAR 340-247-8020 Table 2 is to evaluate the public health impacts from toxic air contaminants.

(2) OAR 340-247-8010 Table 1, Priority Toxic Air Contaminants List.

(a) The Priority Toxic Air Contaminants List is comprised of contaminants listed on California Air Resources Board's Toxic Air Contaminant Identification List Appendix A-1; Washington's Table of Acceptable Source Impact Levels, Small Quantity Emission Rate, and de minimis emission values; Oregon's Toxics Focus list; and EPA's Hazardous Air Pollutants list;

(b) Every three years starting from November 16, 2018, DEQ, in consultation with OHA, will begin review of the four lists in subsection (a) for changes and may propose rule amendments to update the Priority Toxic Air Contaminants List in OAR 340-247-8010 Table 1 to capture changes in any of those four lists since the last review;

(c) During the reviews of the Priority Toxic Air Contaminants List, DEQ may also propose rule amendments to add or remove toxic air contaminants based on information gathered from past reporting, industry types in Oregon that differ from those in California or Washington, or OHA's and DEQ's knowledge of toxic air contaminants that may be of potential public health concern in Oregon.

(3) OAR 340-247-8020 Table 2, Toxicity Reference Values. Every three years starting from November 16, 2018, or as necessary, DEQ, in consultation with OHA, will begin review of the toxic air contaminants and Toxicity Reference Values published by the authoritative sources listed in OAR 340-247-0030 for changes since the last review. DEQ will propose rule amendments to implement one or more of the following actions, as appropriate:

(a) Revise Toxicity Reference Values for toxic air contaminants listed in OAR 340-247-8020 Table 2 if Toxicity Reference Values have been revised by authoritative sources listed in OAR 340-247-0030 or if indicated as part of the petition process established in section (4);

(b) Add toxic air contaminants to OAR 340-247-8020 Table 2 if Toxicity Reference Values have been generated by authoritative sources listed in OAR 340-247-0030 for toxic air contaminants on the Priority Toxic Air Contaminants List in OAR 340-247-8010 Table 1; and

(c) Remove or revise toxic air contaminants from OAR 340-247-8010 Table 2 if some or all authoritative sources listed in OAR 340-247-0300 have rescinded Toxicity Reference Values for that toxic air contaminant without providing a replacement;

(4) Interested parties may submit petitions to DEQ to update the lists of toxic air contaminants to add or remove toxic air contaminants from OAR 340-247-8010 Table 1 or revise a TRV in OAR 340-247-8020 Table 2.

(a) All petitions must be made in writing and must be received by DEQ by October 31st of the applicable triennial review year described in section (2) or (3);

(b) A request to add a toxic air contaminant to the Priority Toxic Air Contaminants List in OAR 340-0247-8010 Table 1 must include evidence that:

(A) The chemical is emitted in the state of Oregon at a rate of at least 1 pound per year; and

(B) The chemical is toxic;

(c) A request to remove a toxic air contaminant from the Priority Toxic Air Contaminant List in OAR 340-0247-8010 Table 1, must demonstrate that the chemical is emitted in the state of Oregon at a rate less than 1 pound per year;

(d) A request to remove a toxic air contaminant from the TRV List in OAR 340-247-8020 Table 2, must demonstrate that all authoritative sources listed in OAR 340-247-0030 have rescinded TRVs for that toxic air contaminant without providing a replacement;

(e) (A) If the request to add or revise a TRV applies to a toxic air contaminant for which toxicity information is available from one or more of the authoritative sources listed in OAR 340-247-0300, then only petitions to select a Toxicity Reference Value from one of those authoritative sources will be considered;

(B) If there are no TRVs established by any of the authoritative sources listed in OAR 340-247-0030 for a toxic air contaminant, then a petitioner may still request to add Toxicity Reference Values in OAR 340-247-8020 Table 2. The request must include one or more of the following, in order of preference:

(i) Inhalation Toxicity Reference Values established by a federal agency or by another state;

(ii) Publicly available and peer-reviewed toxicity information for the toxic air contaminant that demonstrates a quantitative dose-response relationship in human or animal studies from which Toxicity Reference Values could be calculated; and

(iii) Publicly available and peer-reviewed new approach methodologies for inferring toxicity information from a well-studied toxic air contaminant to a structurally similar, but less-studied toxic air contaminant on the Priority Toxic Air Contaminants List;

(C) If a toxic air contaminant being requested for review has no available toxicity information as described in paragraph (B) and is emitted at a rate of at least one pound per year in the state of Oregon, then DEQ will put the toxic air contaminant on a formal “Wait List”, to be held there until toxicity information for that toxic air contaminant becomes available;

(f) If DEQ, after consultation with OHA, determines that revisions are warranted as a result of a petition, DEQ will consult with ATSAC and propose rule amendments to revise TRVs or for additions or removals of toxic air contaminants to the Priority Toxic Air Contaminants List in OAR 340-247-8010 Table 1 or the TRV list in OAR 340-247-8020 Table 2; and

(g) If DEQ receives a request to add, remove, or revise a TRV or add or remove a toxic air contaminant from the Priority Toxic Air Contaminants List in OAR 340-247-8010 Table 1, or the TRV list in OAR 340-247-8020 Table 2 and the request is received after October 31st the year of the applicable triennial review described in section (2) or (3), DEQ will review the request during the subsequent triennial review in section (3).

Stat. Auth.: ORS 468.020, 468A.025 & 468A.135.

Stats. Implemented: 468A.025.

340-247-0050

Air Toxics Science Advisory Committee

(1) Purpose. The Commission recognizes the many scientific uncertainties associated with the effects of toxic air contaminants, and the continuing development of new information in this field. An Air Toxics Science Advisory Committee (ATSAC), will advise DEQ, on the development of TRVs to be recommended to the Commission for use in the state’s toxic air contaminant program. The ATSAC will review and provide feedback on TRVs proposed by DEQ.

(2) Staffing. Personnel from both the DEQ and OHA will coordinate the work of ATSAC.

(3) Membership. The ATSAC will be composed of highly qualified members with experience relevant to the development and review of toxicity reference values. There will be at least five but no more than

seven members. DEQ will evaluate qualifications of each ATSAC member and the capacity of the committee as a whole by seeking skills and experience relevant to:

(a) Toxicology and/or Toxicity Assessment, with additional consideration for experts with specialization in:

(A) Inhalation toxicology;

(B) Reproductive toxicology; or

(C) Developmental toxicology;

(b) Environmental and/or Atmospheric Chemistry, with additional consideration for experts with specialization in:

(A) Multi-pathway exposure;

(B) Bioaccumulation; and

(c) Epidemiology/Biostatistics, with additional consideration for experts with specialization in:

(A) Environmental public health;

(B) Neonatal and children's health;

(C) Medicine, or

(D) Health of vulnerable populations.

(4) Appointment. DEQ's Air Quality Division Administrator will nominate potential members to the Director. Before making these nominations, the Administrator will develop a list of candidates by consulting with government, public, and private organizations involved in work relevant to toxic air contaminants. The Director will appoint ATSAC members with concurrence by the Commission.

(5) Term. Air Toxics Science Advisory Committee members each will serve a three-year term. Initial terms will be staggered for continuity and transfer of work so that members of the first ATSAC may serve more or less than three years.

(6) Operation.

(a) No member may have an actual or potential conflict of interest, as those terms are defined by ORS 244.020 and must otherwise comply with government ethics requirements in ORS chapter 244.

(b) The ATSAC will meet as determined necessary by DEQ.

(c) The ATSAC members will provide DEQ with findings and recommendations that DEQ will report to the Environmental Quality Commission, including consensus, majority, and minority opinions.

(d) If necessary, DEQ may obtain a facilitator to assist the ATSAC.

(e) ATSAC may remove a member for cause, with concurrence by the Commission.

Statutory/Other Authority: ORS 468.035, 468A.010(1), 468A.015 & 468A.135.
Statutes/Other Implemented: ORS 468A.015 & 468A.025

340-247-8010

Tables

(1) Table 1 – Priority Toxic Air Contaminant List

(2) Table 2 - Toxicity Reference Values

Stat. Auth.: ORS 468.020, 468A.025 & 468A.135.

Stats. Implemented: 468A.025.

Proposed Rules: Division 245 and 247 Tables

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

June 2021

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



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DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

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State of Oregon Department of Environmental Quality

Draft Rules Tables – Edits Highlighted

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

Key to Identifying Changed Text:

~~Deleted Text~~

New/inserted text

340-245-8010 Table 1 Risk Action Levels

 OAR 340-245-8010 Table 1 Risk Action Levels†			
Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
New and Reconstructed Source	Aggregate TEU Level	0.5	0.1
	Source Permit Level	0.5	0.5
	Community Engagement Level	5	1
	TLAER Level	10	1
	Permit Denial Level	25	1
Existing Source	Aggregate TEU Level	2.5	0.1
	Source Permit Level	5	0.5
	Community Engagement Level	25	1
	TBACT Level	50	5 ^a or 3 ^b or Risk Determination Ratio of > 1.0 ^c



OAR 340-245-8010
Table 1
Risk Action Levels†

Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
	Risk Reduction Level	200	10 ^a or 6 ^b or Risk Determination Ratio of 2.0 ^c
	Immediate Curtailment Level	500	20 ^a or 12 ^b or Risk Determination Ratio of 4.0 ^c

Footnotes for OAR 340-245-8010 Table 1:

† Facility risk that is equal to or less than the values in the table is considered compliant with the Risk Action Level. Risk Action Levels are considered consistent with benchmarks in Oregon Laws 2018, chapter 102 (Senate Bill (SB) 1541 (2018)).

- a) ~~a~~ If all toxic air contaminants emitted by the source are identified as HI5 in OAR 340-247~~5~~-801~~30~~, Table ~~23~~, and OAR 340-245-801~~40~~, Table ~~24~~.
- b) ~~b~~ If all toxic air contaminants emitted by the source are identified as HI3 in OAR 340-247~~5~~-801~~30~~, Table ~~23~~, and OAR 340-245-801~~40~~, Table ~~24~~.
- c) ~~c~~ If toxic air contaminants emitted by the source include contaminants listed as both HI3 and HI5 in OAR 340-247~~5~~-801~~30~~, Table ~~23~~, and OAR 340-245-801~~40~~, Table ~~24~~, and a Risk Determination Ratio is required to be calculated under OAR 340-245-0200.

340-2475-80120 Table-12
 Toxic Air Contaminant Reporting Priority List

 <p style="text-align: center;">OAR 340-2457-80210 Table 2-1 Toxic Air Contaminant Reporting Priority List</p>	
CASRN# ^a	Chemical Name
75-07-0	Acetaldehyde
60-35-5	Acetamide
67-64-1	Acetone
75-05-8	Acetonitrile
98-86-2	Acetophenone
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid
107-13-1	Acrylonitrile
50-76-0	Actinomycin D
1596-84-5	Alar
309-00-2	Aldrin
107-05-1	Allyl chloride
7429-90-5	Aluminum and compounds ^b
1344-28-1	Aluminum oxide (fibrous forms)
97-56-3	<i>ortho</i> -Aminoazotoluene
6109-97-3	3-Amino-9-ethylcarbazole hydrochloride
68006-83-7	2-Amino-3-methyl-9H pyrido[2,3-b]indole
82-28-0	1-Amino-2-methylanthraquinone
76180-96-6	2-Amino-3-methylimidazo-[4,5-f]quinoline
712-68-5	2-Amino-5-(5-Nnitro-2-Ffuryl)-1,3,4-Tthiadiazole
26148-68-5	A-alpha-c(2-amino-9h-pyrido[2,3-b]indole)
92-67-1	4-Aminobiphenyl
61-82-5	Amitrole
7664-41-7	Ammonia
7803-63-6	Ammonium bisulfate
6484-52-2	Ammonium nitrate
7783-20-2	Ammonium sulfate
62-53-3	Aniline
90-04-0	<i>o</i> -Anisidine



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
134-29-2	<i>o</i> -Anisidine hydrochloride
7440-36-0	Antimony and compounds ^b
1309-64-4	Antimony trioxide
140-57-8	Aramite
7440-38-2	Arsenic and compounds ^b
7784-42-1	Arsine
1332-21-4	Asbestos
492-80-8	Auramine
115-02-6	Azaserine
446-86-6	Azathioprine
52-24-4	<i>Tris</i> -(1-Aziridinyl)phosphine sulfide
103-33-3	Azobenzene
7440-39-3	Barium and compounds ^b
71-43-2	Benzene
92-87-5	Benzidine (and its salts)
271-89-6	Benzofuran
98-07-7	Benzoic trichloride (B enzotrichloride)
98-88-4	Benzoyl chloride
94-36-0	Benzoyl peroxide
100-44-7	Benzyl chloride
1694-09-3	Benzyl Violet 4B
7440-41-7	Beryllium and compounds ^b
1304-56-9	Beryllium O xide
13510-49-1	Beryllium S ulfate
92-52-4	Biphenyl
111-44-4	<i>Bis</i> (2-chloroethyl) ether (D B C E E)
542-88-1	<i>Bis</i> (chloromethyl) ether
103-23-1	<i>Bis</i> (2-ethylhexyl) adipate
117-81-7	<i>Bis</i> (2-ethylhexyl) phthalate (DEHP)
7726-95-6	Bromine and compounds ^b
7789-30-2	Bromine pentafluoride
75-27-4	Bromodichloromethane
75-25-2	Bromoform
74-83-9	Bromomethane (M methyl bromide)



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN ^a	Chemical Name
106-94-5	1-Bromopropane (<i>n</i> -propyl bromide)
126-72-7	F ris(2,3- d Dibromopropyl)phosphate
106-99-0	1,3-Butadiene
78-93-3	2-Butanone (M methyl ethyl ketone)
540-88-5	<i>t</i> -Butyl acetate
141-32-2	Butyl acrylate
71-36-3	<i>n</i> -Butyl alcohol
78-92-2	<i>sec</i> -Butyl alcohol
75-65-0	<i>tert</i> -Butyl alcohol
85-68-7	Butyl benzyl phthalate
25013-16-5	Butylated hydroxyanisole
3068-88-0	<i>beta</i> -Butyrolactone
7440-43-9	Cadmium and compounds ^b
156-62-7	Calcium cyanamide
105-60-2	Caprolactam
2425-06-1	Captafol
133-06-2	Captan
89†	Carbon black extracts
75-15-0	Carbon disulfide
56-23-5	Carbon tetrachloride
463-58-1	Carbonyl sulfide
9000-07-1	Carrageenan (degraded)
120-80-9	Catechol
351†	Ceramic fibers
133-90-4	Chloramben
305-03-3	Chlorambucil
57-74-9	Chlordane
143-50-0	Chlordecone
115-28-6	Chlorendic A acid
76-13-1	Chlorinated fluorocarbon (1,1,2- T richloro-1,2,2-trifluoroethane, CFC-113)
108171-26-2	Chlorinated paraffins
7782-50-5	Chlorine
10049-04-4	Chlorine dioxide
79-11-8	Chloroacetic acid



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
532-27-4	2-Chloroacetophenone
85535-84-8	Chloroalkanes C10-13 (C chlorinated paraffins)
106-47-8	<i>p</i> -Chloroaniline
108-90-7	Chlorobenzene
510-15-6	Chlorobenzilate (E ethyl-4,4'-dichlorobenzilate)
75-68-3	1-Chloro-1,1-difluoroethane
75-45-6	Chlorodifluoromethane (Freon 22)
75-00-3	Chloroethane (E ethyl chloride)
67-66-3	Chloroform
74-87-3	Chloromethane (M methyl chloride)
107-30-2	Chloromethyl methyl ether (technical grade)
563-47-3	3-Chloro-2-methyl-1-propene
95-57-8	2-Chlorophenol
95-83-0	4-Chloro- <i>o</i> -phenylenediamine
76-06-2	Chloropicrin
126-99-8	Chloroprene
1897-45-6	Chloroethalonil
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine
54749-90-5	Chlorozotocin
7738-94-5	Chromic(VI) Acid
18540-29-9	Chromium VI, chromate and dichromate particulate
18540-29-9 7738-94-5	Chromium VI, chromic acid aerosol mist <u>and chromium trioxide</u>
569-61-9	C.I. Basic Red 9 M monohydrochloride
87-29-6	Cinnamyl anthranilate
7440-48-4	Cobalt and compounds ^b
148†	Coke O ven E missions
7440-50-8	Copper and compounds ^b
150†	Creosotes
120-71-8	<i>p</i> -Cresidine
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol
108-39-4	<i>m</i> -Cresol
95-48-7	<i>o</i> -Cresol
106-44-5	<i>p</i> -Cresol



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
4170-30-3	Crotonaldehyde
80-15-9	Cumene hydroperoxide
135-20-6	Cupferron
74-90-8	Cyanide, hydrogen
110-82-7	Cyclohexane
108-93-0	Cyclohexanol
66-81-9	Cycloheximide
50-18-0	Cyclophosphamide (anhydrous)
6055-19-2	Cyclophosphamide (hydrated)
5160-02-1	D & C Red No. 9
4342-03-4	Dacarbazine
117-10-2	Danthron (chrysazin)
72-54-8	4,4'-DDD (4,4'-dichlorodiphenyldichloroethane)
53-19-0	2,4'-DDD (2,4'-dichlorodiphenyldichloroethane)
3547-04-4	DDE (1-chloro-4-[1-(4-chlorophenyl)ethyl]benzene)
3424-82-6	2,4'-DDE (2,4'-dichlorodiphenyldichloroethene)
72-55-9	4,4'-DDE (4,4'-dichlorodiphenyldichloroethene)
789-02-6	2,4'-DDT (2,4'-dichlorodiphenyltrichloroethane)
50-29-3	DDT
615-05-4	2,4-Diaminoanisole
39156-41-7	2,4-Diaminoanisole sulfate
101-80-4	4,4'-Diaminodiphenyl ether
95-80-7	2,4-Diaminotoluene (2,4-Toluene diamine)
334-88-3	Diazomethane
333-41-5	Diazinon
132-64-9	Dibenzofuran
124-48-1	Dibromochloromethane
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)
96-13-9	2,3-Dibromo-1-propanol
84-74-2	Dibutyl phthalate
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	<i>p</i> -Dichlorobenzene (1,4-Ddichlorobenzene)
91-94-1	3,3'-Dichlorobenzidine



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
75-71-8	Dichlorodifluoromethane (Freon 12)
75-43-4	Dichlorofluoromethane (Freon 21)
75-34-3	1,1-Dichloroethane (E ethylidene dichloride)
156-60-5	<i>trans</i> -1,2- d Dichloroethene
75-09-2	Dichloromethane (M methylene chloride)
120-83-2	2,4-Dichlorophenol
94-75-7	Dichlorophenoxyacetic acid, salts and esters (2,4-D)
78-87-5	1,2-Dichloropropane (P propylene dichloride)
542-75-6	1,3-Dichloropropene
62-73-7	Dichloro e vos (DDVP)
115-32-2	Dicofol
84-61-7	Di-cyclohexyl phthalate (DCHP)
60-57-1	Dieldrin
<u>200</u> ^r	Diesel P articulate M atter
111-42-2	Diethanolamine
111-46-6	Diethylene glycol
111-96-6	Diethylene glycol dimethyl ether
112-34-5	Diethylene glycol monobutyl ether
111-90-0	Diethylene glycol monoethyl ether
111-77-3	Diethylene glycol monomethyl ether
84-66-2	Diethylphthalate
64-67-5	Diethyl sulfate
134-62-3	Diethyltoluamide, N,N- (DEET)
75-37-6	1,1-Difluoroethane
101-90-6	Diglycidyl resorcinol ether
94-58-6	Dihydrosafrole
119-90-4	3,3'-Dimethoxybenzidine
60-11-7	4-Dimethylaminoazobenzene
121-69-7	N,N-Dimethylaniline
119-93-7	3,3'-Dimethylbenzidine (o - T olidine)
79-44-7	Dimethyl carbamoyl chloride
68-12-2	Dimethyl formamide
57-14-7	1,1-Dimethylhydrazine
131-11-3	Dimethyl phthalate



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN ^a	Chemical Name
77-78-1	Dimethyl sulfate
513-37-1	Dimethylvinylchloride
534-52-1	4,6-Dinitro-o-cresol (and salts)
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
123-91-1	1,4-Dioxane
630-93-3	Diphenylhydantoin
122-66-7	1,2-Diphenylhydrazine (H hydrazobenzene)
25265-71-8	Dipropylene glycol
34590-94-8	Dipropylene glycol monomethyl ether
1937-37-7	Direct Black 38
2602-46-2	Direct Blue 6
16071-86-6	Direct Brown 95 (technical grade)
2475-45-8	Disperse Blue 1
298-04-4	Disulfoton
106-89-8	Epichlorohydrin
106-88-7	1,2-Epoxybutane
227[†]	Epoxy resins
12510-42-8	Erionite
140-88-5	Ethyl acrylate
100-41-4	Ethyl benzene
74-85-1	Ethylene
106-93-4	Ethylene dibromide (EDB, 1,2- D dibromoethane)
107-06-2	Ethylene dichloride (EDC, 1,2- D dichloroethane)
107-21-1	Ethylene glycol
629-14-1	Ethylene glycol diethyl ether
110-71-4	Ethylene glycol dimethyl ether
111-76-2	Ethylene glycol monobutyl ether
110-80-5	Ethylene glycol monoethyl ether
111-15-9	Ethylene glycol monoethyl ether acetate
109-86-4	Ethylene glycol monomethyl ether
110-49-6	Ethylene glycol monomethyl ether acetate
2807-30-9	Ethylene glycol monopropyl ether



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Table 2.1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
151-56-4	Ethyleneimine (A aziridine)
75-21-8	Ethylene oxide
96-45-7	Ethylene thiourea
10028-22-5	Ferric S sulfate
239†	Fluorides
7782-41-4	Fluorine gas
50-00-0	Formaldehyde
110-00-9	Furan
60568-05-0	Furmecyclox
3688-53-7	Furylfuramide
352†	Glasswool fibers
111-30-8	Glutaraldehyde
67730-11-4	Glu-P-1
67730-10-3	Glu-P-2
16568-02-8	Gyromitrin
2784-94-3	HC Blue 1
76-44-8	Heptachlor
1024-57-3	Heptachlor epoxide
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:
319-84-6	<i>alpha</i> -Hexachlorocyclohexane
319-85-7	<i>beta</i> -Hexachlorocyclohexane
58-89-9	<i>gamma</i> -Hexachlorocyclohexane (Lindane)
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
680-31-9	Hexamethylphosphoramide
822-06-0	Hexamethylene-1,6-diisocyanate
110-54-3	Hexane
302-01-2	Hydrazine
10034-93-2	Hydrazine sulfate
7647-01-0	Hydrochloric acid
10035-10-6	Hydrogen bromide
7664-39-3	Hydrogen fluoride



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
7783-06-4	Hydrogen sulfide
123-31-9	Hydroquinone
24267-56-9 10043-66-0	Iodine-131
13463-40-6	Iron pentacarbonyl
78-59-1	Isophorone
78-79-5	Isoprene, except from vegetative emission sources
67-63-0	Isopropyl alcohol
98-82-8	Isopropylbenzene (C umene)
80-05-7	4,4'-Isopropylidenediphenol (bisphenol A)
303-34-4	Lasiocarpine
7439-92-1	Lead and compounds ^b
18454-12-1	Lead chromate oxide
108-31-6	Maleic anhydride
7439-96-5	Manganese and compounds ^b
148-82-3	Melphalan
3223-07-2	Melphalan HCl
7439-97-6	Mercury and compounds ^b
627-44-1	Diethylmercury
593-74-8	Dimethylmercury
22967-92-6	Methylmercury
67-56-1	Methanol
72-43-5	Methoxychlor
55738-54-0	<i>Trans</i> -2-[(d dimethylamino)-methylimino]-5-[2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole
101-14-4	4,4'-Methylene <i>bis</i> (2-chloroaniline) (MOCA)
101-77-9	4,4'-Methylenedianiline (and its dichloride)
13552-44-8	4,4'-Methylenedianiline dihydrochloride
838-88-0	4,4'-Methylene <i>bis</i> (2-methylaniline)
101-61-1	4,4'-Methylene <i>bis</i> (<i>N,N'</i> -dimethyl)aniline
101-68-8	Methylene diphenyl diisocyanate (MDI)
60-34-4	Methyl hydrazine
540-73-8	1,2-Dimethylhydrazine
74-88-4	Methyl iodide (I odomethane)



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
108-10-1	Methyl isobutyl ketone (MIBK, H hexone)
624-83-9	Methyl isocyanate
75-86-5	2-Methylactonitrile (A acetone cyanohydrin)
80-62-6	Methyl methacrylate
66-27-3	Methyl M methanesulfonate
129-15-7	2-Methyl-1-nitroanthraquinone
70-25-7	N-Methyl-N-nitro-N-nitrosoguanidine
832-69-9	1-Methylphenanthrene
2381-21-7	1-Methylpyrene
109-06-8	2-Methylpyridine
1634-04-4	Methyl <i>tert</i> -butyl ether
56-04-2	Methylthiouracil
90-94-8	Michler's ketone
349 [†]	Mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
350 [†]	Mineral fibers (fine mineral fibers which are man-made, and are airborne particles of a respirable size greater than 5 microns in length, less than or equal to 3.5 microns in diameter, with a length to diameter ratio of 3:1)
2385-85-5	Mirex
50-07-7	Mitomycin C
1313-27-5	Molybdenum trioxide
315-22-0	Monocrotaline
91-59-8	2-Naphthylamine
91-20-3	Naphthalene
7440-02-0	Nickel and compounds ^b
365 [†]	Nickel compounds, insoluble
7440-02-0	Nickel metal
1313-99-1	Nickel oxide
12035-72-2	Nickel subsulfide
11113-75-0	Nickel sulfide
368 [†]	Nickel compounds, soluble
373-02-4	Nickel acetate
3333-67-3	Nickel carbonate



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
12607-70-4	Nickel carbonate hydroxide
13463-39-3	Nickel carbonyl
7718-54-9	Nickel chloride
12054-48-7	Nickel hydroxide
7786-81-4	Nickel sulfate
10101-97-0	Nickel sulfate hexahydrate
13478-00-7	Nickel nitrate hexahydrate
1271-28-9	Nickelocene
3570-75-0	Nifurthiazole
7697-37-2	Nitric acid
139-13-9	Nitrilotriacetic acid
18662-53-8	Nitrilotriacetic acid, trisodium salt monohydrate
99-59-2	5-Nitro- <i>o</i> -Anisidine
98-95-3	Nitrobenzene
92-93-3	4-Nitrobiphenyl
1836-75-5	Nitrofen
59-87-0	Nitrofurazone
555-84-0	1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone
531-82-8	N-[4-(5-nitro-2-furyl)-2-thiazolyl]-acetamide
302-70-5	Nitrogen mustard N-oxide
100-02-7	4-Nitrophenol
79-46-9	2-Nitropropane
924-16-3	N-Nitrosodi- n -butylamine
1116-54-7	N-Nitrosodiethanolamine
55-18-5	N-Nitrosodiethylamine
62-75-9	N-Nitrosodimethylamine
86-30-6	N-Nitrosodiphenylamine
156-10-5	<i>p</i> -Nitrosodiphenylamine
621-64-7	N-Nitrosodi- n -propylamine
10595-95-6	N-Nitrosomethylethylamine
759-73-9	N-Nitroso-N-ethylurea
615-53-2	N-Nitroso-N-methylurethane
684-93-5	N-Nitroso-N-methylurea
59-89-2	N-Nitrosomorpholine



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Table 2.1 Toxic Air Contaminant Reporting Priority List

CASRN ^a	Chemical Name
16543-55-8	N-Nitrosornicotine
100-75-4	N-Nitrosopiperidine
930-55-2	N-Nitrosopyrrolidine
39765-80-5	<i>trans</i> -Nonachlor
104-40-5	Nonylphenol, 4- (& ethoxylates)
8014-95-7	Oleum (fuming sulfuric acid)
56-38-2	Parathion
87-86-5	Pentachlorophenol
32534-81-9	Pentabromodiphenyl ether
82-68-8	Pentachloronitrobenzene (Pentachlorobenzene)
79-21-0	Peracetic acid
489 ^r	Perfluorinated compounds (PFCs)
335-67-1	Perfluorooctanoic acid (PFOA)
1763-23-1	Perfluorooctanesulfonic acid (PFOS)
62-44-2	Phenacetin
94-78-0	Phenazopyridine
136-40-3	Phenazopyridine hydrochloride
3546-10-9	Phenesterin
50-06-6	Phenobarbital
108-95-2	Phenol
59-96-1	Phenoxybenzamine
63-92-3	Phenoxybenzamine hydrochloride
106-50-3	<i>p</i> -Phenylenediamine
132-27-4	<i>o</i> -Phenylphenate, sodium
90-43-7	2-Phenylphenol
75-44-5	Phosgene
7803-51-2	Phosphine
7664-38-2	Phosphoric acid
5047723-14-0	Phosphorus and compounds ^b
10025-87-3	Phosphorus oxychloride
10026-13-8	Phosphorus pentachloride
1314-56-3	Phosphorus pentoxide
7719-12-2	Phosphorus trichloride
12185-10-3	Phosphorus, white



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Table 2-1 Toxic Air Contaminant Reporting Priority List

CASRN# ^a	Chemical Name
518[†]	Phthalates
85-44-9	Phthalic anhydride
447[†]	Polybrominated diphenyl ethers (PBDEs)
5436-43-1	PBDE-47 [2,2',4,4'- T tetrabromodiphenyl ether]
60348-60-9	PBDE-99 [2,2',4,4',5- P pentabromodiphenyl ether]
189084-64-8	PBDE-100 [2,2',4,4',6- P pentabromodiphenyl ether]
17026-54-3 182677-30-1	PBDE-138 [2,2',3,4,4',5'- H hexabromodiphenyl ether]
68631-49-2	PBDE-153 [2,2',4,4',5,5'-hexabromodiphenyl ether]
17026-58-4 207122-15-4	PBDE-154 [2,2',4,4',5,6'- H hexabromodiphenyl ether]
68928-80-3 207122-16-5	PBDE- 185-183 [2,2',3,4,4',5',6- H heptabromodiphenyl ether]
1163-19-5	PBDE-209 [D decabromodiphenyl ether]
1336-36-3	Polychlorinated biphenyls (PCBs)
645[†]	Polychlorinated biphenyls (PCBs) TEQ ^c
34883-43-7	PCB-8 [2,4'-dichlorobiphenyl]
37680-65-2	PCB 18 [2,2',5-trichlorobiphenyl]
7012-37-5	PCB-28 [2,4,4'-trichlorobiphenyl]
41464-39-5	PCB-44 [2,2',3,5'-tetrachlorobiphenyl]
35693-99-3	PCB-52 [2,2',5,5'-tetrachlorobiphenyl]
32598-10-0	PCB-66 [2,3',4,4'-tetrachlorobiphenyl]
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]
37680-73-2	PCB-101 [2,2',4,5,5'-pentachlorobiphenyl]
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]
38380-07-3	PCB-128 [2,2',3,3',4,4'-hexachlorobiphenyl]
35065-28-2	PCB-138 [2,2',3,4,4',5'-hexachlorobiphenyl]
35065-27-1	PCB-153 [2,2',4,4',5,5'-hexachlorobiphenyl]
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]



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CASRN# ^a	Chemical Name
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]
52663-72-6	PCB 167 [2,3,4,4',5,5'-hexachlorobiphenyl]
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]
35065-30-6	PCB-170 [2,2',3,3',4,4',5-heptachlorobiphenyl]
35065-29-3	PCB-180 [2,2',3,4,4',5,5'-heptachlorobiphenyl]
52663-68-0	PCB-187 [2,2',3,4',5,5',6-heptachlorobiphenyl]
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]
52663-78-2	PCB-195 [2,2',3,3',4,4',5,6-octachlorobiphenyl]
40186-72-9	PCB-206 [2,2',3,3',4,4',5,5',6-nonachlorobiphenyl]
2051-24-3	PCB-209 [2, 2', 3, 3', 4, 4', 5, 5', 6, 6' -decachlorobiphenyl]
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ ^c
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TeCDF)
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)
39001-02-0	Octachlorodibenzofuran (OCDF)
401 [†]	Polycyclic aromatic hydrocarbons (PAHs)
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
120-12-7	Anthracene
191-26-4	Anthanthrene
56-55-3	Benz[a]anthracene



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CASRN# ^a	Chemical Name
50-32-8	Benzo[a]pyrene
205-99-2	Benzo[b]fluoranthene
205-12-9	Benzo[c]fluorene
192-97-2	Benzo[e]pyrene
191-24-2	Benzo[g,h,i]perylene
205-82-3	Benzo[j]fluoranthene
207-08-9	Benzo[k]fluoranthene
86-74-8	Carbazole
218-01-9	Chrysene
27208-37-3	Cyclopenta[c,d]pyrene
226-36-8	Dibenz[a,h]acridine
224-42-0	Dibenz[a,j]acridine
194-59-2	7H-Dibenzo[c,g]carbazole
53-70-3	Dibenz[a,h]anthracene
5385-75-1	Dibenzo[a,e]fluoranthene
192-65-4	Dibenzo[a,e]pyrene
189-64-0	Dibenzo[a,h]pyrene
189-55-9	Dibenzo[a,i]pyrene
191-30-0	Dibenzo[a,l]pyrene
206-44-0	Fluoranthene
86-73-7	Fluorene
193-39-5	Indeno[1,2,3-cd]pyrene
91-57-6	2-Methyl naphthalene
198-55-0	Perylene
85-01-8	Phenanthrene
129-00-0	Pyrene
432†	Polycyclic aromatic hydrocarbon derivatives [PAH-Derivatives]
53-96-3	2-Acetylaminofluorene
117-79-3	2-Aminoanthraquinone
63-25-2	Carbaryl
57-97-6	7,12-Dimethylbenz[a]anthracene
42397-64-8	1,6-Dinitropyrene
42397-65-9	1,8-Dinitropyrene
56-49-5	3-Methylcholanthrene



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CASRN# ^a	Chemical Name
3697-24-3	5-Methylchrysene
602-87-9	5-Nitroacenaphthene
7496-02-8	6-Nitrochrysene
607-57-8	2-Nitrofluorene
5522-43-0	1-Nitropyrene
57835-92-4	4-Nitropyrene
3564-09-8	Ponceau 3R
3761-53-3	Ponceau MX
7758-01-2	Potassium bromate
671-16-9	Procarbazine
366-70-1	Procarbazine hydrochloride
1120-71-4	1,3-Propane sultone
57-57-8	<i>beta</i> -Propiolactone
123-38-6	Propionaldehyde
114-26-1	Propoxur (Baygon)
115-07-1	Propylene
6423-43-4	Propylene glycol dinitrate
107-98-2	Propylene glycol monomethyl ether
108-65-6	Propylene glycol monomethyl ether acetate
75-56-9	Propylene oxide
75-55-8	1,2-Propyleneimine (2-Methylaziridine)
51-52-5	Propylthiouracil
110-86-1	Pyridine
91-22-5	Quinoline
106-51-4	Quinone
571†	Radon and its decay products
572†	Refractory Ceramic Fibers
50-55-5	Reserpine
353†	Rockwool
94-59-7	Safrole
7783-07-5	Selenide, hydrogen
7782-49-2	Selenium and compounds ^b
7446-34-6	Selenium sulfide
7631-86-9	Silica, crystalline (respirable)



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CASRN# ^a	Chemical Name
7440-22-4	Silver and compounds ^b
354 [†]	Slagwool
1310-73-2	Sodium hydroxide
10048-13-2	Sterigmatocystin
18883-66-4	Streptozotocin
100-42-5	Styrene
96-09-3	Styrene oxide
95-06-7	Sulfallate
7664-93-9	Sulfuric acid
505-60-2	Sulfur mustard
7446-711-9	Sulfur trioxide
358 [†]	Talc containing asbestiform fibers
100-21-0	Terephthalic acid
40088-47-9	Tetrabromodiphenyl ether
630-20-6	1,1,1,2-Tetrachloroethane
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethene (Pperchloroethylene)
58-90-2	2,3,4,6-Tetrachlorophenol
811-97-2	1,1,1,2-Tetrafluoroethane
7440-28-0	Thallium and compounds ^b
62-55-5	Thioacetamide
139-65-1	4,4'-Thiodianiline
62-56-6	Thiourea
7550-45-0	Titanium tetrachloride
108-88-3	Toluene
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)
584-84-9	Toluene-2,4-diisocyanate
91-08-7	Toluene-2,6-diisocyanate
95-53-4	<i>o</i> -Toluidine
636-21-5	<i>o</i> -Toluidine hydrochloride
41903-57-5	Total Ttetrachlorodibenzo- <i>p</i> -dioxin
36088-22-9	Total Ppentachlorodibenzo- <i>p</i> -dioxin
34465-46-8	Total Hhexachlorodibenzo- <i>p</i> -dioxin
37871-00-4	Total Hheptachlorodibenzo- <i>p</i> -dioxin



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CASRN ^a	Chemical Name
55722-27-5	Total T tetrachlorodibenzofuran
30402-15-4	Total P pentachlorodibenzofuran
55684-94-1	Total H hexachlorodibenzofuran
38998-75-3	Total H heptachlorodibenzofuran
8001-35-2	Toxaphene (P polychlorinated camphenes)
126-73-8	Tributyl phosphate
120-82-1	1,2,4-Trichlorobenzene
71-55-6	1,1,1-Trichloroethane (M methyl chloroform)
79-00-5	1,1,2-Trichloroethane (V vinyl trichloride)
79-01-6	Trichloroethene (TCE, T trichloroethylene)
75-69-4	Trichlorofluoromethane (Freon 11)
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
96-18-4	1,2,3-Trichloropropane
78-40-0	Triethyl phosph ate ine
121-44-8	Triethylamine
112-49-2	Triethylene glycol dimethyl ether
512-56-1	Trimethyl phosphate
78-30-8	Triorthocresyl phosphate
115-86-6	Triphenyl phosphate
101-02-0	Triphenyl phosphite
1582-09-8	Trifluralin
526-73-8	1,2,3-Trimethylbenzene
95-63-6	1,2,4-Trimethylbenzene
108-67-8	1,3,5-Trimethylbenzene
540-84-1	2,2,4-Trimethylpentane
62450-06-0	Tryptophan-P-1
62450-07-1	Tryptophan-P-2
51-79-6	Urethane (E ethyl carbamate)
7440-62-2	Vanadium (fume or dust)
1314-62-1	Vanadium pentoxide
108-05-4	Vinyl acetate
593-60-2	Vinyl bromide
75-01-4	Vinyl chloride



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CASRN# ^a	Chemical Name
100-40-3	4-Vinylcyclohexene
75-02-5	Vinyl fluoride
75-35-4	Vinylidene chloride
1330-20-7	Xylene (mixture), including <i>m</i> -xylene, <i>o</i> -xylene, <i>p</i> -xylene
108-38-3	<i>m</i> -Xylene
95-47-6	<i>o</i> -Xylene
106-42-3	<i>p</i> -Xylene
7440-66-6	Zinc and compounds ^b
1314-13-2	Zinc oxide

[Footnotes for OAR 340-247-8010 Table 1:](#)

NOTE: † [Chemical designated by DEQ ID number.](#)

- CASRN# = Chemical Abstracts Service [Registry Number](#), or [DEQ ID](#) if there is no CASRN.
- Inorganic chemicals designated with "and compounds" should be reported as the sum of all forms of the chemical, expressed as the inorganic element.
- TEQ = toxic equivalency, relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin.

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
 Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, and 468A.155

340-2475-8030 Table 23
Toxicity Reference Values



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
75-07-0	Acetaldehyde		HI3	0.45	A	140	O	470	O
60-35-5	Acetamide			0.050	O				
67-64-1	Acetone		HI3			31,000	T	62,000	S
75-05-8	Acetonitrile		HI3			60	I		
107-02-8	Acrolein		HI5			0.35	A	6.9	T
79-06-1	Acrylamide		HI3	0.010	I	6.0	I		
79-10-7	Acrylic acid		HI3			1.0	I	6,000	O
107-13-1	Acrylonitrile		HI3	0.015	A	5.0	O	220	T
309-00-2	Aldrin			0.00020	I				
107-05-1	Allyl chloride		HI3	0.17	O	1.0	I		
7429-90-5	Aluminum and compounds	Eq	HI5			5.0	P		
7664-41-7	Ammonia		HI3			500	A	1,200	T
62-53-3	Aniline		HI5	0.63	O	1.0	I		
7440-36-0	Antimony and compounds	o	HI3			0.30	T	1.0	T



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
140-57-8	Aramite			0.14	I				
7440-38-2	Arsenic and compounds	o	HI3	0.00023	A	0.015	O	0.20	S
7784-42-1	Arsine		HI3			0.015	O	0.20	O
1332-21-4	Asbestos	k		4.3E-06	I				
103-33-3	Azobenzene			0.032	I				
71-43-2	Benzene	j	HI3	0.13	A	3.0	O	29	T
92-87-5	Benzidine (and its salts)			7.1E-06	O				
100-44-7	Benzyl chloride		HI3	0.020	O	1.0	P	240	O
7440-41-7	Beryllium and compounds	o	HI3	0.00042	A	0.0070	O	0.020	S
111-44-4	<i>Bis</i> (2-chloroethyl) ether (BCEE)		HI3	0.0014	O			120	Tint
542-88-1	<i>Bis</i> (chloromethyl) ether		HI5	7.7E-05	O			1.4	Tint
117-81-7	<i>Bis</i> (2-ethylhexyl) phthalate (DEHP)			0.42	O				
75-25-2	Bromoform			0.91	I				
74-83-9	Bromomethane (Methyl bromide)		HI3			5.0	A	3,900	O



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
106-94-5	1-Bromopropane (<i>n</i> -propyl bromide)		HI3	0.48	A	33	T	1,700	T
106-99-0	1,3-Butadiene		HI3	0.033	A	2.0	O	660	O
78-93-3	2-Butanone (Methyl ethyl ketone)		HI3			5,000	I	5,000	S
78-92-2	sec-Butyl alcohol		HI3			30,000	P		
7440-43-9	Cadmium and compounds	o	HI3	0.00056	A	0.010	T	0.030	S
105-60-2	Caprolactam		HI3			2.2	O	50	O
75-15-0	Carbon disulfide		HI3			800	A	6,200	O
56-23-5	Carbon tetrachloride		HI3	0.17	A	100	I	1,900	O
463-58-1	Carbonyl sulfide		HI3			10	O	660	O
57-74-9	Chlordane	j	HI3	0.010	I	0.020	T	0.20	Tint
108171-26-2	Chlorinated paraffins	n		0.040	O				
7782-50-5	Chlorine		HI3			0.15	A	170	T
10049-04-4	Chlorine dioxide		HI3			0.60	O	2.8	Tint
532-27-4	2-Chloroacetophenone		HI5			0.030	I		
108-90-7	Chlorobenzene		HI3			50	P		



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)							
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c			
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes			
75-68-3	1-Chloro-1,1-difluoroethane		HI3			50,000	I				
75-45-6	Chlorodifluoromethane (Freon 22)		HI3			50,000	I				
75-00-3	Chloroethane (Eethyl chloride)		HI3			30,000	O	40,000	T		
67-66-3	Chloroform		HI3	A2		300	A	490	T		
74-87-3	Chloromethane (Mmethyl chloride)		HI3			90	A	1,000	T		
95-83-0	4-Chloro- <i>o</i> -phenylenediamine				0.22	O					
76-06-2	Chloropicrin		HI3			0.40	O	29	O		
126-99-8	Chloroprene		HI3		0.0033	I		20	I		
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine				0.013	O					
18540-29-9	Chromium VI, chromate and dichromate particulate	d	HI3		8.3E-05	A		0.20	O	0.30	S
18540-29-9 97738-94-5	Chromium VI, chromic acid aerosol mist and chromium trioxide	d	HI3		8.3E-05	A		0.0050	T	0.0050	S
7440-48-4	Cobalt and compounds	o	HI3			A2		0.10	A		



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
148†	Coke Oven Emissions			0.0016	I				
7440-50-8	Copper and compounds	o	HI3					100	O
120-71-8	<i>p</i> -Cresidine			0.023	O				
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol		HI3			600	O		
135-20-6	Cupferron			0.016	O				
74-90-8	Cyanide, Hydrogen		HI3			0.80	A	340	O
110-82-7	Cyclohexane		HI3			6,000	I		
50-29-3	DDT	e		0.010	I				
615-05-4	2,4-Diaminoanisole			0.15	O				
95-80-7	2,4-Diaminotoluene (2,4-Toluene diamine)			0.00091	O				
333-41-5	Diazinon		HI3					10	Tint
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		HI3	0.00017	P	0.20	I	1.9	Tint
106-46-7	<i>p</i> -Dichlorobenzene (1,4-Ddichlorobenzene)		HI3	0.091	A	60	T	12,000	T
91-94-1	3,3'-Dichlorobenzidine			0.0029	O				



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)						
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c		
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes		
75-34-3	1,1-Dichloroethane (Eethylidene dichloride)		0.63	O						
156-60-5	<i>trans</i> -1,2-dichloroethene		HI3				790	T		
75-09-2	Dichloromethane (Mmethylene chloride)		HI3		100	A	600	I	2,100	T
78-87-5	1,2-Dichloropropane (Ppropylene dichloride)		HI3				4.0	I	230	T
542-75-6	1,3-Dichloropropene		HI3		0.25	A	32	T	36	Tint
62-73-7	Dichlorevos (DDVP)		HI5				0.54	T	18	T
60-57-1	Dieldrin				0.00022	I				
200 [†]	Diesel Pparticulate Mmatter		HI3		0.10	A	5.0	O		
111-42-2	Diethanolamine		HI3				0.20	P		
112-34-5	Diethylene glycol monobutyl ether		HI3				0.10	P		
111-90-0	Diethylene glycol monoethyl ether		HI5				0.30	P		
75-37-6	1,1-Difluoroethane		HI5				40,000	I		
60-11-7	4- Dimethylaminoazobenzene				0.00077	O				



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	
68-12-2	Dimethyl formamide		HI3		80	O			
57-14-7	1,1-Dimethylhydrazine		HI3				0.49	Tint	
121-14-2	2,4-Dinitrotoluene			0.011	O				
123-91-1	1,4-Dioxane		HI3	0.20	I	30	I	7,200	T
122-66-7	1,2-Diphenylhydrazine (Hydrazobenzene)			0.0045	I				
1937-37-7	Direct Black 38			7.1E-06	O				
2602-46-2	Direct Blue 6			7.1E-06	O				
16071-86-6	Direct Brown 95 (technical grade)			7.1E-06	O				
298-04-4	Disulfoton		HI3				6.0	T	
106-89-8	Epichlorohydrin		HI3	0.043	O	3.0	O	1,300	O
106-88-7	1,2-Epoxybutane		HI5			20	O		
140-88-5	Ethyl acrylate		HI3			8.0	P		
100-41-4	Ethyl benzene		HI3	0.40	A	260	T	22,000	T
106-93-4	Ethylene dibromide (EDB, 1,2-Dibromoethane)		HI3	0.0017	A	9.0	I		



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes
107-06-2	Ethylene dichloride (EDC, 1,2-Dichloroethane)		HI3	0.038	A	7.0	P		
107-21-1	Ethylene glycol		HI3			400	O	2,000	T
111-76-2	Ethylene glycol monobutyl ether		HI3			82	O	29,000	T
110-80-5	Ethylene glycol monoethyl ether		HI3			70	O	370	O
111-15-9	Ethylene glycol monoethyl ether acetate		HI3			60	P	140	O
109-86-4	Ethylene glycol monomethyl ether		HI3			60	O	93	O
110-49-6	Ethylene glycol monomethyl ether acetate		HI3			1.0	P		
75-21-8	Ethylene oxide		HI3	0.00033	A	30	O	160	Tint
96-45-7	Ethylene thiourea			0.077	O				
239†	Fluorides		HI3			13	A	240	O
7782-41-4	Fluorine gas		HI3					16	T
50-00-0	Formaldehyde		HI3	0.17	A	9.0	O	49	T
111-30-8	Glutaraldehyde		HI5			0.080	O	4.1	T



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	
76-44-8	Heptachlor				0.00077	I			
1024-57-3	Heptachlor epoxide				0.00038	I			
118-74-1	Hexachlorobenzene				0.0020	O			
87-68-3	Hexachlorobutadiene				0.045	I			
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:				0.00091	O			
319-84-6	Hexachlorocyclohexane, <i>alpha</i> -				0.00091	O			
319-85-7	Hexachlorocyclohexane, <i>beta</i> -				0.00091	O			
58-89-9	Hexachlorocyclohexane, <i>gamma</i> - (Lindane)				0.0032	O			
77-47-4	Hexachlorocyclopentadiene		HI3				0.20	I	110 Tint
67-72-1	Hexachloroethane		HI3				30	I	58,000 T
822-06-0	Hexamethylene-1,6-diisocyanate		HI5				0.069	T	0.21 Tint
110-54-3	Hexane		HI3				700	A	
302-01-2	Hydrazine		HI3		0.00020	O	0.030	P	5.2 Tint



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
7647-01-0	Hydrochloric acid		HI3			20	A	2,100	O
7664-39-3	Hydrogen fluoride		HI3			13	A	16	T
7783-06-4	Hydrogen sulfide		HI3			2.0	A	98	S
78-59-1	Isophorone		HI3			2,000	O		
67-63-0	Isopropyl alcohol		HI3			200	P	3,200	O
98-82-8	Isopropylbenzene (Cumene)		HI3			400	I		
7439-92-1	Lead and compounds	o	HI3		A2	0.15	A	0.15	S
108-31-6	Maleic anhydride		HI5			0.70	O		
7439-96-5	Manganese and compounds	o	HI3			0.090	A	0.30	S
7439-97-6	Mercury and compounds	o	HI3			0.30	A	0.60	O
67-56-1	Methanol		HI3			4,000	A	28,000	O
101-14-4	4,4'-Methylene bis(2-chloroaniline) (MOCA)			0.0023	O				
101-77-9	4,4'-Methylenedianiline (and its dichloride)		HI5	0.0022	O	20	O		
101-68-8	Methylene diphenyl diisocyanate (MDI)		HI3			0.080	O	12	O



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes	
108-10-1	Methyl isobutyl ketone (MIBK, Hexone)		HI3			3,000	I		
624-83-9	Methyl isocyanate		HI3			1.0	O		
80-62-6	Methyl methacrylate		HI5			700	I		
1634-04-4	Methyl <i>tert</i> -butyl ether		HI3	3.8	O	8,000	O	8,000	O
90-94-8	Michler's ketone			0.0040	O				
91-20-3	Naphthalene		HI3	0.029	A	3.7	T	200	S
365[†]	Nickel compounds, insoluble	f	HI3	0.0038	A	0.014	O	0.20	O
368[†]	Nickel compounds, soluble	f	HI3		A2	0.014	A	0.20	O
7697-37-2	Nitric acid		HI5					86	O
98-95-3	Nitrobenzene		HI3	0.025	I	9.0	I		
79-46-9	2-Nitropropane		HI3			20	I		
924-16-3	N-Nitrosodi- <i>n</i> -butylamine			0.00032	O				
55-18-5	N-Nitrosodiethylamine			1.0E-04	O				
62-75-9	N-Nitrosodimethylamine			0.00022	O				
86-30-6	N-Nitrosodiphenylamine			0.38	O				



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	
156-10-5	p-Nitrosodiphenylamine		0.16	O					
621-64-7	N-Nitrosodi-n-propylamine		0.00050	O					
10595-95-6	N-Nitrosomethylethylamine		0.00016	O					
59-89-2	N-Nitrosomorpholine		0.00053	O					
100-75-4	N-Nitrosopiperidine		0.00037	O					
930-55-2	N-Nitrosopyrrolidine		0.0017	O					
8014-95-7	Oleum (fuming sulfuric acid)		HI3				120	O	
56-38-2	Parathion		HI3				0.020	Tint	
87-86-5	Pentachlorophenol		0.20	O					
108-95-2	Phenol		HI3		200	O	5,800	O	
75-44-5	Phosgene		HI3		0.30	A	4.0	O	
7803-51-2	Phosphine		HI3		0.80	A			
7664-38-2	Phosphoric acid		HI3		10	A			
12185-10-3	Phosphorus, white		HI3		9.0	A	20	T	
85-44-9	Phthalic anhydride		HI3		20	O			



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
447[†]	Polybrominated diphenyl ethers (PBDEs)	g	HI3					6.0	Tint
1336-36-3	Polychlorinated biphenyls (PCBs)			0.010	A				
645[†]	Polychlorinated biphenyls (PCBs) TEQ	h	HI3	2.6E-08	A1	4.E-05	O		
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]	h	HI3	0.00026	A1	0.40	O		
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]	h	HI3	8.8E-05	A1	0.13	O		
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]	h	HI3	2.6E-07	A1	0.00040	O		
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
52663-72-6	PCB 167 [2,3',4,4',5,5'-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]	h	HI3	8.8E-07	A1	0.0013	O		
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ	h	HI3	2.6E-08	A1	4.0E-05	O		
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)		HI3	2.6E-08	A	4.0E-05	O		
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)	h	HI3	2.6E-08	A1	4.0E-05	O		
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)	h	HI3	2.6E-06	A1	0.0040	O		
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)	h	HI3	8.8E-05	A1	0.13	O		
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TeCDF)	h	HI3	2.6E-07	A1	0.00040	O		
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	h	HI3	8.8E-07	A1	0.0013	O		
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	h	HI3	8.8E-08	A1	0.00013	O		
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	h	HI3	2.6E-06	A1	0.0040	O		
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	h	HI3	2.6E-06	A1	0.0040	O		
39001-02-0	Octachlorodibenzofuran (OCDF)	h	HI3	8.8E-05	A1	0.13	O		
401†	Polycyclic aromatic hydrocarbons (PAHs)	g		0.0017	A				
191-26-4	Anthanthrene	i		0.0042	A1				
56-55-3	Benz[a]anthracene	i		0.0083	A1				
50-32-8	Benzo[a]pyrene	m	HI3	0.0017	A	0.0020	I	0.0020	I
205-99-2	Benzo[b]fluoranthene	i		0.0021	A1				
205-12-9	Benzo[c]fluorene	i		8.3E-05	A1				



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	
191-24-2	Benzo[g,h,i]perylene	i	0.19	A1					
205-82-3	Benzo[j]fluoranthene	i	0.0056	A1					
207-08-9	Benzo[k]fluoranthene	i	0.056	A1					
218-01-9	Chrysene	i	0.017	A1					
27208-37-3	Cyclopenta[c,d]pyrene	i	0.0042	A1					
53-70-3	Dibenz[a,h]anthracene	i	0.00017	A1					
192-65-4	Dibenzo[a,e]pyrene	i	0.0042	A1					
189-64-0	Dibenzo[a,h]pyrene	i	0.0019	A1					
189-55-9	Dibenzo[a,i]pyrene	i	0.0028	A1					
191-30-0	Dibenzo[a,l]pyrene	i	5.6E-05	A1					
206-44-0	Fluoranthene	i	0.021	A1					
193-39-5	Indeno[1,2,3-cd]pyrene	i	0.024	A1					
3697-24-3	5-Methylchrysene	i	0.0017	A1					
7496-02-8	6-Nitrochrysene	i	0.00017	A1					
7758-01-2	Potassium bromate		0.0071	O					
1120-71-4	1,3-Propane sultone		0.0014	O					



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
123-38-6	Propionaldehyde		HI5			8.0	I		
115-07-1	Propylene		HI5			3,000	O		
6423-43-4	Propylene glycol dinitrate		HI5			0.27	T	20	T
107-98-2	Propylene glycol monomethyl ether		HI3			7,000	O		
75-56-9	Propylene oxide		HI3	0.27	O	30	O	3,100	O
572 ^t	Refractory Ceramic Fibers	k	HI5			0.030	T		
7783-07-5	Selenide, hydrogen		HI3					5.0	O
7782-49-2	Selenium and compounds	j, o	HI3				A3	2.0	S
7631-86-9	Silica, crystalline (respirable)		HI5			3.0	O		
1310-73-2	Sodium hydroxide		HI3					8.0	O
100-42-5	Styrene		HI3			1,000	A	21,000	S
7664-93-9	Sulfuric acid		HI5			1.0	O	120	O
505-60-2	Sulfur Mustard		HI3					0.70	T
7446-711-9	Sulfur trioxide		HI5			1.0	O	120	O
630-20-6	1,1,1,2-Tetrachloroethane			0.14	I				



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
79-34-5	1,1,2,2-Tetrachloroethane			0.017	O				
127-18-4	Tetrachloroethene (Perchloroethylene)		HI3	3.8	A	41	T	41	T
811-97-2	1,1,1,2-Tetrafluoroethane		HI3			80,000	I		
62-55-5	Thioacetamide			0.00059	O				
7550-45-0	Titanium tetrachloride		HI3			0.10	T	10	Tint
108-88-3	Toluene		HI3			5,000	A	7,500	T
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)		HI3	0.091	O	0.021	A	0.071	T
8001-35-2	Toxaphene (Polychlorinated camphenes)			0.0031	I				
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)		HI3			5,000	A	11,000	T
79-00-5	1,1,2-Trichloroethane (Vinyl trichloride)			0.063	O				
79-01-6	Trichloroethene (TCE, Trichloroethylene)		HI3	0.24	A	2.1	T	2.1	Tint
88-06-2	2,4,6-Trichlorophenol			0.050	O				
96-18-4	1,2,3-Trichloropropane		HI5			0.30	I	1.8	T



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Table 23
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN#	Chemical	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes	
121-44-8	Triethylamine		HI3		200	O	2,800	O	
526-73-8	1,2,3-Trimethylbenzene		HI3		60	I			
95-63-6	1,2,4-Trimethylbenzene		HI3		60	I			
108-67-8	1,3,5-Trimethylbenzene		HI3		60	I			
51-79-6	Urethane (Eethyl carbamate)			0.0034	O				
7440-62-2	Vanadium (fume or dust)		HI3		0.10	T	0.80	T	
1314-62-1	Vanadium pentoxide		HI3	0.00012	P	0.0070	P	30	
108-05-4	Vinyl acetate	†	HI3		200	O	200	I	
593-60-2	Vinyl bromide		HI5		3.0	I			
75-01-4	Vinyl chloride		HI3	0.11	I	100	I	1,300	
75-35-4	Vinylidene chloride	†	HI3		200	I	200	I	
1330-20-7	Xylene (mixture), including <i>m</i> -xylene, <i>o</i> -xylene, <i>p</i> -xylene		HI3		220	A	8,700	T	

[Footnotes for OAR 340-247-8010 Table 2:](#)

† [Chemical designated by DEQ ID number.](#)

Notes:

- a) TRV based on a 1 in 1 million excess cancer risk.
TRV = $1 \times 10^{-6} / \text{IUR}$, where IUR = chemical-specific inhalation unit risk value $[(\mu\text{g}/\text{m}^3)^{-1}]$.
- b) TRV based on chronic non-cancer value from authoritative sources ($\mu\text{g}/\text{m}^3$).
- c) TRV based on acute or subchronic non-cancer value from authoritative sources ($\mu\text{g}/\text{m}^3$).
- d) The TRVs presented for chromium are applicable to hexavalent chromium.
- e) DDT TRVs apply to the sum of DDT, DDE, and DDD compounds.
- f) As recommended by the ATSAC in 2018, the two categories of nickel compounds contain the following specific nickel compounds:
Soluble nickel compounds are considered to be emitted mainly in aerosol form, to be less potent carcinogens than insoluble nickel compounds, and include nickel acetate, nickel chloride, nickel carbonate, nickel hydroxide, nickelocene, nickel sulfate, nickel sulfate hexahydrate, nickel nitrate hexahydrate, nickel carbonate hydroxide.
Insoluble nickel compounds are considered to be emitted mainly in particulate form, to be more potent carcinogens than soluble nickel compounds, and to include nickel subsulfide, nickel oxide, nickel sulfide, nickel metal.
- g) TRVs apply to octabrominated diphenyl ethers (CASRN# 32536-52-0) and pentabrominated diphenyl ethers (CASRN# 32534-81-9), including BDE-99.
- h) TRV for chronic cancer calculated by applying toxicity equivalency factor to 2,3,7,8-TCDD TRV.
- i) TRV for chronic cancer calculated by applying toxicity equivalency factor to benzo[a]pyrene TRV.
- j) If the short-term toxicity reference value is lower than the chronic noncancer toxicity reference value, the chronic noncancer toxicity reference value was used for the short-term toxicity reference value because chronic noncancer toxicity reference values are generally more reliable.
- k) TRVs for asbestos and refractory ceramic fibers are in units of fibers/cm³.
- m) Because benzo[a]pyrene can cause developmental effects, the chronic noncancer TRV is also used as the acute noncancer TRV.
- n) Chlorinated paraffins of average chain length of C12, approximately 60% chlorine by weight.
- o) An inorganic chemical designated with "and compounds" indicates that the TRV applies to the sum of all forms of the chemical, expressed as the inorganic element.
- p) Noncancer TBACT RAL = noncancer Toxics Best Available Control Technology Risk Action Level, OAR 340-245-8010, Table 1.
- q) [Cancer TRV for PAHs was developed using benzo\[a\]pyrene TRV.](#)

Legend:

- A = ATSAC, DEQ Air Toxics Science Advisory Committee, 2018.
- A1 = ATSAC, 2018. TRV for cancer calculated by applying toxic equivalency factor.
- A2 = Because the ATSAC decided it was inappropriate to develop an ABC based on carcinogenic effects, DEQ did not obtain a cancer TRV from the other authoritative sources.
- A3 = Because the ATSAC decided it was inappropriate to develop an ABC based on noncarcinogenic effects, DEQ did not obtain a TRV from the other authoritative sources.
- CASRN# = Chemical Abstracts Service [Registry #Number](#), or DEQ ID if there is no CASRN.
- I = IRIS, EPA integrated risk information system
- O = OEHHA, California Environmental Protection Agency, Office of Environmental Health Hazard Assessment
- P = PPRTV, EPA preliminary peer reviewed toxicity value
- S = SGC, DEQ short-term guideline concentration
- T = ATSDR, U.S. Agency for Toxic Substances and Disease Registry
- TEQ = toxic equivalency, relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin.
- Tint = ATSDR, intermediate minimal risk level
- TRV = toxicity reference value

340-245-80140 Table 24
Risk-Based Concentrations



OAR 340-245-80140
Table 24
Risk-Based Concentrations

CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
75-07-0	Acetaldehyde		HI3	0.45	140	12	620	5.5	620	470
60-35-5	Acetamide			0.050		1.3		0.60		
67-64-1	Acetone		HI3		31,000		140,000		140,000	62,000
75-05-8	Acetonitrile		HI3		60		260		260	
107-02-8	Acrolein		HI5		0.35		1.5		1.5	6.9
79-06-1	Acrylamide	g	HI3	0.0059	6.0	0.062	26	0.12	26	
79-10-7	Acrylic acid		HI3		1.0		4.4		4.4	6,000
107-13-1	Acrylonitrile		HI3	0.015	5.0	0.38	22	0.18	22	220
309-00-2	Aldrin			0.00020		0.0053		0.0024		
107-05-1	Allyl chloride		HI3	0.17	1.0	4.3	4.4	2.0	4.4	
7429-90-5	Aluminum and compounds	1	HI5		5.0		22		22	
7664-41-7	Ammonia		HI3		500		2,200		2,200	1,200
62-53-3	Aniline		HI5	0.63	1.0	16	4.4	7.5	4.4	
7440-36-0	Antimony and compounds	1	HI3		0.30		1.3		1.3	1.0
140-57-8	Aramite			0.14		3.7		1.7		
7440-38-2	Arsenic and compounds	1	HI3	2.4E-05	0.00017	0.0013	0.0024	0.00062	0.0024	0.20
7784-42-1	Arsine		HI3		0.015		0.066		0.066	0.20
1332-21-4	Asbestos	I		4.3E-06		0.00011		5.2E-05		
103-33-3	Azobenzene			0.032		0.84		0.39		
71-43-2	Benzene		HI3	0.13	3.0	3.3	13	1.5	13	29
92-87-5	Benzidine (and its salts)	Gg		4.2E-06		4.4E-05		8.6E-05		
100-44-7	Benzyl chloride		HI3	0.020	1.0	0.53	4.4	0.24	4.4	240
7440-41-7	Beryllium and compounds	H1	HI3	0.00042	0.0070	0.011	0.031	0.0050	0.031	0.020
111-44-4	Bis(2-chloroethyl) ether (BCEE)		HI3	0.0014		0.037		0.017		120



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
542-88-1	Bis(chloromethyl) ether		HI5	7.7E-05		0.0020		0.00092		1.4
117-81-7	Bis(2-ethylhexyl) phthalate (DEHP)	c		0.080		11		5.0		
75-25-2	Bromoform			0.91		24		11		
74-83-9	Bromomethane (Methyl bromide)		HI3		5.0		22		22	3,900
106-94-5	1-Bromopropane (n-propyl bromide)		HI3	0.48	33	12	150	5.7	150	1,700
106-99-0	1,3-Butadiene		HI3	0.033	2.0	0.86	8.8	0.40	8.8	660
78-93-3	2-Butanone (Methyl ethyl ketone)		HI3		5,000		22,000		22,000	5,000
78-92-2	sec-Butyl alcohol		HI3		30,000		130,000		130,000	
7440-43-9	Cadmium and compounds	c, l	HI3	0.00056	0.0050	0.014	0.037	0.0067	0.037	0.030
105-60-2	Caprolactam		HI3		2.2		9.7		9.7	50
75-15-0	Carbon disulfide		HI3		800		3,500		3,500	6,200
56-23-5	Carbon tetrachloride		HI3	0.17	100	4.3	440	2.0	440	1,900
463-58-1	Carbonyl sulfide		HI3		10		44		44	660
57-74-9	Chlordane		HI3	0.010	0.020	0.26	0.088	0.12	0.088	0.20
108171-26-2	Chlorinated paraffins	j		0.040		1.0		0.48		
7782-50-5	Chlorine		HI3		0.15		0.66		0.66	170
10049-04-4	Chlorine dioxide		HI3		0.60		2.6		2.6	2.8
532-27-4	2-Chloroacetophenone		HI5		0.030		0.13		0.13	
108-90-7	Chlorobenzene		HI3		50		220		220	
75-68-3	1-Chloro-1,1-difluoroethane		HI3		50,000		220,000		220,000	
75-45-6	Chlorodifluoromethane (Freon 22)		HI3		50,000		220,000		220,000	
75-00-3	Chloroethane (Ethyl chloride)		HI3		30,000		130,000		130,000	40,000
67-66-3	Chloroform		HI3		300		1,300		1,300	490



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
74-87-3	Chloromethane (Methyl chloride)		HI3		90		400		400	1,000
95-83-0	4-Chloro- <i>o</i> -phenylenediamine			0.22		5.7		2.6		
76-06-2	Chloropicrin		HI3		0.40		1.8		1.8	29
126-99-8	Chloroprene		HI3	0.0033	20	0.087	88	0.040	88	
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine			0.013		0.34		0.16		
18540-29-9	Chromium VI, chromate and dichromate particulate	c, d	HI3	3.1E-05	0.083	0.00052	0.88	0.0010	0.88	0.30
18540-29-9 97738-94-5	Chromium VI, chromic acid aerosol mist and chromium trioxide	c, d	HI3	3.1E-05	0.0021	0.00052	0.022	0.0010	0.022	0.0050
7440-48-4	Cobalt and compounds	l	HI3		0.10		0.44		0.44	
148 ^f	Coke Oven Emissions	g		0.00095		0.0100		0.019		
7440-50-8	Copper and compounds	l	HI3							100
120-71-8	<i>p</i> -Cresidine			0.023		0.60		0.28		
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol		HI3		600		2,600		2,600	
135-20-6	Cupferron			0.016		0.41		0.19		
74-90-8	Cyanide, Hhydrogen		HI3		0.80		3.5		3.5	340
110-82-7	Cyclohexane		HI3		6,000		26,000		26,000	
50-29-3	DDT	e		0.010		0.27		0.12		
615-05-4	2,4-Diaminoanisole			0.15		3.9		1.8		
95-80-7	2,4-Diaminotoluene (2,4-Toluene diamine)			0.00091		0.024		0.011		
333-41-5	Diazinon		HI3							10
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	g	HI3	9.8E-05	0.20	0.0010	0.88	0.0020	0.88	1.9
106-46-7	<i>p</i> -Dichlorobenzene (1,4-Dichlorobenzene)		HI3	0.091	60	2.4	260	1.1	260	12,000
91-94-1	3,3'-Dichlorobenzidine			0.0029		0.076		0.035		



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
75-34-3	1,1-Dichloroethane (Eethylidene dichloride)			0.63		16		7.5		
156-60-5	trans-1,2-dichloroethene		HI3							790
75-09-2	Dichloromethane (Mmethylene chloride)		HI3	59	600	620	2,600	1,200	2,600	2,100
78-87-5	1,2-Dichloropropane (Ppropylene dichloride)		HI3		4.0		18		18	230
542-75-6	1,3-Dichloropropene		HI3	0.25	32	6.5	140	3.0	140	36
62-73-7	Dichloroevos (DDVP)		HI5		0.54		2.4		2.4	18
60-57-1	Dieldrin			0.00022		0.0057		0.0026		
200 [†]	Diesel Pparticulate Mmatter		HI3	0.10	5.0	2.6	22	1.2	22	
111-42-2	Diethanolamine		HI3		0.20		0.88		0.88	
112-34-5	Diethylene glycol monobutyl ether		HI3		0.10		0.44		0.44	
111-90-0	Diethylene glycol monoethyl ether		HI5		0.30		1.3		1.3	
75-37-6	1,1-Difluoroethane		HI5		40,000		180,000		180,000	
60-11-7	4-Dimethylaminoazobenzene			0.00077		0.020		0.0092		
68-12-2	Dimethyl formamide		HI3		80		350		350	
57-14-7	1,1-Dimethylhydrazine		HI3							0.49
121-14-2	2,4-Dinitrotoluene			0.011		0.29		0.13		
123-91-1	1,4-Dioxane		HI3	0.20	30	5.2	130	2.4	130	7,200
122-66-7	1,2-Diphenylhydrazine (Hhydrazobenzene)			0.0045		0.12		0.055		
1937-37-7	Direct Black 38			7.1E-06		0.00019		8.6E-05		
2602-46-2	Direct Blue 6			7.1E-06		0.00019		8.6E-05		
16071-86-6	Direct Brown 95 (technical grade)			7.1E-06		0.00019		8.6E-05		
298-04-4	Disulfoton		HI3							6.0
106-89-8	Epichlorohydrin		HI3	0.043	3.0	1.1	13	0.52	13	1,300



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
106-88-7	1,2-Epoxybutane		HI5		20		88		88	
140-88-5	Ethyl acrylate		HI3		8.0		35		35	
100-41-4	Ethyl benzene		HI3	0.40	260	10	1,100	4.8	1,100	22,000
106-93-4	Ethylene dibromide (EDB, 1,2-Dibromoethane)		HI3	0.0017	9.0	0.043	40	0.020	40	
107-06-2	Ethylene dichloride (EDC, 1,2-Dichloroethane)		HI3	0.038	7.0	1.0	31	0.46	31	
107-21-1	Ethylene glycol		HI3		400		1,800		1,800	2,000
111-76-2	Ethylene glycol monobutyl ether		HI3		82		360		360	29,000
110-80-5	Ethylene glycol monoethyl ether		HI3		70		310		310	370
111-15-9	Ethylene glycol monoethyl ether acetate		HI3		60		260		260	140
109-86-4	Ethylene glycol monomethyl ether		HI3		60		260		260	93
110-49-6	Ethylene glycol monomethyl ether acetate		HI3		1.0		4.4		4.4	
75-21-8	Ethylene oxide	g	HI3	0.00020	30	0.0021	130	0.0040	130	160
96-45-7	Ethylene thiourea			0.077		2.0		0.92		
239 ^f	Fluorides	c	HI3		2.3		20		20	240
7782-41-4	Fluorine gas		HI3							16
50-00-0	Formaldehyde		HI3	0.17	9.0	4.3	40	2.0	40	49
111-30-8	Glutaraldehyde		HI5		0.080		0.35		0.35	4.1
76-44-8	Heptachlor			0.00077		0.020		0.0092		
1024-57-3	Heptachlor epoxide			0.00038		0.010		0.0046		
118-74-1	Hexachlorobenzene			0.0020		0.051		0.024		
87-68-3	Hexachlorobutadiene			0.045		1.2		0.55		
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:	c		0.00017		0.018		0.0084		



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic			Acute	
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
319-84-6	Hexachlorocyclohexane, <i>alpha</i> -	c		0.00017		0.018		0.0084		
319-85-7	Hexachlorocyclohexane, <i>beta</i> -	c		0.00017		0.018		0.0084		
58-89-9	Hexachlorocyclohexane, <i>gamma</i> - (Lindane)	c		0.00060		0.065		0.030		
77-47-4	Hexachlorocyclopentadiene		HI3		0.20		0.88		0.88	110
67-72-1	Hexachloroethane		HI3		30		130		130	58,000
822-06-0	Hexamethylene-1,6-diisocyanate		HI5		0.069		0.30		0.30	0.21
110-54-3	Hexane		HI3		700		3,100		3,100	
302-01-2	Hydrazine		HI3	0.00020	0.030	0.0053	0.13	0.0024	0.13	5.2
7647-01-0	Hydrochloric acid		HI3		20		88		88	2,100
7664-39-3	Hydrogen fluoride	c	HI3		2.1		19		19	16
7783-06-4	Hydrogen sulfide		HI3		2.0		8.8		8.8	98
78-59-1	Isophorone		HI3		2,000		8,800		8,800	
67-63-0	Isopropyl alcohol		HI3		200		880		880	3,200
98-82-8	Isopropylbenzene (Cumene)		HI3		400		1,800		1,800	
7439-92-1	Lead and compounds	c, l	HI3		0.15		0.66		0.66	0.15
108-31-6	Maleic anhydride		HI5		0.70		3.1		3.1	
7439-96-5	Manganese and compounds	l	HI3		0.090		0.40		0.40	0.30
7439-97-6	Mercury and compounds	c, l	HI3		0.077		0.63		0.63	0.60
67-56-1	Methanol		HI3		4,000		18,000		18,000	28,000
101-14-4	4,4'-Methylene bis(2-chloroaniline) (MOCA)			0.0023		0.060		0.028		
101-77-9	4,4'-Methylenedianiline (and its dichloride)		HI5	0.00030	20	0.023	88	0.010	88	
101-68-8	Methylene diphenyl diisocyanate (MDI)		HI3		0.080		0.35		0.35	12



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
108-10-1	Methyl isobutyl ketone (MIBK, Hexone)		HI3		3,000		13,000		13,000	
624-83-9	Methyl isocyanate		HI3		1.0		4.4		4.4	
80-62-6	Methyl methacrylate		HI5		700		3,100		3,100	
1634-04-4	Methyl <i>tert</i> -butyl ether		HI3	3.8	8,000	100	35,000	46	35,000	8,000
90-94-8	Michler's ketone			0.0040		0.10		0.048		
91-20-3	Naphthalene	c	HI3	0.029	3.7	0.76	16	0.35	16	200
365 ^f	Nickel compounds, insoluble	f	HI3	0.0038	0.014	0.10	0.062	0.046	0.062	0.20
368 ^f	Nickel compounds, soluble	f	HI3		0.014		0.062		0.062	0.20
7697-37-2	Nitric acid		HI5							86
98-95-3	Nitrobenzene		HI3	0.025	9.0	0.65	40	0.30	40	
79-46-9	2-Nitropropane		HI3		20		88		88	
924-16-3	N-Nitrosodi- <i>n</i> -butylamine			0.00032		0.0084		0.0039		
55-18-5	N-Nitrosodiethylamine	g		5.9E-05		0.00062		0.0012		
62-75-9	N-Nitrosodimethylamine	g		0.00013		0.0013		0.0026		
86-30-6	N-Nitrosodiphenylamine			0.38		10		4.6		
156-10-5	<i>p</i> -Nitrosodiphenylamine			0.16		4.1		1.9		
621-64-7	N-Nitrosodi- <i>n</i> -propylamine			0.00050		0.013		0.0060		
10595-95-6	N-Nitrosomethylethylamine			0.00016		0.0041		0.0019		
59-89-2	N-Nitrosomorpholine			0.00053		0.014		0.0063		
100-75-4	N-Nitrosopiperidine			0.00037		0.0096		0.0044		
930-55-2	N-Nitrosopyrrolidine			0.0017		0.043		0.020		
8014-95-7	Oleum (fuming sulfuric acid)		HI3							120
56-38-2	Parathion		HI3							0.020
87-86-5	Pentachlorophenol			0.20		5.1		2.4		
108-95-2	Phenol		HI3		200		880		880	5,800
75-44-5	Phosgene		HI3		0.30		1.3		1.3	4.0
7803-51-2	Phosphine		HI3		0.80		3.5		3.5	



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CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
7664-38-2	Phosphoric acid		HI5		10		44		44	
12185-10-3	Phosphorus, white		HI3		9.0		40		40	20
85-44-9	Phthalic anhydride		HI3		20		88		88	
447[†]	Polybrominated diphenyl ethers (PBDEs)	h	HI3							6.0
1336-36-3	Polychlorinated biphenyls (PCBs)	c		0.00053		0.020		0.0092		
645[†]	Polychlorinated biphenyls (PCBs) TEQ	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]	c	HI3	1.0E-05	0.0013	0.00090	0.26	0.00042	0.26	
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
52663-72-6	PCB 167 [2,3',4,4',5,5'-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]	c	HI3	3.4E-08	4.2E-06	3.0E-06	0.00085	1.4E-06	0.00085	
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]	c	HI3	0.00088 3.4E-05	1.3 0.0042	0.023 0.0030	5.70.85 5.70.85	0.011 0.0014	5.7 0.85	



OAR 340-245-80140
Table 24
Risk-Based Concentrations

CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TeCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	c	HI3	3.4E-08	4.2E-06	3.0E-06	0.00085	1.4E-06	0.00085	
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	c	HI3	3.4E-09	4.2E-07	3.0E-07	8.5E-05	1.4E-07	8.5E-05	
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	



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Table 24
Risk-Based Concentrations

CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
39001-02-0	Octachlorodibenzofuran (OCDF)	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
401 [†]	Polycyclic aromatic hydrocarbons (PAHs)	c, g, <u>n</u>		4.3E-05		0.0016		0.0030		
191-26-4	Anthanthrene	c, g		0.00011		0.0039		0.0076		
56-55-3	Benz[a]anthracene	c, g		0.00021		0.0078		0.015		
50-32-8	Benzo[a]pyrene	c, g	HI3	4.3E-05	0.0020	0.0016	0.0088	0.0030	0.0088	0.0020
205-99-2	Benzo[b]fluoranthene	c, g		5.3E-05		0.0020		0.0038		
205-12-9	Benzo[c]fluorene	c, g		2.1E-06		7.8E-05		0.00015		
191-24-2	Benzo[g,h,i]perylene	c, g		0.0047		0.17		0.34		
205-82-3	Benzo[j]fluoranthene	c, g		0.00014		0.0052		0.010		
207-08-9	Benzo[k]fluoranthene	c, g		0.0014		0.052		0.10		
218-01-9	Chrysene	c, g		0.00043		0.016		0.030		
27208-37-3	Cyclopenta[c,d]pyrene	c, g		0.00011		0.0039		0.0076		
53-70-3	Dibenz[a,h]anthracene	c, g		4.3E-06		0.00016		0.00030		
192-65-4	Dibenzo[a,e]pyrene	c, g		0.00011		0.0039		0.0076		
189-64-0	Dibenzo[a,h]pyrene	c, g		4.7E-05		0.0017		0.0034		
189-55-9	Dibenzo[a,i]pyrene	c, g		7.1E-05		0.0026		0.0051		
191-30-0	Dibenzo[a,l]pyrene	c, g		1.4E-06		5.2E-05		0.00010		



OAR 340-245-80140
Table 24
Risk-Based Concentrations

CASRN# ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
206-44-0	Fluoranthene	c, g		0.00053		0.020		0.038		
193-39-5	Indeno[1,2,3-cd]pyrene	c, g		0.00061		0.022		0.043		
3697-24-3	5-Methylchrysene	c, g		4.3E-05		0.0016		0.0030		
7496-02-8	6-Nitrochrysene	c, g		4.3E-06		0.00016		0.00030		
7758-01-2	Potassium bromate			0.0071		0.19		0.086		
1120-71-4	1,3-Propane sultone			0.0014		0.038		0.017		
123-38-6	Propionaldehyde		HI5		8.0		35		35	
115-07-1	Propylene		HI5		3,000		13,000		13,000	
6423-43-4	Propylene glycol dinitrate		HI5		0.27		1.2		1.2	20
107-98-2	Propylene glycol monomethyl ether		HI3		7,000		31,000		31,000	
75-56-9	Propylene oxide		HI3	0.27	30	7.0	130	3.2	130	3,100
572 ⁱ	Refractory Ceramic Fibers	i	HI5		0.030		0.13		0.13	
7783-07-5	Selenide, hydrogen		HI3							5.0
7782-49-2	Selenium and compounds	l	HI3							2.0
7631-86-9	Silica, crystalline (respirable)		HI5		3.0		13		13	
1310-73-2	Sodium hydroxide		HI3							8.0
100-42-5	Styrene		HI3		1,000		4,400		4,400	21,000
7664-93-9	Sulfuric acid		HI5		1.0		4.4		4.4	120
505-60-2	Sulfur Mustard		HI3							0.70
7446-71-9	Sulfur trioxide		HI5		1.0		4.4		4.4	120
630-20-6	1,1,1,2-Tetrachloroethane			0.14		3.5		1.6		
79-34-5	1,1,2,2-Tetrachloroethane			0.017		0.45		0.21		
127-18-4	Tetrachloroethene (Perchloroethylene)		HI3	3.8	41	100	180	46	180	41
811-97-2	1,1,1,2-Tetrafluoroethane		HI3		80,000		350,000		350,000	
62-55-5	Thioacetamide			0.00059		0.015		0.0071		
7550-45-0	Titanium tetrachloride		HI3		0.10		0.44		0.44	10



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Table 24
Risk-Based Concentrations

CASRN# ^b	Chemical	Notes	Non cancer TBACTRAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
108-88-3	Toluene		HI3		5,000		22,000		22,000	7,500
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)		HI3	0.091	0.021	2.4	0.092	1.1	0.092	0.071
8001-35-2	Toxaphene (Polychlorinated camphenes)			0.0031		0.081		0.038		
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)		HI3		5,000		22,000		22,000	11,000
79-00-5	1,1,2-Trichloroethane (Vinyl trichloride)			0.063		1.6		0.75		
79-01-6	Trichloroethene (TCE, Trichloroethylene)	g	HI3	0.20	2.1	3.5	9.2	2.9	9.2	2.1
88-06-2	2,4,6-Trichlorophenol			0.050		1.3		0.60		
96-18-4	1,2,3-Trichloropropane		HI5		0.30		1.3		1.3	1.8
121-44-8	Triethylamine		HI3		200		880		880	2,800
526-73-8	1,2,3-Trimethylbenzene		HI3		60		260		260	
95-63-6	1,2,4-Trimethylbenzene		HI3		60		260		260	
108-67-8	1,3,5-Trimethylbenzene		HI3		60		260		260	
51-79-6	Urethane (Ethyl carbamate)	g		0.0020		0.021		0.041		
7440-62-2	Vanadium (fume or dust)		HI3		0.10		0.44		0.44	0.80
1314-62-1	Vanadium pentoxide		HI3	0.00012	0.0070	0.0031	0.031	0.0014	0.031	30
108-05-4	Vinyl acetate		HI3		200		880		880	200
593-60-2	Vinyl bromide		HI5		3.0		13		13	
75-01-4	Vinyl chloride	g, k	HI3	0.11	100	0.22	440	2.7	440	1,300
75-35-4	Vinylidene chloride		HI3		200		880		880	200
1330-20-7	Xylene (mixture), including m-xylene, o-xylene, p-xylene		HI3		220		970		970	8,700

[Footnotes for OAR 340-245-8010 Table 2:](#)

† [Chemical designated by DEQ ID number.](#)

Notes:

- a) RBC = Risk-Based Concentration
- b) CASRN# = Chemical Abstracts Service [Registry #Number](#), or DEQ ID if there is no CASRN.
- c) Chronic RBCs include factors for multipathway risk.
- d) The RBCs presented for chromium are applicable to hexavalent chromium. In the absence of data indicating otherwise, assume that any total chromium (i.e., unspiciated) that is measured or modeled is entirely in the hexavalent form. Determine, based on information about the source of emissions, whether hexavalent chromium is emitted in aerosol or particulate form, and apply the corresponding RBC. Because there are no RBCs for trivalent chromium, a source determined to be emitting only trivalent chromium cannot be shown to pose an unacceptable risk, so the risk in this case will be considered acceptable.
- e) DDT RBCs apply to the sum of DDT, DDE, and DDD compounds.
- f) As recommended by DEQ's Air Toxics Science Advisory Committee (ATSAC) in 2018, the two categories of nickel compounds contain the following specific nickel compounds:
Soluble nickel compounds are considered to be emitted mainly in aerosol form, to be less potent carcinogens than insoluble nickel compounds, and include nickel acetate, nickel chloride, nickel carbonate, nickel hydroxide, nickelocene, nickel sulfate, nickel sulfate hexahydrate, nickel nitrate hexahydrate, nickel carbonate hydroxide.
Insoluble nickel compounds are considered to be emitted mainly in particulate form, to be more potent carcinogens than soluble nickel compounds, and to include nickel subsulfide, nickel oxide, nickel sulfide, nickel metal.
- g) RBCs adjusted to protect early-life exposure to infants and children because chemical is carcinogenic by a mutagenic mode of action.
- h) RBCs apply to octabrominated diphenyl ethers (CASRN# 32536-52-0) and pentabrominated diphenyl ethers (CASRN# 32534-81-9), including BDE-99.
- i) RBCs for asbestos and refractory ceramic fibers are in units of fibers/cm³.
- j) Chlorinated paraffins of average chain length of C12, approximately 60% chlorine by weight.
- k) DEQ followed the ATSAC recommendation to develop a vinyl chloride TRV that already includes early-life exposure.
- l) An inorganic chemical designated with "and compounds" indicates that the RBC applies to the sum of all forms of the chemical, expressed as the inorganic element.
- m) Noncancer TBACT RAL = noncancer Toxics Best Available Control Technology Risk Action Level, OAR 340-245-8010, Table 1.
- n) [Because RBCs for PAHs were developed using TRVs for benzo\[a\]pyrene, apply PAH RBCs to summed benzo\[a\]pyrene toxicity equivalents for carcinogenic PAHs. If individual PAHs are not evaluated, apply PAH RBCs to total PAH concentrations.](#)



OAR 340-245-80150 Table 35
Level 1 Risk Assessment Tool Dispersion Factors

Table 35A: Stack Emission Dispersion Factors for Annual Exposure
($\mu\text{g}/\text{m}^3$ / pounds/year)

Stack	Exposure Location Distance (meters)												
Ht (m)	50	60	70	80	90	100	110	120	130	140	150	160	170
5	0.0033	0.0026	0.0021	0.0017	0.0014	0.0012	0.0010	0.00088	0.00076	0.00066	0.00058	0.00051	0.00046
10	0.0014	0.0012	0.0011	0.00094	0.00084	0.00075	0.00068	0.00062	0.00057	0.00052	0.00048	0.00044	0.00041
15	0.00075	0.00061	0.00054	0.00049	0.00044	0.00040	0.00037	0.00034	0.00031	0.00029	0.00027	0.00025	0.00024
20	0.00072	0.00054	0.00035	0.00031	0.00028	0.00026	0.00023	0.00022	0.00020	0.00019	0.00017	0.00016	0.00015
25	0.00050	0.00041	0.00035	0.00025	0.00019	0.00018	0.00016	0.00015	0.00014	0.00013	0.00012	0.00012	0.00011
30	0.00037	0.00030	0.00026	0.00023	0.00019	0.00013	0.00012	0.00011	0.00010	0.000096	0.000090	0.000085	0.000080
35	0.00030	0.00023	0.00019	0.00017	0.00015	0.00013	0.00011	0.000081	0.000075	0.000071	0.000068	0.000064	0.000061
40	0.00023	0.00019	0.00015	0.00013	0.00012	0.00011	0.000096	0.000081	0.000064	0.000054	0.000051	0.000049	0.000047
45	0.00018	0.00016	0.00013	0.00011	0.000095	0.000085	0.000078	0.000072	0.000063	0.000053	0.000042	0.000038	0.000037
50	0.00014	0.00013	0.00011	0.000090	0.000077	0.000068	0.000062	0.000057	0.000053	0.000048	0.000042	0.000035	0.000029

Stack	Exposure Location Distance (meters)												
Ht (m)	180	190	200	250	300	350	400	450	500	600	700	800	1000
5	0.00041	0.00037	0.00034	0.00023	0.00017	0.00013	0.00010	0.000084	0.000071	0.000052	0.000040	0.000032	0.000022
10	0.00038	0.00035	0.00033	0.00023	0.00017	0.00013	0.000098	0.000078	0.000064	0.000047	0.000036	0.000029	0.000021
15	0.00023	0.00021	0.00020	0.00016	0.00013	0.00010	0.000083	0.000069	0.000057	0.000041	0.000032	0.000025	0.000018
20	0.00014	0.00014	0.00013	0.00010	0.000086	0.000073	0.000062	0.000053	0.000046	0.000035	0.000027	0.000021	0.000015
25	0.00010	0.000096	0.000091	0.000072	0.000059	0.000051	0.000044	0.000039	0.000034	0.000027	0.000022	0.000018	0.000013
30	0.000075	0.000071	0.000068	0.000053	0.000044	0.000037	0.000032	0.000028	0.000025	0.000021	0.000017	0.000014	0.000010
35	0.000058	0.000055	0.000052	0.000042	0.000034	0.000029	0.000025	0.000022	0.000019	0.000016	0.000014	0.000011	0.000008
40	0.000045	0.000043	0.000041	0.000033	0.000028	0.000023	0.000020	0.000018	0.000016	0.000013	0.000011	0.000009	0.000007
45	0.000036	0.000034	0.000033	0.000027	0.000023	0.000019	0.000017	0.000015	0.000013	0.000011	0.000009	0.000008	0.000006
50	0.000027	0.000026	0.000026	0.000022	0.000019	0.000016	0.000014	0.000012	0.000011	0.000009	0.000007	0.000006	0.000005

Table 35B: Stack Emission Dispersion Factors for 24 hour Exposure ($\mu\text{g}/\text{m}^3$ / pounds/day)

Stack	Exposure Location Distance (meters)												
Ht (m)	50	60	70	80	90	100	110	120	130	140	150	160	170
5	8.3	7.1	6.1	5.2	4.4	3.8	3.2	2.7	2.4	2.1	1.8	1.6	1.4
10	3.8	3.4	3.1	2.8	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5
15	1.8	1.6	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.00	0.95	0.91	0.87
20	1.6	1.3	0.91	0.86	0.82	0.77	0.73	0.69	0.65	0.62	0.59	0.56	0.54
25	0.97	0.93	0.85	0.64	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36
30	0.62	0.59	0.57	0.55	0.49	0.34	0.32	0.31	0.30	0.29	0.28	0.27	0.26
35	0.42	0.41	0.39	0.38	0.37	0.34	0.29	0.22	0.21	0.21	0.20	0.20	0.19
40	0.30	0.29	0.28	0.28	0.27	0.26	0.25	0.22	0.17	0.15	0.15	0.15	0.14
45	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.17	0.16	0.12	0.11	0.11
50	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.12	0.10	0.082

Stack	Exposure Location Distance (meters)												
Ht (m)	180	190	200	250	300	350	400	450	500	600	700	800	1000
5	1.3	1.2	1.1	0.72	0.55	0.44	0.36	0.30	0.26	0.20	0.16	0.13	0.092
10	1.4	1.3	1.3	0.91	0.67	0.50	0.38	0.30	0.25	0.18	0.14	0.12	0.088
15	0.83	0.80	0.77	0.64	0.53	0.43	0.36	0.30	0.25	0.18	0.13	0.10	0.075
20	0.52	0.49	0.48	0.40	0.35	0.31	0.27	0.23	0.20	0.16	0.12	0.096	0.064
25	0.35	0.34	0.32	0.27	0.23	0.21	0.19	0.17	0.15	0.12	0.100	0.082	0.057
30	0.25	0.24	0.23	0.19	0.17	0.15	0.13	0.12	0.11	0.095	0.078	0.066	0.048
35	0.18	0.18	0.17	0.15	0.13	0.11	0.099	0.090	0.083	0.072	0.062	0.053	0.040
40	0.14	0.14	0.13	0.11	0.10	0.088	0.078	0.070	0.064	0.056	0.049	0.044	0.033
45	0.11	0.11	0.10	0.092	0.081	0.072	0.065	0.058	0.053	0.045	0.040	0.036	0.028
50	0.081	0.080	0.079	0.072	0.065	0.059	0.053	0.048	0.044	0.037	0.032	0.029	0.024

Use of stack emission dispersion factors in a Level 1 screening risk assessment:

For each Toxics Emissions Unit, select the appropriate stack height and distance from the stack to nearest exposure locations approved by DEQ. For each exposure location, find the corresponding annual dispersion factor in Table 35A. For each toxic air contaminant, multiply the annual toxic air contaminant emission rate (in pounds/year) by the dispersion factor. Divide the product by the RBC for all the toxic air contaminants for the appropriate exposure location in OAR 340-245-80140 Table 24. Add up the resulting ratios for all Toxic Emissions Units for each exposure location. Compare the results with the Risk Action Levels in OAR 340-245-8010 Table 1. Repeat the process for daily emission rates (in pounds/day) using Table 35B at the acute exposure location.

For a stack height between the values shown in the table, either use the next lowest stack height, or interpolate the dispersion factor. For an exposure location distance between the values shown in the table, either use the next lowest distance, or interpolate the dispersion factor. For stack heights greater than 50 meters, use the appropriate dispersion factor for 50 meters. For exposure locations greater than 1,000 meters from the stack, use the appropriate dispersion factor at 1,000 meters. In the absence of a known stack height and exposure location distance, use as a default the annual dispersion factor ($0.0033 \mu\text{g}/\text{m}^3$ / pounds/year) and daily dispersion factor ($8.3 \mu\text{g}/\text{m}^3$ / pounds/day) for a stack height of 5 meters and an exposure location distance of 50 meters.

[A Level 1 Risk Assessment will not be approved if the source is located near elevated terrain that DEQ determines could invalidate the assumptions used to develop the Level 1 Risk Assessment tool.](#)

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, and 468A.155



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OAR 340-245-80150 Table 35
Level 1 Risk Assessment Fugitive Dispersion Factors

Table 35C: Fugitive Emission Dispersion Factors for Annual Exposure
($\mu\text{g}/\text{m}^3$ / pounds/year)

Building Area	Building	Exposure Location Distance (meters)												
(1,000 ft ²)	Height (ft)	50	60	70	80	90	100	110	120	130	140	150	160	170
≤3	≤20	0.0045	0.0033	0.0026	0.0020	0.0017	0.0014	0.0012	0.0010	0.00089	0.00078	0.00069	0.00062	0.00056
>3 to 6	≤20	0.0044	0.0032	0.0025	0.0020	0.0016	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00061	0.00055
>3 to 6	>20	0.0041	0.0031	0.0024	0.0019	0.0016	0.0013	0.0011	0.0010	0.00086	0.00076	0.00067	0.00060	0.00054
>6 to 10	≤20	0.0044	0.0033	0.0025	0.0020	0.0017	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00062	0.00055
>6 to 10	>20	0.0037	0.0028	0.0022	0.0018	0.0015	0.0013	0.0011	0.0010	0.00083	0.00074	0.00066	0.00059	0.00053
>10 to 15	≤20	0.0044	0.0033	0.0025	0.0020	0.0017	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00062	0.00055
>10 to 15	>20	0.0034	0.0027	0.0021	0.0018	0.0015	0.0012	0.0011	0.00093	0.00081	0.00072	0.00064	0.00058	0.00052
>15 to 30	≤20	0.0043	0.0032	0.0025	0.0020	0.0016	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00061	0.00055
>15 to 30	>20	0.0034	0.0027	0.0021	0.0018	0.0015	0.0012	0.0011	0.00093	0.00082	0.00072	0.00065	0.00058	0.00052
>30	>20	0.0022	0.0018	0.0015	0.0013	0.0011	0.0010	0.00086	0.00076	0.00068	0.00061	0.00055	0.00050	0.00046

Building Area	Building	Exposure Location Distance (meters)												
(1,000 ft ²)	Height (ft)	180	190	200	250	300	350	400	450	500	600	700	800	1000
≤3	≤20	0.00050	0.00046	0.00042	0.00029	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>3 to 6	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>3 to 6	>20	0.00049	0.00045	0.00041	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>6 to 10	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>6 to 10	>20	0.00048	0.00044	0.00041	0.00028	0.00020	0.00016	0.00013	0.00010	0.000086	0.000064	0.000049	0.000039	0.000027
>10 to 15	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>10 to 15	>20	0.00048	0.00044	0.00040	0.00028	0.00020	0.00016	0.00012	0.00010	0.000086	0.000063	0.000049	0.000039	0.000027
>15 to 30	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027
>15 to 30	>20	0.00048	0.00044	0.00040	0.00028	0.00020	0.00016	0.00013	0.00010	0.000086	0.000063	0.000049	0.000039	0.000027
>30	>20	0.00042	0.00039	0.00036	0.00025	0.00019	0.00015	0.00012	0.00010	0.000083	0.000061	0.000048	0.000038	0.000027

Table 35D: Fugitive Emission Dispersion Factors for 24 hour Exposure ($\mu\text{g}/\text{m}^3$ / pounds/day)

Building Area	Building	Exposure Location Distance (meters)												
(1,000 ft ²)	Height (ft)	50	60	70	80	90	100	110	120	130	140	150	160	170
≤3	≤20	4.8	3.7	2.9	2.4	2.0	1.7	1.4	1.2	1.1	0.97	0.87	0.78	0.71
>3 to 6	≤20	4.1	3.1	2.5	2.0	1.7	1.4	1.2	1.1	0.95	0.84	0.76	0.68	0.62
>3 to 6	>20	3.5	2.8	2.2	1.9	1.6	1.3	1.2	1.0	0.90	0.80	0.72	0.65	0.59
>6 to 10	≤20	4.0	3.1	2.5	2.0	1.7	1.4	1.2	1.1	0.94	0.84	0.75	0.68	0.62
>6 to 10	>20	3.3	2.6	2.1	1.8	1.5	1.3	1.1	0.97	0.86	0.77	0.69	0.63	0.57
>10 to 15	≤20	4.0	3.1	2.4	2.0	1.7	1.4	1.2	1.1	0.94	0.84	0.75	0.68	0.62
>10 to 15	>20	2.9	2.4	2.0	1.6	1.4	1.2	1.1	0.93	0.83	0.74	0.67	0.61	0.56
>15 to 30	≤20	3.7	2.9	2.3	1.9	1.6	1.4	1.2	1.0	0.92	0.82	0.74	0.67	0.61
>15 to 30	>20	2.9	2.3	1.9	1.6	1.4	1.2	1.0	0.92	0.82	0.74	0.67	0.60	0.55
>30	>20	1.8	1.5	1.3	1.2	1.0	0.92	0.82	0.73	0.66	0.60	0.55	0.51	0.47

Building Area	Building	Exposure Location Distance (meters)												
(1,000 ft ²)	Height (ft)	180	190	200	250	300	350	400	450	500	600	700	800	1000
≤3	≤20	0.65	0.59	0.55	0.38	0.29	0.22	0.18	0.15	0.13	0.095	0.074	0.060	0.043
>3 to 6	≤20	0.57	0.52	0.48	0.33	0.25	0.20	0.16	0.13	0.11	0.083	0.065	0.053	0.038
>3 to 6	>20	0.54	0.50	0.46	0.32	0.24	0.19	0.15	0.13	0.11	0.081	0.064	0.052	0.037
>6 to 10	≤20	0.56	0.52	0.48	0.33	0.25	0.20	0.16	0.13	0.11	0.083	0.065	0.053	0.038
>6 to 10	>20	0.53	0.48	0.45	0.31	0.24	0.19	0.15	0.12	0.11	0.080	0.063	0.051	0.036
>10 to 15	≤20	0.56	0.52	0.48	0.33	0.25	0.19	0.16	0.13	0.11	0.083	0.065	0.053	0.038
>10 to 15	>20	0.51	0.47	0.43	0.31	0.23	0.18	0.15	0.12	0.10	0.078	0.062	0.050	0.035
>15 to 30	≤20	0.55	0.51	0.47	0.33	0.25	0.19	0.16	0.13	0.11	0.083	0.065	0.053	0.037
>15 to 30	>20	0.51	0.47	0.43	0.31	0.23	0.18	0.15	0.12	0.10	0.078	0.062	0.050	0.035
>30	>20	0.43	0.40	0.37	0.27	0.21	0.17	0.14	0.12	0.098	0.075	0.059	0.048	0.034

Use of fugitive emission dispersion factors in a Level 1 screening risk assessment:

For each Toxics Emissions Unit, select the appropriate building dimensions and distance from building to nearest exposure locations approved by DEQ. For each exposure location, find the corresponding annual dispersion factor in Table 35C. For each toxic air contaminant, multiply the annual toxic air contaminant emission rate (in pounds/year) by the dispersion factor. Divide the product by the RBC for all the toxic air contaminants for the appropriate exposure location in OAR 340-245-80140 Table 24. Add up the resulting ratios for all Toxic Emissions Units for each exposure location. Compare the results with the Risk Action Levels in OAR 340-245-8010 Table 1. Repeat the process for daily emission rates (in pounds/day) using Table 35D at the acute exposure location.

For an exposure location distance between the values shown in the table, either use the next lowest distance, or interpolate the dispersion factor. For exposure locations greater than 1,000 meters from the building, use the appropriate dispersion factor at 1,000 meters. In the absence of known building dimensions and exposure location distance, use as a default, the annual dispersion factor ($0.0045 \mu\text{g}/\text{m}^3$ / pounds/year) and daily dispersion factor ($4.8 \mu\text{g}/\text{m}^3$ / pounds/day) for a building area of $\leq 3,000 \text{ ft}^2$, height of $\leq 20 \text{ ft}$, and exposure location distance of 50 meters.

[A Level 1 Risk Assessment will not be approved if the source is located near elevated terrain that DEQ determines could invalidate the assumptions used to develop the Level 1 Risk Assessment Dispersion Factors.](#)

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, and 468A.155



Draft Rules Tables – Edits Incorporated

Cleaner Air Oregon and Air Toxics Alignment and Updates 2021

**340-245-8010 Table 1
Risk Action Levels**

 OAR 340-245-8010 Table 1 Risk Action Levels†			
Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
New and Reconstructed Source	Aggregate TEU Level	0.5	0.1
	Source Permit Level	0.5	0.5
	Community Engagement Level	5	1
	TLAER Level	10	1
	Permit Denial Level	25	1
Existing Source	Aggregate TEU Level	2.5	0.1
	Source Permit Level	5	0.5
	Community Engagement Level	25	1
	TBACT Level	50	5 ^a or 3 ^b or Risk Determination Ratio of 1.0 ^c
	Risk Reduction Level	200	10 ^a or 6 ^b or Risk Determination Ratio of 2.0 ^c
	Immediate Curtailment Level	500	20 ^a or 12 ^b or



**OAR 340-245-8010
Table 1
Risk Action Levels†**

Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
			Risk Determination Ratio of 4.0 ^c

Footnotes for OAR 340-245-8010 Table 1:

- † Facility risk that is equal to or less than the values in the table is considered compliant with the Risk Action Level. Risk Action Levels are considered consistent with benchmarks in Oregon Laws 2018, chapter 102 (Senate Bill (SB) 1541 (2018)).
- d) If all toxic air contaminants emitted by the source are identified as HI5 in OAR 340-247-8010, Table 2, and OAR 340-245-8010, Table 2.
- e) If all toxic air contaminants emitted by the source are identified as HI3 in OAR 340-247-8010, Table 2, and OAR 340-245-8010, Table 2.
- f) If toxic air contaminants emitted by the source include contaminants listed as both HI3 and HI5 in OAR 340-247-8010, Table 2, and OAR 340-245-8010, Table 2, and a Risk Determination Ratio is required to be calculated under OAR 340-245-0200.

**340-247-8010 Table1
Toxic Air Contaminant Priority List**

 OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List	
CASRN ^a	Chemical Name
75-07-0	Acetaldehyde
60-35-5	Acetamide
67-64-1	Acetone
75-05-8	Acetonitrile
98-86-2	Acetophenone
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid
107-13-1	Acrylonitrile
50-76-0	Actinomycin D
1596-84-5	Alar
309-00-2	Aldrin
107-05-1	Allyl chloride
7429-90-5	Aluminum and compounds ^b
1344-28-1	Aluminum oxide (fibrous forms)
97-56-3	<i>ortho</i> -Aminoazotoluene
6109-97-3	3-Amino-9-ethylcarbazole hydrochloride
68006-83-7	2-Amino-3-methyl-9H pyrido[2,3-b]indole
82-28-0	1-Amino-2-methylanthraquinone
76180-96-6	2-Amino-3-methylimidazo-[4,5-f]quinoline
712-68-5	2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole
26148-68-5	A-alpha-c(2-amino-9h-pyrido[2,3-b]indole)
92-67-1	4-Aminobiphenyl
61-82-5	Amitrole
7664-41-7	Ammonia
7803-63-6	Ammonium bisulfate
6484-52-2	Ammonium nitrate
7783-20-2	Ammonium sulfate
62-53-3	Aniline
90-04-0	<i>o</i> -Anisidine



OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List

CASRN ^a	Chemical Name
134-29-2	<i>o</i> -Anisidine hydrochloride
7440-36-0	Antimony and compounds ^b
1309-64-4	Antimony trioxide
140-57-8	Aramite
7440-38-2	Arsenic and compounds ^b
7784-42-1	Arsine
1332-21-4	Asbestos
492-80-8	Auramine
115-02-6	Azaserine
446-86-6	Azathioprine
52-24-4	<i>tris</i> -(1-Aziridinyl)phosphine sulfide
103-33-3	Azobenzene
7440-39-3	Barium and compounds ^b
71-43-2	Benzene
92-87-5	Benzidine (and its salts)
271-89-6	Benzofuran
98-07-7	Benzoic trichloride (benzotrichloride)
98-88-4	Benzoyl chloride
94-36-0	Benzoyl peroxide
100-44-7	Benzyl chloride
1694-09-3	Benzyl Violet 4B
7440-41-7	Beryllium and compounds ^b
1304-56-9	Beryllium oxide
13510-49-1	Beryllium sulfate
92-52-4	Biphenyl
111-44-4	<i>Bis</i> (2-chloroethyl) ether (BCEE)
542-88-1	<i>Bis</i> (chloromethyl) ether
103-23-1	<i>Bis</i> (2-ethylhexyl) adipate
117-81-7	<i>Bis</i> (2-ethylhexyl) phthalate (DEHP)
7726-95-6	Bromine and compounds ^b
7789-30-2	Bromine pentafluoride
75-27-4	Bromodichloromethane
75-25-2	Bromoform
74-83-9	Bromomethane (methyl bromide)



OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List

CASRN ^a	Chemical Name
106-94-5	1-Bromopropane (<i>n</i> -propyl bromide)
126-72-7	<i>tris</i> (2,3-Dibromopropyl)phosphate
106-99-0	1,3-Butadiene
78-93-3	2-Butanone (methyl ethyl ketone)
540-88-5	<i>t</i> -Butyl acetate
141-32-2	Butyl acrylate
71-36-3	<i>n</i> -Butyl alcohol
78-92-2	<i>sec</i> -Butyl alcohol
75-65-0	<i>tert</i> -Butyl alcohol
85-68-7	Butyl benzyl phthalate
25013-16-5	Butylated hydroxyanisole
3068-88-0	<i>beta</i> -Butyrolactone
7440-43-9	Cadmium and compounds ^b
156-62-7	Calcium cyanamide
105-60-2	Caprolactam
2425-06-1	Captafol
133-06-2	Captan
89 [†]	Carbon black extracts
75-15-0	Carbon disulfide
56-23-5	Carbon tetrachloride
463-58-1	Carbonyl sulfide
9000-07-1	Carrageenan (degraded)
120-80-9	Catechol
351 [†]	Ceramic fibers
133-90-4	Chloramben
305-03-3	Chlorambucil
57-74-9	Chlordane
143-50-0	Chlordecone
115-28-6	Chlorendic acid
76-13-1	Chlorinated fluorocarbon (1,1,2-trichloro-1,2,2-trifluoroethane, CFC-113)
108171-26-2	Chlorinated paraffins
7782-50-5	Chlorine
10049-04-4	Chlorine dioxide
79-11-8	Chloroacetic acid



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OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List

CASRN ^a	Chemical Name
532-27-4	2-Chloroacetophenone
85535-84-8	Chloroalkanes C10-13 (chlorinated paraffins)
106-47-8	<i>p</i> -Chloroaniline
108-90-7	Chlorobenzene
510-15-6	Chlorobenzilate (ethyl-4,4'-dichlorobenzilate)
75-68-3	1-Chloro-1,1-difluoroethane
75-45-6	Chlorodifluoromethane (Freon 22)
75-00-3	Chloroethane (ethyl chloride)
67-66-3	Chloroform
74-87-3	Chloromethane (methyl chloride)
107-30-2	Chloromethyl methyl ether (technical grade)
563-47-3	3-Chloro-2-methyl-1-propene
95-57-8	2-Chlorophenol
95-83-0	4-Chloro- <i>o</i> -phenylenediamine
76-06-2	Chloropicrin
126-99-8	Chloroprene
1897-45-6	Chloroethalonil
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine
54749-90-5	Chlorozotocin
18540-29-9	Chromium VI, chromate and dichromate particulate
7738-94-5	Chromium VI, chromic acid aerosol mist and chromium trioxide
569-61-9	C.I. Basic Red 9 monohydrochloride
87-29-6	Cinnamyl anthranilate
7440-48-4	Cobalt and compounds ^b
148 [†]	Coke oven emissions
7440-50-8	Copper and compounds ^b
150 [†]	Creosotes
120-71-8	<i>p</i> -Cresidine
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol
108-39-4	<i>m</i> -Cresol
95-48-7	<i>o</i> -Cresol
106-44-5	<i>p</i> -Cresol
4170-30-3	Crotonaldehyde
80-15-9	Cumene hydroperoxide



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OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List

CASRN ^a	Chemical Name
135-20-6	Cupferron
74-90-8	Cyanide, hydrogen
110-82-7	Cyclohexane
108-93-0	Cyclohexanol
66-81-9	Cycloheximide
50-18-0	Cyclophosphamide (anhydrous)
6055-19-2	Cyclophosphamide (hydrated)
5160-02-1	D & C Red No. 9
4342-03-4	Dacarbazine
117-10-2	Danthron (chrysazin)
72-54-8	4,4'-DDD (4,4'-dichlorodipenyldichloroethane)
53-19-0	2,4'-DDD (2,4'-dichlorodipenyldichloroethane)
3547-04-4	DDE (1-chloro-4-[1-(4-chlorophenyl)ethyl]benzene)
3424-82-6	2,4'-DDE (2,4'-dichlorodipenyldichloroethene)
72-55-9	4,4'-DDE (4,4'-dichlorodipenyldichloroethene)
789-02-6	2,4'-DDT (2,4'-dichlorodipenyltrichloroethane)
50-29-3	DDT
615-05-4	2,4-Diaminoanisole
39156-41-7	2,4-Diaminoanisole sulfate
101-80-4	4,4'-Diaminodiphenyl ether
95-80-7	2,4-Diaminotoluene (2,4-toluene diamine)
334-88-3	Diazomethane
333-41-5	Diazinon
132-64-9	Dibenzofuran
124-48-1	Dibromochloromethane
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)
96-13-9	2,3-Dibromo-1-propanol
84-74-2	Dibutyl phthalate
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	<i>p</i> -Dichlorobenzene (1,4-dichlorobenzene)
91-94-1	3,3'-Dichlorobenzidine
75-71-8	Dichlorodifluoromethane (Freon 12)
75-43-4	Dichlorofluoromethane (Freon 21)



OAR 340-247-8010 Table 1 Toxic Air Contaminant Priority List

CASRN ^a	Chemical Name
75-34-3	1,1-Dichloroethane (ethylidene dichloride)
156-60-5	<i>trans</i> -1,2-Dichloroethene
75-09-2	Dichloromethane (methylene chloride)
120-83-2	2,4-Dichlorophenol
94-75-7	Dichlorophenoxyacetic acid, salts and esters (2,4-D)
78-87-5	1,2-Dichloropropane (propylene dichloride)
542-75-6	1,3-Dichloropropene
62-73-7	Dichlorvos (DDVP)
115-32-2	Dicofol
84-61-7	Di-cyclohexyl phthalate (DCHP)
60-57-1	Dieldrin
200 [†]	Diesel particulate matter
111-42-2	Diethanolamine
111-46-6	Diethylene glycol
111-96-6	Diethylene glycol dimethyl ether
112-34-5	Diethylene glycol monobutyl ether
111-90-0	Diethylene glycol monoethyl ether
111-77-3	Diethylene glycol monomethyl ether
84-66-2	Diethylphthalate
64-67-5	Diethyl sulfate
134-62-3	Diethyltoluamide, N,N- (DEET)
75-37-6	1,1-Difluoroethane
101-90-6	Diglycidyl resorcinol ether
94-58-6	Dihydrosafrole
119-90-4	3,3'-Dimethoxybenzidine
60-11-7	4-Dimethylaminoazobenzene
121-69-7	N,N-Dimethylaniline
119-93-7	3,3'-Dimethylbenzidine (<i>o</i> -tolidine)
79-44-7	Dimethyl carbamoyl chloride
68-12-2	Dimethyl formamide
57-14-7	1,1-Dimethylhydrazine
131-11-3	Dimethyl phthalate
77-78-1	Dimethyl sulfate
513-37-1	Dimethylvinylchloride



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CASRN ^a	Chemical Name
534-52-1	4,6-Dinitro-o-cresol (and salts)
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
123-91-1	1,4-Dioxane
630-93-3	Diphenylhydantoin
122-66-7	1,2-Diphenylhydrazine (hydrazobenzene)
25265-71-8	Dipropylene glycol
34590-94-8	Dipropylene glycol monomethyl ether
1937-37-7	Direct Black 38
2602-46-2	Direct Blue 6
16071-86-6	Direct Brown 95 (technical grade)
2475-45-8	Disperse Blue 1
298-04-4	Disulfoton
106-89-8	Epichlorohydrin
106-88-7	1,2-Epoxybutane
227 [†]	Epoxy resins
12510-42-8	Erionite
140-88-5	Ethyl acrylate
100-41-4	Ethyl benzene
74-85-1	Ethylene
106-93-4	Ethylene dibromide (EDB, 1,2-dibromoethane)
107-06-2	Ethylene dichloride (EDC, 1,2-dichloroethane)
107-21-1	Ethylene glycol
629-14-1	Ethylene glycol diethyl ether
110-71-4	Ethylene glycol dimethyl ether
111-76-2	Ethylene glycol monobutyl ether
110-80-5	Ethylene glycol monoethyl ether
111-15-9	Ethylene glycol monoethyl ether acetate
109-86-4	Ethylene glycol monomethyl ether
110-49-6	Ethylene glycol monomethyl ether acetate
2807-30-9	Ethylene glycol monopropyl ether
151-56-4	Ethyleneimine (aziridine)
75-21-8	Ethylene oxide



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CASRN ^a	Chemical Name
96-45-7	Ethylene thiourea
10028-22-5	Ferric sulfate
239 [†]	Fluorides
7782-41-4	Fluorine gas
50-00-0	Formaldehyde
110-00-9	Furan
60568-05-0	Furmecyclox
3688-53-7	Furylfuramide
352 [†]	Glasswool fibers
111-30-8	Glutaraldehyde
67730-11-4	Glu-P-1
67730-10-3	Glu-P-2
16568-02-8	Gyromitrin
2784-94-3	HC Blue 1
76-44-8	Heptachlor
1024-57-3	Heptachlor epoxide
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:
319-84-6	<i>alpha</i> -Hexachlorocyclohexane
319-85-7	<i>beta</i> -Hexachlorocyclohexane
58-89-9	<i>gamma</i> -Hexachlorocyclohexane (Lindane)
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
680-31-9	Hexamethylphosphoramide
822-06-0	Hexamethylene-1,6-diisocyanate
110-54-3	Hexane
302-01-2	Hydrazine
10034-93-2	Hydrazine sulfate
7647-01-0	Hydrochloric acid
10035-10-6	Hydrogen bromide
7664-39-3	Hydrogen fluoride
7783-06-4	Hydrogen sulfide
123-31-9	Hydroquinone



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CASRN ^a	Chemical Name
10043-66-0	Iodine-131
13463-40-6	Iron pentacarbonyl
78-59-1	Isophorone
78-79-5	Isoprene, except from vegetative emission sources
67-63-0	Isopropyl alcohol
98-82-8	Isopropylbenzene (cumene)
80-05-7	4,4'-Isopropylidenediphenol (bisphenol A)
303-34-4	Lasiocarpine
7439-92-1	Lead and compounds ^b
18454-12-1	Lead chromate oxide
108-31-6	Maleic anhydride
7439-96-5	Manganese and compounds ^b
148-82-3	Melphalan
3223-07-2	Melphalan HCl
7439-97-6	Mercury and compounds ^b
627-44-1	Diethylmercury
593-74-8	Dimethylmercury
22967-92-6	Methylmercury
67-56-1	Methanol
72-43-5	Methoxychlor
55738-54-0	<i>trans</i> -2-[(Dimethylamino)-methylimino]-5-[2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole
101-14-4	4,4'-Methylene <i>bis</i> (2-chloroaniline) (MOCA)
101-77-9	4,4'-Methylenedianiline (and its dichloride)
13552-44-8	4,4'-Methylenedianiline dihydrochloride
838-88-0	4,4'-Methylene <i>bis</i> (2-methylaniline)
101-61-1	4,4'-Methylene <i>bis</i> (<i>N,N'</i> -dimethyl)aniline
101-68-8	Methylene diphenyl diisocyanate (MDI)
60-34-4	Methyl hydrazine
540-73-8	1,2-Dimethylhydrazine
74-88-4	Methyl iodide (iodomethane)
108-10-1	Methyl isobutyl ketone (MIBK, hexone)
624-83-9	Methyl isocyanate
75-86-5	2-Methylactonitrile (acetone cyanohydrin)



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CASRN ^a	Chemical Name
80-62-6	Methyl methacrylate
66-27-3	Methyl methanesulfonate
129-15-7	2-Methyl-1-nitroanthraquinone
70-25-7	N-Methyl-N-nitro-N-nitrosoguanidine
832-69-9	1-Methylphenanthrene
2381-21-7	1-Methylpyrene
109-06-8	2-Methylpyridine
1634-04-4	Methyl <i>tert</i> -butyl ether
56-04-2	Methylthiouracil
90-94-8	Michler's ketone
349 [†]	Mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
350 [†]	Mineral fibers (fine mineral fibers which are man-made, and are airborne particles of a respirable size greater than 5 microns in length, less than or equal to 3.5 microns in diameter, with a length to diameter ratio of 3:1)
2385-85-5	Mirex
50-07-7	Mitomycin C
1313-27-5	Molybdenum trioxide
315-22-0	Monocrotaline
91-59-8	2-Naphthylamine
91-20-3	Naphthalene
7440-02-0	Nickel and compounds ^b
365 [†]	Nickel compounds, insoluble
7440-02-0	Nickel metal
1313-99-1	Nickel oxide
12035-72-2	Nickel subsulfide
11113-75-0	Nickel sulfide
368 [†]	Nickel compounds, soluble
373-02-4	Nickel acetate
3333-67-3	Nickel carbonate
12607-70-4	Nickel carbonate hydroxide
13463-39-3	Nickel carbonyl
7718-54-9	Nickel chloride



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CASRN ^a	Chemical Name
12054-48-7	Nickel hydroxide
7786-81-4	Nickel sulfate
10101-97-0	Nickel sulfate hexahydrate
13478-00-7	Nickel nitrate hexahydrate
1271-28-9	Nickelocene
3570-75-0	Nifurthiazole
7697-37-2	Nitric acid
139-13-9	Nitrilotriacetic acid
18662-53-8	Nitrilotriacetic acid, trisodium salt monohydrate
99-59-2	5-Nitro- <i>o</i> -anisidine
98-95-3	Nitrobenzene
92-93-3	4-Nitrobiphenyl
1836-75-5	Nitrofen
59-87-0	Nitrofurazone
555-84-0	1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone
531-82-8	N-[4-(5-nitro-2-furyl)-2-thiazolyl]-acetamide
302-70-5	Nitrogen mustard N-oxide
100-02-7	4-Nitrophenol
79-46-9	2-Nitropropane
924-16-3	N-Nitrosodibutylamine
1116-54-7	N-Nitrosodiethanolamine
55-18-5	N-Nitrosodiethylamine
62-75-9	N-Nitrosodimethylamine
86-30-6	N-Nitrosodiphenylamine
156-10-5	<i>p</i> -Nitrosodiphenylamine
621-64-7	N-Nitrosodipropylamine
10595-95-6	N-Nitrosomethylethylamine
759-73-9	N-Nitroso-N-ethylurea
615-53-2	N-Nitroso-N-methylurethane
684-93-5	N-Nitroso-N-methylurea
59-89-2	N-Nitrosomorpholine
16543-55-8	N-Nitrosornicotine
100-75-4	N-Nitrosopiperidine
930-55-2	N-Nitrosopyrrolidine



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CASRN ^a	Chemical Name
39765-80-5	<i>trans</i> -Nonachlor
104-40-5	Nonylphenol, 4- (& ethoxylates)
8014-95-7	Oleum (fuming sulfuric acid)
56-38-2	Parathion
87-86-5	Pentachlorophenol
32534-81-9	Pentabromodiphenyl ether
82-68-8	Pentachloronitrobenzene (quintobenzene)
79-21-0	Peracetic acid
489 [†]	Perfluorinated compounds (PFCs)
335-67-1	Perfluorooctanoic acid (PFOA)
1763-23-1	Perfluorooctanesulfonic acid (PFOS)
62-44-2	Phenacetin
94-78-0	Phenazopyridine
136-40-3	Phenazopyridine hydrochloride
3546-10-9	Phenesterin
50-06-6	Phenobarbital
108-95-2	Phenol
59-96-1	Phenoxybenzamine
63-92-3	Phenoxybenzamine hydrochloride
106-50-3	<i>p</i> -Phenylenediamine
132-27-4	<i>o</i> -Phenylphenate, sodium
90-43-7	2-Phenylphenol
75-44-5	Phosgene
7803-51-2	Phosphine
7664-38-2	Phosphoric acid
7723-14-0	Phosphorus and compounds ^b
10025-87-3	Phosphorus oxychloride
10026-13-8	Phosphorus pentachloride
1314-56-3	Phosphorus pentoxide
7719-12-2	Phosphorus trichloride
12185-10-3	Phosphorus, white
518 [†]	Phthalates
85-44-9	Phthalic anhydride
447 [†]	Polybrominated diphenyl ethers (PBDEs)



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CASRN ^a	Chemical Name
5436-43-1	PBDE-47 [2,2',4,4'-tetrabromodiphenyl ether]
60348-60-9	PBDE-99 [2,2',4,4',5-pentabromodiphenyl ether]
189084-64-8	PBDE-100 [2,2',4,4',6-pentabromodiphenyl ether]
182677-30-1	PBDE-138 [2,2',3,4,4',5'-hexabromodiphenyl ether]
68631-49-2	PBDE-153 [2,2',4,4',5,5'-hexabromodiphenyl ether]
207122-15-4	PBDE-154 [2,2',4,4',5,6'-hexabromodiphenyl ether]
207122-16-5	PBDE-183 [2,2',3,4,4',5',6-heptabromodiphenyl ether]
1163-19-5	PBDE-209 [decabromodiphenyl ether]
1336-36-3	Polychlorinated biphenyls (PCBs)
645 [†]	Polychlorinated biphenyls (PCBs) TEQ [°]
34883-43-7	PCB-8 [2,4'-dichlorobiphenyl]
37680-65-2	PCB 18 [2,2',5-trichlorobiphenyl]
7012-37-5	PCB-28 [2,4,4'-trichlorobiphenyl]
41464-39-5	PCB-44 [2,2',3,5'-tetrachlorobiphenyl]
35693-99-3	PCB-52 [2,2',5,5'-tetrachlorobiphenyl]
32598-10-0	PCB-66 [2,3',4,4'-tetrachlorobiphenyl]
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]
37680-73-2	PCB-101 [2,2',4,5,5'-pentachlorobiphenyl]
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]
38380-07-3	PCB-128 [2,2',3,3',4,4'-hexachlorobiphenyl]
35065-28-2	PCB-138 [2,2',3,4,4',5'-hexachlorobiphenyl]
35065-27-1	PCB-153 [2,2',4,4',5,5'-hexachlorobiphenyl]
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]
52663-72-6	PCB 167 [2,3',4,4',5,5'-hexachlorobiphenyl]
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]
35065-30-6	PCB-170 [2,2',3,3',4,4',5-heptachlorobiphenyl]
35065-29-3	PCB-180 [2,2',3,4,4',5,5'-heptachlorobiphenyl]
52663-68-0	PCB-187 [2,2',3,4',5,5',6-heptachlorobiphenyl]



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CASRN ^a	Chemical Name
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]
52663-78-2	PCB-195 [2,2',3,3',4,4',5,6-octachlorobiphenyl]
40186-72-9	PCB-206 [2,2',3,3',4,4',5,5',6-nonachlorobiphenyl]
2051-24-3	PCB-209 [decachlorobiphenyl]
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ ^c
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TCDF)
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)
39001-02-0	Octachlorodibenzofuran (OCDF)
401 [†]	Polycyclic aromatic hydrocarbons (PAHs)
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
120-12-7	Anthracene
191-26-4	Anthanthrene
56-55-3	Benz[a]anthracene
50-32-8	Benzo[a]pyrene
205-99-2	Benzo[b]fluoranthene
205-12-9	Benzo[c]fluorene
192-97-2	Benzo[e]pyrene
191-24-2	Benzo[g,h,i]perylene
205-82-3	Benzo[j]fluoranthene



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CASRN ^a	Chemical Name
207-08-9	Benzo[k]fluoranthene
86-74-8	Carbazole
218-01-9	Chrysene
27208-37-3	Cyclopenta[c,d]pyrene
226-36-8	Dibenz[a,h]acridine
224-42-0	Dibenz[a,j]acridine
194-59-2	7H-Dibenzo[c,g]carbazole
53-70-3	Dibenz[a,h]anthracene
5385-75-1	Dibenzo[a,e]fluoranthene
192-65-4	Dibenzo[a,e]pyrene
189-64-0	Dibenzo[a,h]pyrene
189-55-9	Dibenzo[a,i]pyrene
191-30-0	Dibenzo[a,l]pyrene
206-44-0	Fluoranthene
86-73-7	Fluorene
193-39-5	Indeno[1,2,3-cd]pyrene
91-57-6	2-Methyl naphthalene
198-55-0	Perylene
85-01-8	Phenanthrene
129-00-0	Pyrene
432 [†]	Polycyclic aromatic hydrocarbon derivatives [PAH-Derivatives]
53-96-3	2-Acetylaminofluorene
117-79-3	2-Aminoanthraquinone
63-25-2	Carbaryl
57-97-6	7,12-Dimethylbenz[a]anthracene
42397-64-8	1,6-Dinitropyrene
42397-65-9	1,8-Dinitropyrene
56-49-5	3-Methylcholanthrene
3697-24-3	5-Methylchrysene
602-87-9	5-Nitroacenaphthene
7496-02-8	6-Nitrochrysene
607-57-8	2-Nitrofluorene
5522-43-0	1-Nitropyrene
57835-92-4	4-Nitropyrene



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CASRN ^a	Chemical Name
3564-09-8	Ponceau 3R
3761-53-3	Ponceau MX
7758-01-2	Potassium bromate
671-16-9	Procarbazine
366-70-1	Procarbazine hydrochloride
1120-71-4	1,3-Propane sultone
57-57-8	<i>beta</i> -Propiolactone
123-38-6	Propionaldehyde
114-26-1	Propoxur (Baygon)
115-07-1	Propylene
6423-43-4	Propylene glycol dinitrate
107-98-2	Propylene glycol monomethyl ether
108-65-6	Propylene glycol monomethyl ether acetate
75-56-9	Propylene oxide
75-55-8	1,2-Propyleneimine (2-methylaziridine)
51-52-5	Propylthiouracil
110-86-1	Pyridine
91-22-5	Quinoline
106-51-4	Quinone
571 [†]	Radon and its decay products
572 [†]	Refractory ceramic fibers
50-55-5	Reserpine
353 [†]	Rockwool
94-59-7	Safrole
7783-07-5	Selenide, hydrogen
7782-49-2	Selenium and compounds ^b
7446-34-6	Selenium sulfide
7631-86-9	Silica, crystalline (respirable)
7440-22-4	Silver and compounds ^b
354 [†]	Slagwool
1310-73-2	Sodium hydroxide
10048-13-2	Sterigmatocystin
18883-66-4	Streptozotocin
100-42-5	Styrene



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CASRN ^a	Chemical Name
96-09-3	Styrene oxide
95-06-7	Sulfallate
7664-93-9	Sulfuric acid
505-60-2	Sulfur mustard
7446-11-9	Sulfur trioxide
358 [†]	Talc containing asbestiform fibers
100-21-0	Terephthalic acid
40088-47-9	Tetrabromodiphenyl ether
630-20-6	1,1,1,2-Tetrachloroethane
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethene (perchloroethylene)
58-90-2	2,3,4,6-Tetrachlorophenol
811-97-2	1,1,1,2-Tetrafluoroethane
7440-28-0	Thallium and compounds ^b
62-55-5	Thioacetamide
139-65-1	4,4'-Thiodianiline
62-56-6	Thiourea
7550-45-0	Titanium tetrachloride
108-88-3	Toluene
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)
584-84-9	Toluene-2,4-diisocyanate
91-08-7	Toluene-2,6-diisocyanate
95-53-4	<i>o</i> -Toluidine
636-21-5	<i>o</i> -Toluidine hydrochloride
41903-57-5	Total tetrachlorodibenzo- <i>p</i> -dioxin
36088-22-9	Total pentachlorodibenzo- <i>p</i> -dioxin
34465-46-8	Total hexachlorodibenzo- <i>p</i> -dioxin
37871-00-4	Total heptachlorodibenzo- <i>p</i> -dioxin
55722-27-5	Total tetrachlorodibenzofuran
30402-15-4	Total pentachlorodibenzofuran
55684-94-1	Total hexachlorodibenzofuran
38998-75-3	Total heptachlorodibenzofuran
8001-35-2	Toxaphene (polychlorinated camphenes)
126-73-8	Tributyl phosphate



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CASRN ^a	Chemical Name
120-82-1	1,2,4-Trichlorobenzene
71-55-6	1,1,1-Trichloroethane (methyl chloroform)
79-00-5	1,1,2-Trichloroethane (vinyl trichloride)
79-01-6	Trichloroethene (TCE, trichloroethylene)
75-69-4	Trichlorofluoromethane (Freon 11)
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
96-18-4	1,2,3-Trichloropropane
78-40-0	Triethyl phosphate
121-44-8	Triethylamine
112-49-2	Triethylene glycol dimethyl ether
512-56-1	Trimethyl phosphate
78-30-8	Triorthocresyl phosphate
115-86-6	Triphenyl phosphate
101-02-0	Triphenyl phosphite
1582-09-8	Trifluralin
526-73-8	1,2,3-Trimethylbenzene
95-63-6	1,2,4-Trimethylbenzene
108-67-8	1,3,5-Trimethylbenzene
540-84-1	2,2,4-Trimethylpentane
62450-06-0	Tryptophan-P-1
62450-07-1	Tryptophan-P-2
51-79-6	Urethane (ethyl carbamate)
7440-62-2	Vanadium (fume or dust)
1314-62-1	Vanadium pentoxide
108-05-4	Vinyl acetate
593-60-2	Vinyl bromide
75-01-4	Vinyl chloride
100-40-3	4-Vinylcyclohexene
75-02-5	Vinyl fluoride
75-35-4	Vinylidene chloride
1330-20-7	Xylene (mixture), including <i>m</i> -xylene, <i>o</i> -xylene, <i>p</i> -xylene
108-38-3	<i>m</i> -Xylene
95-47-6	<i>o</i> -Xylene



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CASRN ^a	Chemical Name
106-42-3	<i>p</i> -Xylene
7440-66-6	Zinc and compounds ^b
1314-13-2	Zinc oxide

Footnotes for OAR 340-247-8010 Table 1:

- † Chemical designated by DEQ ID number.
- d) CASRN = Chemical Abstracts Service Registry Number, or DEQ ID if there is no CASRN.
- e) Inorganic chemicals designated with "and compounds" should be reported as the sum of all forms of the chemical, expressed as the inorganic element.
- f) TEQ = toxic equivalency, relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin.

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040,
468A.050, 468A.070, and 468A.155

340-247-8030 Table 2
Toxicity Reference Values



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
75-07-0	Acetaldehyde		HI3	0.45	A	140	O	470	O
60-35-5	Acetamide			0.050	O				
67-64-1	Acetone		HI3			31,000	T	62,000	S
75-05-8	Acetonitrile		HI3			60	I		
107-02-8	Acrolein		HI5			0.35	A	6.9	T
79-06-1	Acrylamide		HI3	0.010	I	6.0	I		
79-10-7	Acrylic acid		HI3			1.0	I	6,000	O
107-13-1	Acrylonitrile		HI3	0.015	A	5.0	O	220	T
309-00-2	Aldrin			0.00020	I				
107-05-1	Allyl chloride		HI3	0.17	O	1.0	I		
7429-90-5	Aluminum and compounds	o	HI5			5.0	P		
7664-41-7	Ammonia		HI3			500	A	1,200	T
62-53-3	Aniline		HI5	0.63	O	1.0	I		
7440-36-0	Antimony and compounds	o	HI3			0.30	T	1.0	T



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes	($\mu\text{g}/\text{m}^3$)	Notes
140-57-8	Aramite			0.14	I				
7440-38-2	Arsenic and compounds	o	HI3	0.00023	A	0.015	O	0.20	S
7784-42-1	Arsine		HI3			0.015	O	0.20	O
1332-21-4	Asbestos	k		4.3E-06	I				
103-33-3	Azobenzene			0.032	I				
71-43-2	Benzene	j	HI3	0.13	A	3.0	O	29	T
92-87-5	Benzidine (and its salts)			7.1E-06	O				
100-44-7	Benzyl chloride		HI3	0.020	O	1.0	P	240	O
7440-41-7	Beryllium and compounds	o	HI3	0.00042	A	0.0070	O	0.020	S
111-44-4	<i>Bis</i> (2-chloroethyl) ether (BCEE)		HI3	0.0014	O			120	Tint
542-88-1	<i>Bis</i> (chloromethyl) ether		HI5	7.7E-05	O			1.4	Tint
117-81-7	<i>Bis</i> (2-ethylhexyl) phthalate (DEHP)			0.42	O				
75-25-2	Bromoform			0.91	I				
74-83-9	Bromomethane (methyl bromide)		HI3			5.0	A	3,900	O



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Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
106-94-5	1-Bromopropane (<i>n</i> -propyl bromide)		HI3	0.48	A	33	T	1,700	T
106-99-0	1,3-Butadiene		HI3	0.033	A	2.0	O	660	O
78-93-3	2-Butanone (methyl ethyl ketone)		HI3			5,000	I	5,000	S
78-92-2	sec-Butyl alcohol		HI3			30,000	P		
7440-43-9	Cadmium and compounds	o	HI3	0.00056	A	0.010	T	0.030	S
105-60-2	Caprolactam		HI3			2.2	O	50	O
75-15-0	Carbon disulfide		HI3			800	A	6,200	O
56-23-5	Carbon tetrachloride		HI3	0.17	A	100	I	1,900	O
463-58-1	Carbonyl sulfide		HI3			10	O	660	O
57-74-9	Chlordane	j	HI3	0.010	I	0.020	T	0.20	Tint
108171-26-2	Chlorinated paraffins	n		0.040	O				
7782-50-5	Chlorine		HI3			0.15	A	170	T
10049-04-4	Chlorine dioxide		HI3			0.60	O	2.8	Tint
532-27-4	2-Chloroacetophenone		HI5			0.030	I		
108-90-7	Chlorobenzene		HI3			50	P		



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Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
75-68-3	1-Chloro-1,1-difluoroethane		HI3			50,000	I		
75-45-6	Chlorodifluoromethane (Freon 22)		HI3			50,000	I		
75-00-3	Chloroethane (ethyl chloride)		HI3			30,000	O	40,000	T
67-66-3	Chloroform		HI3		A2	300	A	490	T
74-87-3	Chloromethane (methyl chloride)		HI3			90	A	1,000	T
95-83-0	4-Chloro- <i>o</i> -phenylenediamine			0.22	O				
76-06-2	Chloropicrin		HI3			0.40	O	29	O
126-99-8	Chloroprene		HI3	0.0033	I	20	I		
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine			0.013	O				
18540-29-9	Chromium VI, chromate and dichromate particulate	d	HI3	8.3E-05	A	0.20	O	0.30	S
7738-94-5	Chromium VI, chromic acid aerosol mist and chromium trioxide	d	HI3	8.3E-05	A	0.0050	T	0.0050	S
7440-48-4	Cobalt and compounds	o	HI3		A2	0.10	A		



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Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
148 [†]	Coke oven emissions			0.0016	I				
7440-50-8	Copper and compounds	o	HI3					100	O
120-71-8	<i>p</i> -Cresidine			0.023	O				
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol		HI3			600	O		
135-20-6	Cupferron			0.016	O				
74-90-8	Cyanide, hydrogen		HI3			0.80	A	340	O
110-82-7	Cyclohexane		HI3			6,000	I		
50-29-3	DDT	e		0.010	I				
615-05-4	2,4-Diaminoanisole			0.15	O				
95-80-7	2,4-Diaminotoluene (2,4-toluene diamine)			0.00091	O				
333-41-5	Diazinon		HI3					10	Tint
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		HI3	0.00017	P	0.20	I	1.9	Tint
106-46-7	<i>p</i> -Dichlorobenzene (1,4-dichlorobenzene)		HI3	0.091	A	60	T	12,000	T
91-94-1	3,3'-Dichlorobenzidine			0.0029	O				



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
75-34-3	1,1-Dichloroethane (ethylidene dichloride)			0.63	O				
156-60-5	<i>trans</i> -1,2-dichloroethene		HI3					790	T
75-09-2	Dichloromethane (methylene chloride)		HI3	100	A	600	I	2,100	T
78-87-5	1,2-Dichloropropane (propylene dichloride)		HI3			4.0	I	230	T
542-75-6	1,3-Dichloropropene		HI3	0.25	A	32	T	36	Tint
62-73-7	Dichlorvos (DDVP)		HI5			0.54	T	18	T
60-57-1	Dieldrin			0.00022	I				
200 [†]	Diesel particulate matter		HI3	0.10	A	5.0	O		
111-42-2	Diethanolamine		HI3			0.20	P		
112-34-5	Diethylene glycol monobutyl ether		HI3			0.10	P		
111-90-0	Diethylene glycol monoethyl ether		HI5			0.30	P		
75-37-6	1,1-Difluoroethane		HI5			40,000	I		
60-11-7	4- Dimethylaminoazobenzene			0.00077	O				



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Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
68-12-2	Dimethyl formamide		HI3			80	O		
57-14-7	1,1-Dimethylhydrazine		HI3					0.49	Tint
121-14-2	2,4-Dinitrotoluene			0.011	O				
123-91-1	1,4-Dioxane		HI3	0.20	I	30	I	7,200	T
122-66-7	1,2-Diphenylhydrazine (hydrazobenzene)			0.0045	I				
1937-37-7	Direct Black 38			7.1E-06	O				
2602-46-2	Direct Blue 6			7.1E-06	O				
16071-86-6	Direct Brown 95 (technical grade)			7.1E-06	O				
298-04-4	Disulfoton		HI3					6.0	T
106-89-8	Epichlorohydrin		HI3	0.043	O	3.0	O	1,300	O
106-88-7	1,2-Epoxybutane		HI5			20	O		
140-88-5	Ethyl acrylate		HI3			8.0	P		
100-41-4	Ethyl benzene		HI3	0.40	A	260	T	22,000	T
106-93-4	Ethylene dibromide (EDB, 1,2-dibromoethane)		HI3	0.0017	A	9.0	I		



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Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
107-06-2	Ethylene dichloride (EDC, 1,2-dichloroethane)		HI3	0.038	A	7.0	P		
107-21-1	Ethylene glycol		HI3			400	O	2,000	T
111-76-2	Ethylene glycol monobutyl ether		HI3			82	O	29,000	T
110-80-5	Ethylene glycol monoethyl ether		HI3			70	O	370	O
111-15-9	Ethylene glycol monoethyl ether acetate		HI3			60	P	140	O
109-86-4	Ethylene glycol monomethyl ether		HI3			60	O	93	O
110-49-6	Ethylene glycol monomethyl ether acetate		HI3			1.0	P		
75-21-8	Ethylene oxide		HI3	0.00033	A	30	O	160	Tint
96-45-7	Ethylene thiourea			0.077	O				
239 ^f	Fluorides		HI3			13	A	240	O
7782-41-4	Fluorine gas		HI3					16	T
50-00-0	Formaldehyde		HI3	0.17	A	9.0	O	49	T
111-30-8	Glutaraldehyde		HI5			0.080	O	4.1	T



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
76-44-8	Heptachlor			0.00077	I				
1024-57-3	Heptachlor epoxide			0.00038	I				
118-74-1	Hexachlorobenzene			0.0020	O				
87-68-3	Hexachlorobutadiene			0.045	I				
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:			0.00091	O				
319-84-6	Hexachlorocyclohexane, <i>alpha</i> -			0.00091	O				
319-85-7	Hexachlorocyclohexane, <i>beta</i> -			0.00091	O				
58-89-9	Hexachlorocyclohexane, <i>gamma</i> - (Lindane)			0.0032	O				
77-47-4	Hexachlorocyclopentadiene		HI3			0.20	I	110	Tint
67-72-1	Hexachloroethane		HI3			30	I	58,000	T
822-06-0	Hexamethylene-1,6-diisocyanate		HI5			0.069	T	0.21	Tint
110-54-3	Hexane		HI3			700	A		
302-01-2	Hydrazine		HI3	0.00020	O	0.030	P	5.2	Tint



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
7647-01-0	Hydrochloric acid		HI3			20	A	2,100	O
7664-39-3	Hydrogen fluoride		HI3			13	A	16	T
7783-06-4	Hydrogen sulfide		HI3			2.0	A	98	S
78-59-1	Isophorone		HI3			2,000	O		
67-63-0	Isopropyl alcohol		HI3			200	P	3,200	O
98-82-8	Isopropylbenzene (c umene)		HI3			400	I		
7439-92-1	Lead and compounds	o	HI3		A2	0.15	A	0.15	S
108-31-6	Maleic anhydride		HI5			0.70	O		
7439-96-5	Manganese and compounds	o	HI3			0.090	A	0.30	S
7439-97-6	Mercury and compounds	o	HI3			0.30	A	0.60	O
67-56-1	Methanol		HI3			4,000	A	28,000	O
101-14-4	4,4'-Methylene <i>bis</i> (2- chloroaniline) (MOCA)			0.0023	O				
101-77-9	4,4'-Methylenedianiline (and its dichloride)		HI5	0.0022	O	20	O		
101-68-8	Methylene diphenyl diisocyanate (MDI)		HI3			0.080	O	12	O



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
108-10-1	Methyl isobutyl ketone (MIBK, hexone)		HI3			3,000	I		
624-83-9	Methyl isocyanate		HI3			1.0	O		
80-62-6	Methyl methacrylate		HI5			700	I		
1634-04-4	Methyl <i>tert</i> -butyl ether		HI3	3.8	O	8,000	O	8,000	O
90-94-8	Michler's ketone			0.0040	O				
91-20-3	Naphthalene		HI3	0.029	A	3.7	T	200	S
365 [†]	Nickel compounds, insoluble	f	HI3	0.0038	A	0.014	O	0.20	O
368 [†]	Nickel compounds, soluble	f	HI3		A2	0.014	A	0.20	O
7697-37-2	Nitric acid		HI5					86	O
98-95-3	Nitrobenzene		HI3	0.025	I	9.0	I		
79-46-9	2-Nitropropane		HI3			20	I		
924-16-3	N-Nitrosodibutylamine			0.00032	O				
55-18-5	N-Nitrosodiethylamine			1.0E-04	O				
62-75-9	N-Nitrosodimethylamine			0.00022	O				
86-30-6	N-Nitrosodiphenylamine			0.38	O				



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
156-10-5	<i>p</i> -Nitrosodiphenylamine			0.16	O				
621-64-7	N-Nitrosodipropylamine			0.00050	O				
10595-95-6	N-Nitrosomethylethylamine			0.00016	O				
59-89-2	N-Nitrosomorpholine			0.00053	O				
100-75-4	N-Nitrosopiperidine			0.00037	O				
930-55-2	N-Nitrosopyrrolidine			0.0017	O				
8014-95-7	Oleum (fuming sulfuric acid)		HI3					120	O
56-38-2	Parathion		HI3					0.020	Tint
87-86-5	Pentachlorophenol			0.20	O				
108-95-2	Phenol		HI3			200	O	5,800	O
75-44-5	Phosgene		HI3			0.30	A	4.0	O
7803-51-2	Phosphine		HI3			0.80	A		
7664-38-2	Phosphoric acid		HI3			10	A		
12185-10-3	Phosphorus, white		HI3			9.0	A	20	T
85-44-9	Phthalic anhydride		HI3			20	O		



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			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
447 [†]	Polybrominated diphenyl ethers (PBDEs)	g	HI3					6.0	Tint
1336-36-3	Polychlorinated biphenyls (PCBs)			0.010	A				
645 [†]	Polychlorinated biphenyls (PCBs) TEQ	h	HI3	2.6E-08	A1	4.E-05	O		
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]	h	HI3	0.00026	A1	0.40	O		
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]	h	HI3	8.8E-05	A1	0.13	O		
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]	h	HI3	2.6E-07	A1	0.00040	O		
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		



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			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
52663-72-6	PCB 167 [2,3',4,4',5,5'-hexachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]	h	HI3	8.8E-07	A1	0.0013	O		
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]	h	HI3	0.00088	A1	1.3	O		
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ	h	HI3	2.6E-08	A1	4.0E-05	O		
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)		HI3	2.6E-08	A	4.0E-05	O		
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)	h	HI3	2.6E-08	A1	4.0E-05	O		
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	h	HI3	2.6E-07	A1	0.00040	O		
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)	h	HI3	2.6E-06	A1	0.0040	O		
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)	h	HI3	8.8E-05	A1	0.13	O		
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	h	HI3	2.6E-07	A1	0.00040	O		
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	h	HI3	8.8E-07	A1	0.0013	O		
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	h	HI3	8.8E-08	A1	0.00013	O		
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	h	HI3	2.6E-07	A1	0.00040	O		
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	h	HI3	2.6E-06	A1	0.0040	O		
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	h	HI3	2.6E-06	A1	0.0040	O		
39001-02-0	Octachlorodibenzofuran (OCDF)	h	HI3	8.8E-05	A1	0.13	O		
401 [†]	Polycyclic aromatic hydrocarbons (PAHs)	q		0.0017	A				
191-26-4	Anthanthrene	i		0.0042	A1				
56-55-3	Benz[a]anthracene	i		0.0083	A1				
50-32-8	Benzo[a]pyrene	m	HI3	0.0017	A	0.0020	I	0.0020	I
205-99-2	Benzo[b]fluoranthene	i		0.0021	A1				
205-12-9	Benzo[c]fluorene	i		8.3E-05	A1				



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
191-24-2	Benzo[g,h,i]perylene	i		0.19	A1				
205-82-3	Benzo[j]fluoranthene	i		0.0056	A1				
207-08-9	Benzo[k]fluoranthene	i		0.056	A1				
218-01-9	Chrysene	i		0.017	A1				
27208-37-3	Cyclopenta[c,d]pyrene	i		0.0042	A1				
53-70-3	Dibenz[a,h]anthracene	i		0.00017	A1				
192-65-4	Dibenzo[a,e]pyrene	i		0.0042	A1				
189-64-0	Dibenzo[a,h]pyrene	i		0.0019	A1				
189-55-9	Dibenzo[a,i]pyrene	i		0.0028	A1				
191-30-0	Dibenzo[a,l]pyrene	i		5.6E-05	A1				
206-44-0	Fluoranthene	i		0.021	A1				
193-39-5	Indeno[1,2,3-cd]pyrene	i		0.024	A1				
3697-24-3	5-Methylchrysene	i		0.0017	A1				
7496-02-8	6-Nitrochrysene	i		0.00017	A1				
7758-01-2	Potassium bromate			0.0071	O				
1120-71-4	1,3-Propane sultone			0.0014	O				



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
123-38-6	Propionaldehyde		HI5			8.0	I		
115-07-1	Propylene		HI5			3,000	O		
6423-43-4	Propylene glycol dinitrate		HI5			0.27	T	20	T
107-98-2	Propylene glycol monomethyl ether		HI3			7,000	O		
75-56-9	Propylene oxide		HI3	0.27	O	30	O	3,100	O
572 [†]	Refractory ceramic fibers	k	HI5			0.030	T		
7783-07-5	Selenide, hydrogen		HI3					5.0	O
7782-49-2	Selenium and compounds	j, o	HI3				A3	2.0	S
7631-86-9	Silica, crystalline (respirable)		HI5			3.0	O		
1310-73-2	Sodium hydroxide		HI3					8.0	O
100-42-5	Styrene		HI3			1,000	A	21,000	S
7664-93-9	Sulfuric acid		HI5			1.0	O	120	O
505-60-2	Sulfur mustard		HI3					0.70	T
7446-11-9	Sulfur trioxide		HI5			1.0	O	120	O
630-20-6	1,1,1,2-Tetrachloroethane			0.14	I				



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^P	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
79-34-5	1,1,2,2-Tetrachloroethane			0.017	O				
127-18-4	Tetrachloroethene (perchloroethylene)		HI3	3.8	A	41	T	41	T
811-97-2	1,1,1,2-Tetrafluoroethane		HI3			80,000	I		
62-55-5	Thioacetamide			0.00059	O				
7550-45-0	Titanium tetrachloride		HI3			0.10	T	10	Tint
108-88-3	Toluene		HI3			5,000	A	7,500	T
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)		HI3	0.091	O	0.021	A	0.071	T
8001-35-2	Toxaphene (polychlorinated camphenes)			0.0031	I				
71-55-6	1,1,1-Trichloroethane (methyl chloroform)		HI3			5,000	A	11,000	T
79-00-5	1,1,2-Trichloroethane (vinyl trichloride)			0.063	O				
79-01-6	Trichloroethene (TCE, trichloroethylene)		HI3	0.24	A	2.1	T	2.1	Tint
88-06-2	2,4,6-Trichlorophenol			0.050	O				
96-18-4	1,2,3-Trichloropropane		HI5			0.30	I	1.8	T



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Table 2
Toxicity Reference Values

			Noncancer TBACT RAL ^p	Toxicity Reference Values (TRVs)					
				Chronic Cancer ^a		Chronic Noncancer ^b		Acute Noncancer ^c	
CASRN	Chemical	Notes		(µg/m ³)	Notes	(µg/m ³)	Notes	(µg/m ³)	Notes
121-44-8	Triethylamine		HI3			200	O	2,800	O
526-73-8	1,2,3-Trimethylbenzene		HI3			60	I		
95-63-6	1,2,4-Trimethylbenzene		HI3			60	I		
108-67-8	1,3,5-Trimethylbenzene		HI3			60	I		
51-79-6	Urethane (ethyl carbamate)			0.0034	O				
7440-62-2	Vanadium (fume or dust)		HI3			0.10	T	0.80	T
1314-62-1	Vanadium pentoxide		HI3	0.00012	P	0.0070	P	30	O
108-05-4	Vinyl acetate	j	HI3			200	O	200	I
593-60-2	Vinyl bromide		HI5			3.0	I		
75-01-4	Vinyl chloride		HI3	0.11	I	100	I	1,300	T
75-35-4	Vinylidene chloride	j	HI3			200	I	200	I
1330-20-7	Xylene (mixture), including <i>m</i> -xylene, <i>o</i> -xylene, <i>p</i> -xylene		HI3			220	A	8,700	T

Footnotes for OAR 340-247-8010 Table 2:

† Chemical designated by DEQ ID number.

a) TRV based on a 1 in 1 million excess cancer risk.

TRV = $1 \times 10^{-6} / \text{IUR}$, where IUR = chemical-specific inhalation unit risk value $[(\mu\text{g}/\text{m}^3)^{-1}]$.

- b) TRV based on chronic noncancer value from authoritative sources ($\mu\text{g}/\text{m}^3$).
- c) TRV based on acute or subchronic noncancer value from authoritative sources ($\mu\text{g}/\text{m}^3$).
- d) The TRVs presented for chromium are applicable to hexavalent chromium.
- e) DDT TRVs apply to the sum of DDT, DDE, and DDD compounds.
- f) As recommended by the ATSAC in 2018, the two categories of nickel compounds contain the following specific nickel compounds:
Soluble nickel compounds are considered to be emitted mainly in aerosol form, to be less potent carcinogens than insoluble nickel compounds, and include nickel acetate, nickel chloride, nickel carbonate, nickel hydroxide, nickelocene, nickel sulfate, nickel sulfate hexahydrate, nickel nitrate hexahydrate, nickel carbonate hydroxide.
Insoluble nickel compounds are considered to be emitted mainly in particulate form, to be more potent carcinogens than soluble nickel compounds, and to include nickel subsulfide, nickel oxide, nickel sulfide, nickel metal.
- g) TRVs apply to octabrominated diphenyl ethers (CASRN 32536-52-0) and pentabrominated diphenyl ethers (CASRN 32534-81-9), including BDE-99.
- h) TRV for chronic cancer calculated by applying toxicity equivalency factor to 2,3,7,8-TCDD TRV.
- i) TRV for chronic cancer calculated by applying toxicity equivalency factor to benzo[a]pyrene TRV.
- j) If the short-term toxicity reference value is lower than the chronic noncancer toxicity reference value, the chronic noncancer toxicity reference value was used for the short-term toxicity reference value because chronic noncancer toxicity reference values are generally more reliable.
- k) TRVs for asbestos and refractory ceramic fibers are in units of fibers/cm³.
- m) Because benzo[a]pyrene can cause developmental effects, the chronic noncancer TRV is also used as the acute noncancer TRV.
- n) Chlorinated paraffins of average chain length of C12, approximately 60% chlorine by weight.
- o) An inorganic chemical designated with "and compounds" indicates that the TRV applies to the sum of all forms of the chemical, expressed as the inorganic element.
- p) Noncancer TBACT RAL = noncancer Toxics Best Available Control Technology Risk Action Level, OAR 340-245-8010, Table 1.
- q) Cancer TRV for PAHs was developed using benzo[a]pyrene TRV.

Legend:

A = ATSAC, DEQ Air Toxics Science Advisory Committee, 2018.

A1 = ATSAC, 2018. TRV for cancer calculated by applying toxic equivalency factor.

A2 = Because the ATSAC decided it was inappropriate to develop an ABC based on carcinogenic effects, DEQ did not obtain a cancer TRV from the other authoritative sources.

A3 = Because the ATSAC decided it was inappropriate to develop an ABC based on noncarcinogenic effects, DEQ did not obtain a TRV from the other authoritative sources.

CASRN = Chemical Abstracts Service Registry Number, or DEQ ID if there is no CASRN.

I = IRIS, EPA integrated risk information system

O = OEHHA, California Environmental Protection Agency, Office of Environmental Health Hazard Assessment

P = PPRTV, EPA preliminary peer reviewed toxicity value

S = SGC, DEQ short-term guideline concentration

T = ATSDR, U.S. Agency for Toxic Substances and Disease Registry

TEQ = toxic equivalency, relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin.

Tint = ATSDR, intermediate minimal risk level

TRV = toxicity reference value

340-245-8010 Table 2
Risk-Based Concentrations



OAR 340-245-8010
Table 2
Risk-Based Concentrations

CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
75-07-0	Acetaldehyde		HI3	0.45	140	12	620	5.5	620	470
60-35-5	Acetamide			0.050		1.3		0.60		
67-64-1	Acetone		HI3		31,000		140,000		140,000	62,000
75-05-8	Acetonitrile		HI3		60		260		260	
107-02-8	Acrolein		HI5		0.35		1.5		1.5	6.9
79-06-1	Acrylamide	g	HI3	0.0059	6.0	0.062	26	0.12	26	
79-10-7	Acrylic acid		HI3		1.0		4.4		4.4	6,000
107-13-1	Acrylonitrile		HI3	0.015	5.0	0.38	22	0.18	22	220
309-00-2	Aldrin			0.00020		0.0053		0.0024		
107-05-1	Allyl chloride		HI3	0.17	1.0	4.3	4.4	2.0	4.4	
7429-90-5	Aluminum and compounds	1	HI5		5.0		22		22	
7664-41-7	Ammonia		HI3		500		2,200		2,200	1,200
62-53-3	Aniline		HI5	0.63	1.0	16	4.4	7.5	4.4	
7440-36-0	Antimony and compounds	1	HI3		0.30		1.3		1.3	1.0
140-57-8	Aramite			0.14		3.7		1.7		
7440-38-2	Arsenic and compounds	1	HI3	2.4E-05	0.00017	0.0013	0.0024	0.00062	0.0024	0.20
7784-42-1	Arsine		HI3		0.015		0.066		0.066	0.20
1332-21-4	Asbestos	I		4.3E-06		0.00011		5.2E-05		
103-33-3	Azobenzene			0.032		0.84		0.39		
71-43-2	Benzene		HI3	0.13	3.0	3.3	13	1.5	13	29
92-87-5	Benzidine (and its salts)	g		4.2E-06		4.4E-05		8.6E-05		
100-44-7	Benzyl chloride		HI3	0.020	1.0	0.53	4.4	0.24	4.4	240
7440-41-7	Beryllium and compounds	1	HI3	0.00042	0.0070	0.011	0.031	0.0050	0.031	0.020
111-44-4	Bis(2-chloroethyl) ether (BCEE)		HI3	0.0014		0.037		0.017		120



OAR 340-245-8010
Table 2
Risk-Based Concentrations

			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non- cancer RBC ^a	Child Cancer RBC ^a	Child Non- cancer RBC ^a	Worker Cancer RBC ^a	Worker Non- cancer RBC ^a	Non- cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
542-88-1	Bis(chloromethyl) ether		HI5	7.7E-05		0.0020		0.00092		1.4
117-81-7	Bis(2-ethylhexyl) phthalate (DEHP)	c		0.080		11		5.0		
75-25-2	Bromoform			0.91		24		11		
74-83-9	Bromomethane (methyl bromide)		HI3		5.0		22		22	3,900
106-94-5	1-Bromopropane (n-propyl bromide)		HI3	0.48	33	12	150	5.7	150	1,700
106-99-0	1,3-Butadiene		HI3	0.033	2.0	0.86	8.8	0.40	8.8	660
78-93-3	2-Butanone (methyl ethyl ketone)		HI3		5,000		22,000		22,000	5,000
78-92-2	sec-Butyl alcohol		HI3		30,000		130,000		130,000	
7440-43-9	Cadmium and compounds	c, l	HI3	0.00056	0.0050	0.014	0.037	0.0067	0.037	0.030
105-60-2	Caprolactam		HI3		2.2		9.7		9.7	50
75-15-0	Carbon disulfide		HI3		800		3,500		3,500	6,200
56-23-5	Carbon tetrachloride		HI3	0.17	100	4.3	440	2.0	440	1,900
463-58-1	Carbonyl sulfide		HI3		10		44		44	660
57-74-9	Chlordane		HI3	0.010	0.020	0.26	0.088	0.12	0.088	0.20
108171-26-2	Chlorinated paraffins	j		0.040		1.0		0.48		
7782-50-5	Chlorine		HI3		0.15		0.66		0.66	170
10049-04-4	Chlorine dioxide		HI3		0.60		2.6		2.6	2.8
532-27-4	2-Chloroacetophenone		HI5		0.030		0.13		0.13	
108-90-7	Chlorobenzene		HI3		50		220		220	
75-68-3	1-Chloro-1,1-difluoroethane		HI3		50,000		220,000		220,000	
75-45-6	Chlorodifluoromethane (Freon 22)		HI3		50,000		220,000		220,000	
75-00-3	Chloroethane (ethyl chloride)		HI3		30,000		130,000		130,000	40,000
67-66-3	Chloroform		HI3		300		1,300		1,300	490
74-87-3	Chloromethane (methyl chloride)		HI3		90		400		400	1,000



OAR 340-245-8010
Table 2
Risk-Based Concentrations

CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
95-83-0	4-Chloro- <i>o</i> -phenylenediamine			0.22		5.7		2.6		
76-06-2	Chloropicrin		HI3		0.40		1.8		1.8	29
126-99-8	Chloroprene		HI3	0.0033	20	0.087	88	0.040	88	
95-69-2	<i>p</i> -Chloro- <i>o</i> -toluidine			0.013		0.34		0.16		
18540-29-9	Chromium VI, chromate and dichromate particulate	c, d	HI3	3.1E-05	0.083	0.00052	0.88	0.0010	0.88	0.30
7738-94-5	Chromium VI, chromic acid aerosol mist and chromium trioxide	c, d	HI3	3.1E-05	0.0021	0.00052	0.022	0.0010	0.022	0.0050
7440-48-4	Cobalt and compounds	l	HI3		0.10		0.44		0.44	
148 [†]	Coke oven emissions	g		0.00095		0.0100		0.019		
7440-50-8	Copper and compounds	l	HI3							100
120-71-8	<i>p</i> -Cresidine			0.023		0.60		0.28		
1319-77-3	Cresols (mixture), including <i>m</i> -cresol, <i>o</i> -cresol, <i>p</i> -cresol		HI3		600		2,600		2,600	
135-20-6	Cupferron			0.016		0.41		0.19		
74-90-8	Cyanide, hydrogen		HI3		0.80		3.5		3.5	340
110-82-7	Cyclohexane		HI3		6,000		26,000		26,000	
50-29-3	DDT	e		0.010		0.27		0.12		
615-05-4	2,4-Diaminoanisole			0.15		3.9		1.8		
95-80-7	2,4-Diaminotoluene (2,4-toluene diamine)			0.00091		0.024		0.011		
333-41-5	Diazinon		HI3							10
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	g	HI3	9.8E-05	0.20	0.0010	0.88	0.0020	0.88	1.9
106-46-7	<i>p</i> -Dichlorobenzene (1,4-dichlorobenzene)		HI3	0.091	60	2.4	260	1.1	260	12,000
91-94-1	3,3'-Dichlorobenzidine			0.0029		0.076		0.035		
75-34-3	1,1-Dichloroethane (ethylidene dichloride)			0.63		16		7.5		



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Table 2
Risk-Based Concentrations

CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic			Acute	
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
156-60-5	<i>trans</i> -1,2-dichloroethene		HI3							790
75-09-2	Dichloromethane (methylene chloride)		HI3	59	600	620	2,600	1,200	2,600	2,100
78-87-5	1,2-Dichloropropane (propylene dichloride)		HI3		4.0		18		18	230
542-75-6	1,3-Dichloropropene		HI3	0.25	32	6.5	140	3.0	140	36
62-73-7	Dichlorvos (DDVP)		HI5		0.54		2.4		2.4	18
60-57-1	Dieldrin			0.00022		0.0057		0.0026		
200 [†]	Diesel particulate matter		HI3	0.10	5.0	2.6	22	1.2	22	
111-42-2	Diethanolamine		HI3		0.20		0.88		0.88	
112-34-5	Diethylene glycol monobutyl ether		HI3		0.10		0.44		0.44	
111-90-0	Diethylene glycol monoethyl ether		HI5		0.30		1.3		1.3	
75-37-6	1,1-Difluoroethane		HI5		40,000		180,000		180,000	
60-11-7	4-Dimethylaminoazobenzene			0.00077		0.020		0.0092		
68-12-2	Dimethyl formamide		HI3		80		350		350	
57-14-7	1,1-Dimethylhydrazine		HI3							0.49
121-14-2	2,4-Dinitrotoluene			0.011		0.29		0.13		
123-91-1	1,4-Dioxane		HI3	0.20	30	5.2	130	2.4	130	7,200
122-66-7	1,2-Diphenylhydrazine (hydrazobenzene)			0.0045		0.12		0.055		
1937-37-7	Direct Black 38			7.1E-06		0.00019		8.6E-05		
2602-46-2	Direct Blue 6			7.1E-06		0.00019		8.6E-05		
16071-86-6	Direct Brown 95 (technical grade)			7.1E-06		0.00019		8.6E-05		
298-04-4	Disulfoton		HI3							6.0
106-89-8	Epichlorohydrin		HI3	0.043	3.0	1.1	13	0.52	13	1,300
106-88-7	1,2-Epoxybutane		HI5		20		88		88	
140-88-5	Ethyl acrylate		HI3		8.0		35		35	



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Table 2
Risk-Based Concentrations

			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non- cancer RBC ^a	Child Cancer RBC ^a	Child Non- cancer RBC ^a	Worker Cancer RBC ^a	Worker Non- cancer RBC ^a	Non- cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
100-41-4	Ethyl benzene		HI3	0.40	260	10	1,100	4.8	1,100	22,000
106-93-4	Ethylene dibromide (EDB, 1,2-dibromoethane)		HI3	0.0017	9.0	0.043	40	0.020	40	
107-06-2	Ethylene dichloride (EDC, 1,2-dichloroethane)		HI3	0.038	7.0	1.0	31	0.46	31	
107-21-1	Ethylene glycol		HI3		400		1,800		1,800	2,000
111-76-2	Ethylene glycol monobutyl ether		HI3		82		360		360	29,000
110-80-5	Ethylene glycol monoethyl ether		HI3		70		310		310	370
111-15-9	Ethylene glycol monoethyl ether acetate		HI3		60		260		260	140
109-86-4	Ethylene glycol monomethyl ether		HI3		60		260		260	93
110-49-6	Ethylene glycol monomethyl ether acetate		HI3		1.0		4.4		4.4	
75-21-8	Ethylene oxide	g	HI3	0.00020	30	0.0021	130	0.0040	130	160
96-45-7	Ethylene thiourea			0.077		2.0		0.92		
239 [†]	Fluorides	c	HI3		2.3		20		20	240
7782-41-4	Fluorine gas		HI3							16
50-00-0	Formaldehyde		HI3	0.17	9.0	4.3	40	2.0	40	49
111-30-8	Glutaraldehyde		HI5		0.080		0.35		0.35	4.1
76-44-8	Heptachlor			0.00077		0.020		0.0092		
1024-57-3	Heptachlor epoxide			0.00038		0.010		0.0046		
118-74-1	Hexachlorobenzene			0.0020		0.051		0.024		
87-68-3	Hexachlorobutadiene			0.045		1.2		0.55		
608-73-1	Hexachlorocyclohexanes (mixture) including but not limited to:	c		0.00017		0.018		0.0084		
319-84-6	Hexachlorocyclohexane, <i>alpha</i> -	c		0.00017		0.018		0.0084		



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			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non- cancer RBC ^a	Child Cancer RBC ^a	Child Non- cancer RBC ^a	Worker Cancer RBC ^a	Worker Non- cancer RBC ^a	Non- cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
319-85-7	Hexachlorocyclohexane, <i>beta</i> -	c		0.00017		0.018		0.0084		
58-89-9	Hexachlorocyclohexane, <i>gamma</i> - (Lindane)	c		0.00060		0.065		0.030		
77-47-4	Hexachlorocyclopentadiene		HI3		0.20		0.88		0.88	110
67-72-1	Hexachloroethane		HI3		30		130		130	58,000
822-06-0	Hexamethylene-1,6-diisocyanate		HI5		0.069		0.30		0.30	0.21
110-54-3	Hexane		HI3		700		3,100		3,100	
302-01-2	Hydrazine		HI3	0.00020	0.030	0.0053	0.13	0.0024	0.13	5.2
7647-01-0	Hydrochloric acid		HI3		20		88		88	2,100
7664-39-3	Hydrogen fluoride	c	HI3		2.1		19		19	16
7783-06-4	Hydrogen sulfide		HI3		2.0		8.8		8.8	98
78-59-1	Isophorone		HI3		2,000		8,800		8,800	
67-63-0	Isopropyl alcohol		HI3		200		880		880	3,200
98-82-8	Isopropylbenzene (cumene)		HI3		400		1,800		1,800	
7439-92-1	Lead and compounds	c, l	HI3		0.15		0.66		0.66	0.15
108-31-6	Maleic anhydride		HI5		0.70		3.1		3.1	
7439-96-5	Manganese and compounds	l	HI3		0.090		0.40		0.40	0.30
7439-97-6	Mercury and compounds	c, l	HI3		0.077		0.63		0.63	0.60
67-56-1	Methanol		HI3		4,000		18,000		18,000	28,000
101-14-4	4,4'-Methylene bis(2-chloroaniline) (MOCA)			0.0023		0.060		0.028		
101-77-9	4,4'-Methylenedianiline (and its dichloride)		HI5	0.00030	20	0.023	88	0.010	88	
101-68-8	Methylene diphenyl diisocyanate (MDI)		HI3		0.080		0.35		0.35	12
108-10-1	Methyl isobutyl ketone (MIBK, hexone)		HI3		3,000		13,000		13,000	
624-83-9	Methyl isocyanate		HI3		1.0		4.4		4.4	



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			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non- cancer RBC ^a	Child Cancer RBC ^a	Child Non- cancer RBC ^a	Worker Cancer RBC ^a	Worker Non- cancer RBC ^a	Non- cancer RBC ^a
			(µg/m ³)							
80-62-6	Methyl methacrylate		HI5		700		3,100		3,100	
1634-04-4	Methyl <i>tert</i> -butyl ether		HI3	3.8	8,000	100	35,000	46	35,000	8,000
90-94-8	Michler's ketone			0.0040		0.10		0.048		
91-20-3	Naphthalene	c	HI3	0.029	3.7	0.76	16	0.35	16	200
365 [†]	Nickel compounds, insoluble	f	HI3	0.0038	0.014	0.10	0.062	0.046	0.062	0.20
368 [†]	Nickel compounds, soluble	f	HI3		0.014		0.062		0.062	0.20
7697-37-2	Nitric acid		HI5							86
98-95-3	Nitrobenzene		HI3	0.025	9.0	0.65	40	0.30	40	
79-46-9	2-Nitropropane		HI3		20		88		88	
924-16-3	N-Nitrosodibutylamine			0.00032		0.0084		0.0039		
55-18-5	N-Nitrosodiethylamine	g		5.9E-05		0.00062		0.0012		
62-75-9	N-Nitrosodimethylamine	g		0.00013		0.0013		0.0026		
86-30-6	N-Nitrosodiphenylamine			0.38		10		4.6		
156-10-5	<i>p</i> -Nitrosodiphenylamine			0.16		4.1		1.9		
621-64-7	N-Nitrosodipropylamine			0.00050		0.013		0.0060		
10595-95-6	N-Nitrosomethylethylamine			0.00016		0.0041		0.0019		
59-89-2	N-Nitrosomorpholine			0.00053		0.014		0.0063		
100-75-4	N-Nitrosopiperidine			0.00037		0.0096		0.0044		
930-55-2	N-Nitrosopyrrolidine			0.0017		0.043		0.020		
8014-95-7	Oleum (fuming sulfuric acid)		HI3							120
56-38-2	Parathion		HI3							0.020
87-86-5	Pentachlorophenol			0.20		5.1		2.4		
108-95-2	Phenol		HI3		200		880		880	5,800
75-44-5	Phosgene		HI3		0.30		1.3		1.3	4.0
7803-51-2	Phosphine		HI3		0.80		3.5		3.5	
7664-38-2	Phosphoric acid		HI5		10		44		44	
12185-10-3	Phosphorus, white		HI3		9.0		40		40	20



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CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
85-44-9	Phthalic anhydride		HI3		20		88		88	
447 [†]	Polybrominated diphenyl ethers (PBDEs)	h	HI3							6.0
1336-36-3	Polychlorinated biphenyls (PCBs)	c		0.00053		0.020		0.0092		
645 [†]	Polychlorinated biphenyls (PCBs) TEQ	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
32598-13-3	PCB 77 [3,3',4,4'-tetrachlorobiphenyl]	c	HI3	1.0E-05	0.0013	0.00090	0.26	0.00042	0.26	
70362-50-4	PCB 81 [3,4,4',5-tetrachlorobiphenyl]	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
32598-14-4	PCB 105 [2,3,3',4,4'-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
74472-37-0	PCB 114 [2,3,4,4',5-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
31508-00-6	PCB 118 [2,3',4,4',5-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
65510-44-3	PCB 123 [2,3',4,4',5'-pentachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
57465-28-8	PCB 126 [3,3',4,4',5-pentachlorobiphenyl]	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
38380-08-4	PCB 156 [2,3,3',4,4',5-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
69782-90-7	PCB 157 [2,3,3',4,4',5'-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
52663-72-6	PCB 167 [2,3',4,4',5,5'-hexachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
32774-16-6	PCB 169 [3,3',4,4',5,5'-hexachlorobiphenyl]	c	HI3	3.4E-08	4.2E-06	3.0E-06	0.00085	1.4E-06	0.00085	
39635-31-9	PCB 189 [2,3,3',4,4',5,5'-heptachlorobiphenyl]	c	HI3	3.4E-05	0.0042	0.0030	0.85	0.0014	0.85	
646 [†]	Polychlorinated dibenzo- <i>p</i> -dioxins (PCDDs) & dibenzofurans (PCDFs) TEQ	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	



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CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
40321-76-4	1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)	c	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
3268-87-9	Octachlorodibenzo- <i>p</i> -dioxin (OCDD)	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	c	HI3	3.4E-08	4.2E-06	3.0E-06	0.00085	1.4E-06	0.00085	
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	c	HI3	3.4E-09	4.2E-07	3.0E-07	8.5E-05	1.4E-07	8.5E-05	
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	



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			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non- cancer RBC ^a	Child Cancer RBC ^a	Child Non- cancer RBC ^a	Worker Cancer RBC ^a	Worker Non- cancer RBC ^a	Non- cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	c	HI3	1.0E-08	1.3E-06	9.0E-07	0.00026	4.2E-07	0.00026	
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	c	HI3	1.0E-07	1.3E-05	9.0E-06	0.0026	4.2E-06	0.0026	
39001-02-0	Octachlorodibenzofuran (OCDF)	c	HI3	3.4E-06	0.00042	0.00030	0.085	0.00014	0.085	
401 [†]	Polycyclic aromatic hydrocarbons (PAHs)	c, g, n		4.3E-05		0.0016		0.0030		
191-26-4	Anthanthrene	c, g		0.00011		0.0039		0.0076		
56-55-3	Benz[a]anthracene	c, g		0.00021		0.0078		0.015		
50-32-8	Benzo[a]pyrene	c, g	HI3	4.3E-05	0.0020	0.0016	0.0088	0.0030	0.0088	0.0020
205-99-2	Benzo[b]fluoranthene	c, g		5.3E-05		0.0020		0.0038		
205-12-9	Benzo[c]fluorene	c, g		2.1E-06		7.8E-05		0.00015		
191-24-2	Benzo[g,h,i]perylene	c, g		0.0047		0.17		0.34		
205-82-3	Benzo[j]fluoranthene	c, g		0.00014		0.0052		0.010		
207-08-9	Benzo[k]fluoranthene	c, g		0.0014		0.052		0.10		
218-01-9	Chrysene	c, g		0.00043		0.016		0.030		
27208-37-3	Cyclopenta[c,d]pyrene	c, g		0.00011		0.0039		0.0076		
53-70-3	Dibenz[a,h]anthracene	c, g		4.3E-06		0.00016		0.00030		
192-65-4	Dibenzo[a,e]pyrene	c, g		0.00011		0.0039		0.0076		
189-64-0	Dibenzo[a,h]pyrene	c, g		4.7E-05		0.0017		0.0034		
189-55-9	Dibenzo[a,i]pyrene	c, g		7.1E-05		0.0026		0.0051		
191-30-0	Dibenzo[a,l]pyrene	c, g		1.4E-06		5.2E-05		0.00010		
206-44-0	Fluoranthene	c, g		0.00053		0.020		0.038		
193-39-5	Indeno[1,2,3-cd]pyrene	c, g		0.00061		0.022		0.043		



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			Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
CASRN ^b	Chemical	Notes		Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
			(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
3697-24-3	5-Methylchrysene	c, g		4.3E-05		0.0016		0.0030		
7496-02-8	6-Nitrochrysene	c, g		4.3E-06		0.00016		0.00030		
7758-01-2	Potassium bromate			0.0071		0.19		0.086		
1120-71-4	1,3-Propane sultone			0.0014		0.038		0.017		
123-38-6	Propionaldehyde		HI5		8.0		35		35	
115-07-1	Propylene		HI5		3,000		13,000		13,000	
6423-43-4	Propylene glycol dinitrate		HI5		0.27		1.2		1.2	20
107-98-2	Propylene glycol monomethyl ether		HI3		7,000		31,000		31,000	
75-56-9	Propylene oxide		HI3	0.27	30	7.0	130	3.2	130	3,100
572 [†]	Refractory ceramic fibers	i	HI5		0.030		0.13		0.13	
7783-07-5	Selenide, hydrogen		HI3							5.0
7782-49-2	Selenium and compounds	l	HI3							2.0
7631-86-9	Silica, crystalline (respirable)		HI5		3.0		13		13	
1310-73-2	Sodium hydroxide		HI3							8.0
100-42-5	Styrene		HI3		1,000		4,400		4,400	21,000
7664-93-9	Sulfuric acid		HI5		1.0		4.4		4.4	120
505-60-2	Sulfur mustard		HI3							0.70
7446-11-9	Sulfur trioxide		HI5		1.0		4.4		4.4	120
630-20-6	1,1,1,2-Tetrachloroethane			0.14		3.5		1.6		
79-34-5	1,1,2,2-Tetrachloroethane			0.017		0.45		0.21		
127-18-4	Tetrachloroethene (perchloroethylene)		HI3	3.8	41	100	180	46	180	41
811-97-2	1,1,1,2-Tetrafluoroethane		HI3		80,000		350,000		350,000	
62-55-5	Thioacetamide			0.00059		0.015		0.0071		
7550-45-0	Titanium tetrachloride		HI3		0.10		0.44		0.44	10
108-88-3	Toluene		HI3		5,000		22,000		22,000	7,500



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CASRN ^b	Chemical	Notes	Non cancer TBACT RAL ^m	Residential Chronic		Non-Residential Chronic				Acute
				Cancer RBC ^a	Non-cancer RBC ^a	Child Cancer RBC ^a	Child Non-cancer RBC ^a	Worker Cancer RBC ^a	Worker Non-cancer RBC ^a	Non-cancer RBC ^a
				(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)		HI3	0.091	0.021	2.4	0.092	1.1	0.092	0.071
8001-35-2	Toxaphene (polychlorinated camphenes)			0.0031		0.081		0.038		
71-55-6	1,1,1-Trichloroethane (methyl chloroform)		HI3		5,000		22,000		22,000	11,000
79-00-5	1,1,2-Trichloroethane (vinyl trichloride)			0.063		1.6		0.75		
79-01-6	Trichloroethene (TCE, trichloroethylene)	g	HI3	0.20	2.1	3.5	9.2	2.9	9.2	2.1
88-06-2	2,4,6-Trichlorophenol			0.050		1.3		0.60		
96-18-4	1,2,3-Trichloropropane		HI5		0.30		1.3		1.3	1.8
121-44-8	Triethylamine		HI3		200		880		880	2,800
526-73-8	1,2,3-Trimethylbenzene		HI3		60		260		260	
95-63-6	1,2,4-Trimethylbenzene		HI3		60		260		260	
108-67-8	1,3,5-Trimethylbenzene		HI3		60		260		260	
51-79-6	Urethane (ethyl carbamate)	g		0.0020		0.021		0.041		
7440-62-2	Vanadium (fume or dust)		HI3		0.10		0.44		0.44	0.80
1314-62-1	Vanadium pentoxide		HI3	0.00012	0.0070	0.0031	0.031	0.0014	0.031	30
108-05-4	Vinyl acetate		HI3		200		880		880	200
593-60-2	Vinyl bromide		HI5		3.0		13		13	
75-01-4	Vinyl chloride	g, k	HI3	0.11	100	0.22	440	2.7	440	1,300
75-35-4	Vinylidene chloride		HI3		200		880		880	200
1330-20-7	Xylene (mixture), including <i>m</i> -xylene, <i>o</i> -xylene, <i>p</i> -xylene		HI3		220		970		970	8,700

Footnotes for OAR 340-245-8010 Table 2:

- † Chemical designated by DEQ ID number.
- a) RBC = Risk-Based Concentration
- b) CASRN = Chemical Abstracts Service Registry Number, or DEQ ID if there is no CASRN.
- c) Chronic RBCs include factors for multipathway risk.

- d) The RBCs presented for chromium are applicable to hexavalent chromium. In the absence of data indicating otherwise, assume that any total chromium (i.e., unspicated) that is measured or modeled is entirely in the hexavalent form. Determine, based on information about the source of emissions, whether hexavalent chromium is emitted in aerosol or particulate form, and apply the corresponding RBC. Because there are no RBCs for trivalent chromium, a source determined to be emitting only trivalent chromium cannot be shown to pose an unacceptable risk, so the risk in this case will be considered acceptable.
- e) DDT RBCs apply to the sum of DDT, DDE, and DDD compounds.
- f) As recommended by DEQ's Air Toxics Science Advisory Committee (ATSAC) in 2018, the two categories of nickel compounds contain the following specific nickel compounds:
Soluble nickel compounds are considered to be emitted mainly in aerosol form, to be less potent carcinogens than insoluble nickel compounds, and include nickel acetate, nickel chloride, nickel carbonate, nickel hydroxide, nickelocene, nickel sulfate, nickel sulfate hexahydrate, nickel nitrate hexahydrate, nickel carbonate hydroxide.
Insoluble nickel compounds are considered to be emitted mainly in particulate form, to be more potent carcinogens than soluble nickel compounds, and to include nickel subsulfide, nickel oxide, nickel sulfide, nickel metal.
- g) RBCs adjusted to protect early-life exposure to infants and children because chemical is carcinogenic by a mutagenic mode of action.
- h) RBCs apply to octabrominated diphenyl ethers (CASRN 32536-52-0) and pentabrominated diphenyl ethers (CASRN 32534-81-9), including BDE-99.
- i) RBCs for asbestos and refractory ceramic fibers are in units of fibers/cm³.
- j) Chlorinated paraffins of average chain length of C12, approximately 60% chlorine by weight.
- k) DEQ followed the ATSAC recommendation to develop a vinyl chloride TRV that already includes early-life exposure.
- l) An inorganic chemical designated with "and compounds" indicates that the RBC applies to the sum of all forms of the chemical, expressed as the inorganic element.
- m) Noncancer TBACT RAL = noncancer Toxics Best Available Control Technology Risk Action Level, OAR 340-245-8010, Table 1.
- n) Because RBCs for PAHs were developed using TRVs for benzo[a]pyrene, apply PAH RBCs to summed benzo[a]pyrene toxicity equivalents for carcinogenic PAHs. If individual PAHs are not evaluated, apply PAH RBCs to total PAH concentrations.



OAR 340-245-8010 Table 3
Level 1 Risk Assessment Dispersion Factors

Table 3A: Stack Emission Dispersion Factors for Annual Exposure
($\mu\text{g}/\text{m}^3$ / pounds/year)

Stack	Exposure Location Distance (meters)												
Ht (m)	50	60	70	80	90	100	110	120	130	140	150	160	170
5	0.0033	0.0026	0.0021	0.0017	0.0014	0.0012	0.0010	0.00088	0.00076	0.00066	0.00058	0.00051	0.00046
10	0.0014	0.0012	0.0011	0.00094	0.00084	0.00075	0.00068	0.00062	0.00057	0.00052	0.00048	0.00044	0.00041
15	0.00075	0.00061	0.00054	0.00049	0.00044	0.00040	0.00037	0.00034	0.00031	0.00029	0.00027	0.00025	0.00024
20	0.00072	0.00054	0.00035	0.00031	0.00028	0.00026	0.00023	0.00022	0.00020	0.00019	0.00017	0.00016	0.00015
25	0.00050	0.00041	0.00035	0.00025	0.00019	0.00018	0.00016	0.00015	0.00014	0.00013	0.00012	0.00012	0.00011
30	0.00037	0.00030	0.00026	0.00023	0.00019	0.00013	0.00012	0.00011	0.00010	0.000096	0.000090	0.000085	0.000080
35	0.00030	0.00023	0.00019	0.00017	0.00015	0.00013	0.00011	0.000081	0.000075	0.000071	0.000068	0.000064	0.000061
40	0.00023	0.00019	0.00015	0.00013	0.00012	0.00011	0.000096	0.000081	0.000064	0.000054	0.000051	0.000049	0.000047
45	0.00018	0.00016	0.00013	0.00011	0.000095	0.000085	0.000078	0.000072	0.000063	0.000053	0.000042	0.000038	0.000037
50	0.00014	0.00013	0.00011	0.000090	0.000077	0.000068	0.000062	0.000057	0.000053	0.000048	0.000042	0.000035	0.000029

Stack	Exposure Location Distance (meters)												
Ht (m)	180	190	200	250	300	350	400	450	500	600	700	800	1000
5	0.00041	0.00037	0.00034	0.00023	0.00017	0.00013	0.00010	0.000084	0.000071	0.000052	0.000040	0.000032	0.000022
10	0.00038	0.00035	0.00033	0.00023	0.00017	0.00013	0.000098	0.000078	0.000064	0.000047	0.000036	0.000029	0.000021
15	0.00023	0.00021	0.00020	0.00016	0.00013	0.00010	0.000083	0.000069	0.000057	0.000041	0.000032	0.000025	0.000018
20	0.00014	0.00014	0.00013	0.00010	0.000086	0.000073	0.000062	0.000053	0.000046	0.000035	0.000027	0.000021	0.000015
25	0.00010	0.000096	0.000091	0.000072	0.000059	0.000051	0.000044	0.000039	0.000034	0.000027	0.000022	0.000018	0.000013
30	0.000075	0.000071	0.000068	0.000053	0.000044	0.000037	0.000032	0.000028	0.000025	0.000021	0.000017	0.000014	0.000010
35	0.000058	0.000055	0.000052	0.000042	0.000034	0.000029	0.000025	0.000022	0.000019	0.000016	0.000014	0.000011	0.000008
40	0.000045	0.000043	0.000041	0.000033	0.000028	0.000023	0.000020	0.000018	0.000016	0.000013	0.000011	0.000009	0.000007
45	0.000036	0.000034	0.000033	0.000027	0.000023	0.000019	0.000017	0.000015	0.000013	0.000011	0.000009	0.000008	0.000006
50	0.000027	0.000026	0.000026	0.000022	0.000019	0.000016	0.000014	0.000012	0.000011	0.000009	0.000007	0.000006	0.000005

Table 3B: Stack Emission Dispersion Factors for 24 hour Exposure ($\mu\text{g}/\text{m}^3$ / pounds/day)

Stack	Exposure Location Distance (meters)												
Ht (m)	50	60	70	80	90	100	110	120	130	140	150	160	170
5	8.3	7.1	6.1	5.2	4.4	3.8	3.2	2.7	2.4	2.1	1.8	1.6	1.4
10	3.8	3.4	3.1	2.8	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5
15	1.8	1.6	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.00	0.95	0.91	0.87
20	1.6	1.3	0.91	0.86	0.82	0.77	0.73	0.69	0.65	0.62	0.59	0.56	0.54
25	0.97	0.93	0.85	0.64	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36
30	0.62	0.59	0.57	0.55	0.49	0.34	0.32	0.31	0.30	0.29	0.28	0.27	0.26
35	0.42	0.41	0.39	0.38	0.37	0.34	0.29	0.22	0.21	0.21	0.20	0.20	0.19
40	0.30	0.29	0.28	0.28	0.27	0.26	0.25	0.22	0.17	0.15	0.15	0.15	0.14
45	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.17	0.16	0.12	0.11	0.11
50	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.12	0.10	0.082

Stack	Exposure Location Distance (meters)												
Ht (m)	180	190	200	250	300	350	400	450	500	600	700	800	1000
5	1.3	1.2	1.1	0.72	0.55	0.44	0.36	0.30	0.26	0.20	0.16	0.13	0.092
10	1.4	1.3	1.3	0.91	0.67	0.50	0.38	0.30	0.25	0.18	0.14	0.12	0.088
15	0.83	0.80	0.77	0.64	0.53	0.43	0.36	0.30	0.25	0.18	0.13	0.10	0.075
20	0.52	0.49	0.48	0.40	0.35	0.31	0.27	0.23	0.20	0.16	0.12	0.096	0.064
25	0.35	0.34	0.32	0.27	0.23	0.21	0.19	0.17	0.15	0.12	0.100	0.082	0.057
30	0.25	0.24	0.23	0.19	0.17	0.15	0.13	0.12	0.11	0.095	0.078	0.066	0.048
35	0.18	0.18	0.17	0.15	0.13	0.11	0.099	0.090	0.083	0.072	0.062	0.053	0.040
40	0.14	0.14	0.13	0.11	0.10	0.088	0.078	0.070	0.064	0.056	0.049	0.044	0.033
45	0.11	0.11	0.10	0.092	0.081	0.072	0.065	0.058	0.053	0.045	0.040	0.036	0.028
50	0.081	0.080	0.079	0.072	0.065	0.059	0.053	0.048	0.044	0.037	0.032	0.029	0.024

Use of stack emission dispersion factors in a Level 1 screening risk assessment:

For each Toxics Emissions Unit, select the appropriate stack height and distance from the stack to nearest exposure locations approved by DEQ. For each exposure location, find the corresponding annual dispersion factor in Table 3A. For each toxic air contaminant, multiply the annual toxic air contaminant emission rate (in pounds/year) by the dispersion factor. Divide the product by the RBC for all the toxic air contaminants for the appropriate exposure location in OAR 340-245-8010 Table 2. Add up the resulting ratios for all Toxic Emissions Units for each exposure location. Compare the results with the Risk Action Levels in OAR 340-245-8010 Table 1. Repeat the process for daily emission rates (in pounds/day) using Table 3B at the acute exposure location.

For a stack height between the values shown in the table, either use the next lowest stack height, or interpolate the dispersion factor. For an exposure location distance between the values shown in the table, either use the next lowest distance, or interpolate the dispersion factor. For stack heights greater than 50 meters, use the appropriate dispersion factor for 50 meters. For exposure locations greater than 1,000 meters from the stack, use the appropriate dispersion factor at 1,000 meters. In the absence of a known stack height and exposure location distance, use as a default the annual dispersion factor ($0.0033 \mu\text{g}/\text{m}^3$ / pounds/year) and daily dispersion factor ($8.3 \mu\text{g}/\text{m}^3$ / pounds/day) for a stack height of 5 meters and an exposure location distance of 50 meters.

A Level 1 Risk Assessment will not be approved if the source is located near elevated terrain that DEQ determines could invalidate the assumptions used to develop the Level 1 Risk Assessment tool.

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, and 468A.155



ORAR 340-245-8010 Table 3
Level 1 Risk Assessment Dispersion Factors

Table 3C: Fugitive Emission Dispersion Factors for Annual Exposure
($\mu\text{g}/\text{m}^3$ / pounds/year)

Building Area	Building	Exposure Location Distance (meters)													
(1,000 ft ²)	Height (ft)	50	60	70	80	90	100	110	120	130	140	150	160	170	
≤3	≤20	0.0045	0.0033	0.0026	0.0020	0.0017	0.0014	0.0012	0.0010	0.00089	0.00078	0.00069	0.00062	0.00056	
>3 to 6	≤20	0.0044	0.0032	0.0025	0.0020	0.0016	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00061	0.00055	
>3 to 6	>20	0.0041	0.0031	0.0024	0.0019	0.0016	0.0013	0.0011	0.0010	0.00086	0.00076	0.00067	0.00060	0.00054	
>6 to 10	≤20	0.0044	0.0033	0.0025	0.0020	0.0017	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00062	0.00055	
>6 to 10	>20	0.0037	0.0028	0.0022	0.0018	0.0015	0.0013	0.0011	0.0010	0.00083	0.00074	0.00066	0.00059	0.00053	
>10 to 15	≤20	0.0044	0.0033	0.0025	0.0020	0.0017	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00062	0.00055	
>10 to 15	>20	0.0034	0.0027	0.0021	0.0018	0.0015	0.0012	0.0011	0.00093	0.00081	0.00072	0.00064	0.00058	0.00052	
>15 to 30	≤20	0.0043	0.0032	0.0025	0.0020	0.0016	0.0014	0.0012	0.0010	0.00088	0.00077	0.00069	0.00061	0.00055	
>15 to 30	>20	0.0034	0.0027	0.0021	0.0018	0.0015	0.0012	0.0011	0.00093	0.00082	0.00072	0.00065	0.00058	0.00052	
>30	>20	0.0022	0.0018	0.0015	0.0013	0.0011	0.0010	0.00086	0.00076	0.00068	0.00061	0.00055	0.00050	0.00046	

Building Area	Building	Exposure Location Distance (meters)													
(1,000 ft ²)	Height (ft)	180	190	200	250	300	350	400	450	500	600	700	800	1000	
≤3	≤20	0.00050	0.00046	0.00042	0.00029	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>3 to 6	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>3 to 6	>20	0.00049	0.00045	0.00041	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>6 to 10	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>6 to 10	>20	0.00048	0.00044	0.00041	0.00028	0.00020	0.00016	0.00013	0.00010	0.000086	0.000064	0.000049	0.000039	0.000027	
>10 to 15	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>10 to 15	>20	0.00048	0.00044	0.00040	0.00028	0.00020	0.00016	0.00012	0.00010	0.000086	0.000063	0.000049	0.000039	0.000027	
>15 to 30	≤20	0.00050	0.00046	0.00042	0.00028	0.00021	0.00016	0.00013	0.00010	0.000087	0.000064	0.000049	0.000039	0.000027	
>15 to 30	>20	0.00048	0.00044	0.00040	0.00028	0.00020	0.00016	0.00013	0.00010	0.000086	0.000063	0.000049	0.000039	0.000027	
>30	>20	0.00042	0.00039	0.00036	0.00025	0.00019	0.00015	0.00012	0.00010	0.000083	0.000061	0.000048	0.000038	0.000027	

Table 3D: Fugitive Emission Dispersion Factors for 24 hour Exposure ($\mu\text{g}/\text{m}^3$ / pounds/day)

Building Area	Building	Exposure Location Distance (meters)													
(1,000 ft ²)	Height (ft)	50	60	70	80	90	100	110	120	130	140	150	160	170	
≤3	≤20	4.8	3.7	2.9	2.4	2.0	1.7	1.4	1.2	1.1	0.97	0.87	0.78	0.71	
>3 to 6	≤20	4.1	3.1	2.5	2.0	1.7	1.4	1.2	1.1	0.95	0.84	0.76	0.68	0.62	
>3 to 6	>20	3.5	2.8	2.2	1.9	1.6	1.3	1.2	1.0	0.90	0.80	0.72	0.65	0.59	
>6 to 10	≤20	4.0	3.1	2.5	2.0	1.7	1.4	1.2	1.1	0.94	0.84	0.75	0.68	0.62	
>6 to 10	>20	3.3	2.6	2.1	1.8	1.5	1.3	1.1	0.97	0.86	0.77	0.69	0.63	0.57	
>10 to 15	≤20	4.0	3.1	2.4	2.0	1.7	1.4	1.2	1.1	0.94	0.84	0.75	0.68	0.62	
>10 to 15	>20	2.9	2.4	2.0	1.6	1.4	1.2	1.1	0.93	0.83	0.74	0.67	0.61	0.56	
>15 to 30	≤20	3.7	2.9	2.3	1.9	1.6	1.4	1.2	1.0	0.92	0.82	0.74	0.67	0.61	
>15 to 30	>20	2.9	2.3	1.9	1.6	1.4	1.2	1.0	0.92	0.82	0.74	0.67	0.60	0.55	
>30	>20	1.8	1.5	1.3	1.2	1.0	0.92	0.82	0.73	0.66	0.60	0.55	0.51	0.47	

Building Area	Building	Exposure Location Distance (meters)													
(1,000 ft ²)	Height (ft)	180	190	200	250	300	350	400	450	500	600	700	800	1000	
≤3	≤20	0.65	0.59	0.55	0.38	0.29	0.22	0.18	0.15	0.13	0.095	0.074	0.060	0.043	
>3 to 6	≤20	0.57	0.52	0.48	0.33	0.25	0.20	0.16	0.13	0.11	0.083	0.065	0.053	0.038	
>3 to 6	>20	0.54	0.50	0.46	0.32	0.24	0.19	0.15	0.13	0.11	0.081	0.064	0.052	0.037	
>6 to 10	≤20	0.56	0.52	0.48	0.33	0.25	0.20	0.16	0.13	0.11	0.083	0.065	0.053	0.038	
>6 to 10	>20	0.53	0.48	0.45	0.31	0.24	0.19	0.15	0.12	0.11	0.080	0.063	0.051	0.036	
>10 to 15	≤20	0.56	0.52	0.48	0.33	0.25	0.19	0.16	0.13	0.11	0.083	0.065	0.053	0.038	
>10 to 15	>20	0.51	0.47	0.43	0.31	0.23	0.18	0.15	0.12	0.10	0.078	0.062	0.050	0.035	
>15 to 30	≤20	0.55	0.51	0.47	0.33	0.25	0.19	0.16	0.13	0.11	0.083	0.065	0.053	0.037	
>15 to 30	>20	0.51	0.47	0.43	0.31	0.23	0.18	0.15	0.12	0.10	0.078	0.062	0.050	0.035	
>30	>20	0.43	0.40	0.37	0.27	0.21	0.17	0.14	0.12	0.098	0.075	0.059	0.048	0.034	

Use of fugitive emission dispersion factors in a Level 1 screening risk assessment:

For each Toxics Emissions Unit, select the appropriate building dimensions and distance from building to nearest exposure locations approved by DEQ. For each exposure location, find the corresponding annual dispersion factor in Table 3C. For each toxic air contaminant, multiply the annual toxic air contaminant emission rate (in pounds/year) by the dispersion factor. Divide the product by the RBC for all the toxic air contaminants for the appropriate exposure location in OAR 340-245-8010 Table 2. Add up the resulting ratios for all Toxic Emissions Units for each exposure location. Compare the results with the Risk Action Levels in OAR 340-245-8010 Table 1. Repeat the process for daily emission rates (in pounds/day) using Table 3D at the acute exposure location.

For an exposure location distance between the values shown in the table, either use the next lowest distance, or interpolate the dispersion factor. For exposure locations greater than 1,000 meters from the building, use the appropriate dispersion factor at 1,000 meters. In the absence of known building dimensions and exposure location distance, use as a default, the annual dispersion factor ($0.0045 \mu\text{g}/\text{m}^3$ / pounds/year) and daily dispersion factor ($4.8 \mu\text{g}/\text{m}^3$ / pounds/day) for a building area of $\leq 3,000 \text{ ft}^2$, height of $\leq 20 \text{ ft}$, and exposure location distance of 50 meters.

A Level 1 Risk Assessment will not be approved if the source is located near elevated terrain that DEQ determines could invalidate the assumptions used to develop the Level 1 Risk Assessment Dispersion Factors.

Stat. Auth.: ORS 468.020, 468.065, 468A.025, 468A.040, 468A.050, 468A.070, 468A.155
Stats. Implemented: ORS 468.065, 468A.010, 468A.015, 468A.025, 468A.035, 468A.040, 468A.050, 468A.070, and 468A.155