Chapter 173-460 WAC
CONTROLS FOR NEW SOURCES OF TOXIC AIR POLLUTANTS

Last Update: 11/22/19

WAC

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

173-460-110 Acceptable source impact levels. [Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-110, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-110, filed 6/18/91, effective 9/18/91.] Repealed by WSR 09-11-131 (Order 05-19), filed 5/20/09, effective 6/20/09. Statutory Authority: Washington Clean Air Act, RCW 70.94.152.

173-460-120 Scientific review and amendment of acceptable source impact levels and lists. [Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-120, filed 6/18/91, effective 9/18/91.] Repealed by WSR 09-11-131 (Order 05-19), filed 5/20/09, effective 6/20/09. Statutory Authority: Washington Clean Air Act, RCW 70.94.152.

173-460-130 Fees. [Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-130, filed 6/18/91, effective 9/18/91.] Repealed by WSR 09-11-131 (Order 05-19), filed 5/20/09, effective 6/20/09. Statutory Authority: Washington Clean Air Act, RCW 70.94.152.

173-460-160 Class B toxic air pollutants and acceptable source impact levels. [Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-160, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-160, filed 6/18/91, effective 9/18/91.] Repealed by WSR 09-11-131 (Order 05-19), filed 5/20/09, effective 6/20/09. Statutory Authority: Washington Clean Air Act, RCW 70.94.152.

WAC 173-460-010 Purpose. (1) Pursuant to chapter 70.94 RCW, Washington Clean Air Act, the purpose of this chapter is to establish the systematic control of new or modified sources emitting toxic air pollutants (TAPs) in order to prevent air pollution, reduce emissions to the extent reasonably possible, and maintain such levels of air quality as will protect human health and safety. Toxic air pollutants include carcinogens and noncarcinogens listed in WAC 173-460-150.

(2) This chapter establishes three major requirements:

(a) Best available control technology for toxics;

(b) Toxic air pollutant emission quantification;

(c) Human health and safety protection demonstration.

(3) Policy. It is the policy of ecology to reduce, avoid, or eliminate toxic air pollutants prior to their generation whenever economically and technically practicable.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-010, filed 5/20/09, effective 6/20/09. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-010, filed 6/18/91, effective 9/18/91.]

WAC 173-460-020 Definitions. The definitions of terms contained in chapter 173-400 WAC are incorporated into this chapter by reference. Terms specific to this chapter are defined as follows:

(1) "Acceptable source impact analysis" means a procedure for demonstrating compliance with WAC 173-460-070, that compares maximum incremental ambient air impacts with applicable acceptable source impact levels (ASIL).

(2) "Acceptable source impact level (ASIL)" means a screening concentration of a toxic air pollutant in the ambient air. The ASIL for each toxic air pollutant is listed in WAC 173-460-150.

(3) "Best available control technology for toxics (tBACT)" means best available control technology, as that term is defined in WAC 173-400-030, as applied to toxic air pollutants.

(4) "De minimis emissions" means trivial levels of emissions that do not pose a threat to human health or the environment. The de minimis emission threshold values are listed in WAC 173-460-150.

(5) "Increased cancer risk of one in one hundred thousand" means the 95th percent upper bound on the estimated risk of one additional cancer above the background cancer rate per one hundred thousand individuals continuously exposed to a carcinogenic toxic air pollutant at a given average dose for a specified time.

(6) "New or modified toxic air pollutant source" means the construction or modification of a stationary source that increases the amount of any toxic air pollutant emitted by such source or that results in the emission of any toxic air pollutant not previously emitted.

(7) "Small quantity emission rate (SQER)" means a level of emissions below which dispersion modeling is not required to demonstrate compliance with acceptable source impact levels. SQERs are listed in WAC 173-460-150.

(8) "Toxic air pollutant (TAP)" means any toxic air pollutant listed in WAC 173-460-150.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-020, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-020, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-020, filed 6/18/91, effective 9/18/91.]

WAC 173-460-030 Applicability. The provisions of this chapter apply statewide. WAC 173-460-090 and 173-460-100 must be implemented solely by ecology.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-030, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-030, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-030, filed 6/18/91, effective 9/18/91.]

WAC 173-460-040 New source review. (1) Applicability and exemptions. This chapter supplements the new source review requirements of WAC 173-400-110 by adding review requirements for new and modified toxic air pollutant sources. An action that is exempt from new source review under WAC 173-400-110 (4) or (5) is exempt under this chapter as well, except that a local air authority may adopt its own list of exemptions in accordance with RCW 70.94.331 (2)(b) to operate in lieu of or in addition to the exemptions in WAC 173-400-110 (4) and (5). An action that requires a notice of construction application under WAC 173-400-110 is subject to the review requirements of this chapter, unless the emissions before control equipment of each TAP (rounded to

two significant digits) from a new source or the increase in emissions from each modification is less than the applicable de minimis emission threshold for that TAP listed in WAC 173-460-150.

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

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

(a) The new or modified emission units use tBACT for emissions control for the TAPs with emission increases that trigger the need to submit a notice of construction application; and

(b) The new or modified emission units comply with WAC 173-460-070 as demonstrated by using the procedures established in WAC 173-460-080 or, failing that, demonstrates compliance by using the additional procedures in WAC 173-460-090 and/or 173-460-100.

[Statutory Authority: Chapter 70.94 RCW. WSR 19-24-025 (Order 18-07), § 173-460-040, filed 11/22/19, effective 12/23/19. Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-040, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-040, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-040, filed 6/18/91, effective 9/18/91.]

WAC 173-460-050 Requirement to quantify emissions. (1) New sources.

A notice of construction application for a new or modified toxic air pollutant source must quantify the increase in the emissions of each TAP, after application of tBACT, emitted by the new or modified emission units.

(2) Small quantity emission rates.

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

(3) Level of detail.

An acceptable source impact level analysis under WAC 173-460-080 may be based on a conservative estimate of emissions that represents good engineering judgment. If compliance with WAC 173-460-070 and 173-460-080 cannot be demonstrated, more precise emission estimates may be used to demonstrate compliance with WAC 173-460-090.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-050, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-050, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-050, filed 6/18/91, effective 9/18/91.]

WAC 173-460-060 Control technology requirements. (1) Except as provided for in WAC 173-460-040, a person shall not establish, operate, or cause to be established or operated any new or modified toxic air pollutant source which is likely to increase TAP emissions without installing and operating tBACT.

(2) A notice of construction application for a new or modified toxic air pollutant source must demonstrate that the new or modified emission units will employ tBACT for all TAPs for which the increase in emissions will exceed de minimis emission values as found in WAC 173-460-150. TAP emission increases from nonprocess fugitive emissions activities such as construction or demolition sites, unpaved and paved roads, coal piles, waste piles and fuel and ash handling operations are exempt from the requirement to apply tBACT.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-060, filed 5/20/09, effective 6/20/09. Statutory Authority: RCW 70.94.860, 70.94.510 and 70.94.331. WSR 98-15-129 (Order 98-04), § 173-460-060, filed 7/21/98, effective 8/21/98. Statutory Authority: Chapter 70.98 RCW. WSR 98-04-062 (Order 97-38), § 173-460-060, filed 2/2/98, effective 3/5/98. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-060, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-060, filed 6/18/91, effective 9/18/91.]

WAC 173-460-070 Ambient impact requirement. A notice of construction application must demonstrate that the increase in emissions of toxic air pollutants from the new or modified emission units at the source are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects. Compliance must be demonstrated in any area to which the applicant does not restrict or control access. The application must demonstrate compliance by using procedures established in this chapter after complying with the control technology requirements in WAC 173-460-060.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-070, filed 5/20/09, effective 6/20/09. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-070, filed 6/18/91, effective 9/18/91.]

WAC 173-460-071 Voluntary limits on emissions. (1) If requested by an applicant, the permitting authority may issue a regulatory order that limits emissions of a particular TAP to a level that is lower than the potential emissions of that particular TAP otherwise allowed under all applicable requirements of chapter 70.94 RCW and the federal Clean Air Act.

(2) Any order issued under this section is subject to the notice and comment procedures in WAC 173-400-171 or the permitting authority's public notice and commenting procedures.

(3) Any order issued under this section must include monitoring, recordkeeping, and reporting requirements sufficient to ensure that the applicant complies with any conditions established under this section. Monitoring requirements must use terms, test methods, units, averaging periods, and other statistical conventions consistent with the requirements of WAC 173-400-105.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-071, filed 5/20/09, effective 6/20/09.]

WAC 173-460-080 First tier review. (1) A notice of construction application for a new or modified toxic air pollutant source must include an acceptable source impact level analysis for each TAP emitted by the new or modified emission units with an emission increase greater than the de minimis emission level specified in WAC 173-460-150. The permitting authority may complete this analysis.

(2) The acceptable source impact analysis requirement of WAC 173-460-070 can be satisfied for any TAP using either dispersion modeling or the small quantity emission rate.

(a) Dispersion modeling. The applicant who relies on dispersion modeling must model the increase in the emissions of each TAP emitted by the new or modified emission units, after application of tBACT. The notice of construction application must demonstrate that the modeled ambient impact (rounded to two significant digits) of the aggregate emissions increase of each TAP does not exceed the ASIL for that TAP as listed in WAC 173-460-150. If concentrations predicted by dispersion screening models exceed applicable acceptable source impact levels, more refined modeling and/or emission techniques must be used. Refined modeling techniques must be approved by the permitting authority.

(b) Small quantity emission rates. An applicant may show for any TAP that the increase in emissions of that TAP (rounded to two significant digits), after application of tBACT, is less than the small quantity emission rate listed for that TAP in WAC 173-460-150.

(3) Reduction of TAPs from existing emission units. An applicant may include in an acceptable source impact analysis proposed reductions in actual emissions of a particular TAP from emission units at the source that are not new or modified for the purpose of offsetting emissions of that TAP caused by the new or modified source. The reductions in TAP emissions authorized by this subsection must be included in the approval order as enforceable emission limits and must meet all the requirements of WAC 173-460-071.

(4) Decision criteria.

(a) If the permitting authority finds that the modeled impact of the increase in emissions of a TAP from the new or modified emission units does not exceed the ASIL for that TAP then the authority may approve the notice of construction application.

(b) If the permitting authority finds that the modeled impact of the increase in emissions of a TAP from the new or modified emission units exceeds the ASIL for that TAP then the permitting authority may not approve the project. The applicant may file a second tier review application in compliance with WAC 173-460-090.

[Statutory Authority: Chapter 70.94 RCW. WSR 19-24-025 (Order 18-07), § 173-460-080, filed 11/22/19, effective 12/23/19. Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-080, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-080, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-080, filed 6/18/91, effective 9/18/91.]

WAC 173-460-090 Second tier review. (1) Applicability.

An applicant who cannot demonstrate compliance with WAC 173-460-070 using an acceptable source impact level analysis as provided in WAC 173-460-080, may submit a petition requesting that ecology perform a second tier review to determine a means of compliance with WAC 173-460-070. Petitions for second tier review must be submitted to ecology with a copy to the permitting authority with jurisdiction.

(2) Second tier petition submittal requirements. Ecology will evaluate a second tier petition only if:

(a) The permitting authority submits to ecology a preliminary order of approval that addresses all applicable new source review issues with the exception of the outcome of the second tier review, State Environmental Policy Act review, public notification, and prevention of significant deterioration review; and

(b) The emission controls contained in the preliminary order of approval represent at least tBACT; and

(c) The applicant has developed a health impact assessment protocol that has been approved by ecology;

(d) The ambient impact of the emissions increase of each TAP that exceeds acceptable source impact levels has been quantified using refined air dispersion modeling techniques as approved in the health impact assessment protocol; and

(e) The petition contains a health impact assessment conducted in accordance with the approved health impact assessment protocol.

Note: Contact ecology's air quality program for a copy of a guidance document to assist in the preparation of the health impact assessment protocol.

(3) Health impact assessment (HIA) protocol. The HIA presents data about the new or modified source and its built and natural environment. A HIA includes but is not limited to: Site description, TAP concentrations and toxicity, identification of exposed populations and an exposure assessment. The HIA protocol must be reviewed and approved by ecology prior to development of the HIA.

(4) The health impact assessment must utilize current scientific information. New scientific information on the toxicological characteristics of toxic air pollutants may be used by ecology to justify modifications of risk-based concentrations.

(5) Background concentrations of TAPs will be considered as part of a second tier review. Background concentrations can be estimated using:

(a) The latest National Ambient Toxics Assessment data for the appropriate census tracts; or

(b) Ambient monitoring data for the project's location; or

(c) Modeling of emissions of the TAPs subject to second tier review from all stationary sources within 1.5 kilometers of the source location.

(6) Reduction of TAPs from existing emission units. For the purpose of offsetting emissions of a particular TAP, an applicant may propose reductions in actual emissions of that TAP from existing, unmodified emission units at the source or existing, unmodified emission units at other nearby sources. The health impact analysis must evaluate the benefits of the emission reductions. The reductions in TAP emissions authorized by this subsection must be included in an approval order as enforceable emission limits and must meet all requirements of WAC 173-460-071.

(7) Approval criteria for second tier review. Ecology may recommend approval of a project that is likely to cause an exceedance of acceptable source impact levels for one or more TAPs only if it deter-

mines that the emission controls for the new and modified emission units represent tBACT and the applicant demonstrates that the increase in emissions of TAPs is not likely to result in an increased cancer risk of more than one in one hundred thousand and ecology determines that the noncancer hazard is found to be acceptable.

(8) Application processing. Within thirty days after receiving a second tier petition ecology must either notify the applicant in writing that the application is complete or notify the applicant in writing of all additional information required to make it complete.

(9) Public involvement. All notice of construction approval orders with a second tier component are subject to the public notice and comment requirements of WAC 173-400-171, which may be integrated with the permitting authority's public notice and comment procedures.

(10) Recommendation. Within sixty days of determining that a petition is complete ecology must make a recommendation to the permitting authority.

(a) If ecology recommends approval of the second tier petition, the permitting authority may approve the notice of construction application. Any new emission limits or conditions specified by ecology must be incorporated into the approval order.

(b) If ecology recommends denial of the second tier petition, then the permitting authority may not approve the project.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-090, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-090, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-090, filed 6/18/91, effective 9/18/91.]

WAC 173-460-100 Third tier review. (1) Applicability. An applicant for a project that exceeds the second tier review thresholds may submit a third tier petition requesting that the director of ecology approve the project based on a risk management analysis.

(2) Contents of the petition.

The petition must meet the submittal requirements of WAC 173-460-090. The applicant may submit the request for a risk management decision concurrently with the second tier petition. Prior denial of a second tier petition submitted under WAC 173-460-090 is not required.

(3) Criteria for approval. Ecology's director must find that the following conditions are met before approving a third tier petition:

(a) Proposed emission controls represent at least tBACT; and

(b) A HIA has been completed as described in WAC 173-460-090(3); and

(c) Approval of the project will result in a greater environmental benefit to the state of Washington.

(4) Additional methods to reduce toxic air pollutants. In addition to the requirements in subsection (3) of this section, the applicant may propose and ecology may consider measures that would reduce community exposure, especially exposure of that portion of the community subject to the greatest additional risk, to comparable toxic air pollutants provided that such measures are not already required.

(5) Application processing. Within thirty days of receiving a third tier petition ecology must determine if the petition includes the information required in WAC 173-460-090. If the petition is deemed

complete, ecology must begin substantive review. If the petition is deemed incomplete, ecology must give written notification to the applicant of the information that is required to make the petition complete.

(6) Public involvement. Ecology will initiate public notice and comment within sixty days of determining that a third tier petition is complete. In addition to the public notice and comment requirements of WAC 173-400-171, the applicant must hold a public hearing to:

(a) Present the results of the health impact analysis, the proposed emission controls, pollution prevention methods, additional proposed measures, and remaining risks; and

(b) Participate in discussions and answer questions.

(7) Recommendation.

(a) If ecology recommends approval of the third tier petition, the permitting authority may approve the notice of construction application. Any new emission limits or conditions specified by ecology must be incorporated into the approval order.

(b) If ecology recommends denial of the third tier petition then the permitting authority may not approve the project.

[Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-100, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-100, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-100, filed 6/18/91, effective 9/18/91.]

WAC 173-460-140 Remedies. Violations of this chapter are subject to the penalty provisions and/or other remedies provided in chapter 70.94 RCW.

[Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-140, filed 6/18/91, effective 9/18/91.]

WAC 173-460-150 Table of ASIL, SQER and de minimis emission values. The following table lists the common name of TAPs, the chemical abstract service (CAS) number; the averaging period; the acceptable source impact level (ASIL); the small quantity emission rate (SQER); and de minimis emission value.

Common Name	CAS #	Averaging Period	ASIL (µg/m^3)	SQER (lb/averaging period)	De Minimis (lb/averaging period)
Acetaldehyde	75-07-0	year	3.7E-01	6.0E+01	3.0E+00
Acetamide	60-35-5	year	5.0E-02	8.1E+00	4.1E-01
Acetonitrile	75-05-8	24-hr	6.0E+01	4.4E+00	2.2E-01
2-Acetylaminofluorene	53-96-3	year	4.6E-04	7.5E-02	3.8E-03
Acrolein	107-02-8	24-hr	3.5E-01	2.6E-02	1.3E-03
Acrylamide	79-06-1	year	6.0E-03	9.8E-01	4.9E-02
Acrylic acid	79-10-7	24-hr	1.0E+00	7.4E-02	3.7E-03
Acrylonitrile	107-13-1	year	3.4E-03	5.6E-01	2.8E-02
Actinomycin D	50-76-0	year	4.0E-07	6.5E-05	3.2E-06
Alar (daminsozide)	1596-84-5	year	2.0E-01	3.2E+01	1.6E+00
Aldrin	309-00-2	year	2.0E-04	3.3E-02	1.7E-03
Allyl chloride	107-05-1	year	1.7E-01	2.7E+01	1.4E+00

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
3-Amino-9-ethylcarbazole hydrochloride	6109-97-3	year	4.5E-02	7.4E+00	3.7E-01
2-Amino-3-methyl-9H-pyrido[2,3-b]indole	68006-83-7	year	2.9E-03	4.8E-01	2.4E-02
1-Amino-2-methylanthraquinone	82-28-0	year	2.3E-02	3.8E+00	1.9E-01
2-Amino-3-methylimidazo-[4,5-f]quinoline	76180-96-6	year	2.5E-03	4.1E-01	2.0E-02
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazol	712-68-5	year	2.2E-04	3.5E-02	1.8E-03
A-alpha-c(2-amino-9h-pyrido[2,3-b]indole)	26148-68-5	year	8.7E-03	1.4E+00	7.1E-02
2-Aminoanthraquinone	117-79-3	year	6.4E-02	1.0E+01	5.2E-01
o-Aminoazotoluene	97-56-3	year	9.1E-04	1.5E-01	7.4E-03
4-Aminobiphenyl	92-67-1	year	1.7E-04	2.7E-02	1.4E-03
Amitrole	61-82-5	year	3.7E-03	6.0E-01	3.0E-02
Ammonia	7664-41-7	24-hr	5.0E+02	3.7E+01	1.9E+00
Ammonium bisulfate	7803-63-6	1-hr	1.2E+02	2.2E-01	1.1E-02
Aniline	62-53-3	year	6.3E-01	1.0E+02	5.1E+00
o-Anisidine	90-04-0	year	2.5E-02	4.1E+00	2.0E-01
o-Anisidine hydrochloride	134-29-2	year	3.2E-02	5.2E+00	2.6E-01
Antimony trioxide	1309-64-4	24-hr	2.0E-01	1.5E-02	7.4E-04
Aramite	140-57-8	year	1.2E-01	1.9E+01	9.4E-01
Tris(1-aziridinyl)phosphine sulfide	52-24-4	year	2.9E-04	4.8E-02	2.4E-03
Arsenic & inorganic arsenic compounds, NOS	—	year	3.0E-04	4.9E-02	2.5E-03
Arsine	7784-42-1	24-hr	1.5E-02	1.1E-03	5.6E-05
Asbestos (fibers/cubic centimeter)	1332-21-4	year	4.3E-06	7.1E-04	3.5E-05
Actinolite asbestos (fibers/cubic centimeter)	12172-67-7	year	4.3E-06	7.1E-04	3.5E-05
Amosite asbestos (fibers/cubic centimeter)	12172-73-5	year	4.3E-06	7.1E-04	3.5E-05
Anthophylite asbestos (fibers/cubic centimeter)	17068-78-9	year	4.3E-06	7.1E-04	3.5E-05
Chrysotile asbestos (fibers/cubic centimeter)	12001-29-5	year	4.3E-06	7.1E-04	3.5E-05
Crocidolite asbestos (fibers/cubic centimeter)	12001-28-4	year	4.3E-06	7.1E-04	3.5E-05
Libby amphibole asbestos and amphiboles, NOS (fibers/cubic centimeter)	—	year	5.9E-06	9.6E-04	4.8E-05
Tremolite asbestos (fibers/cubic centimeter)	14567-73-8	year	4.3E-06	7.1E-04	3.5E-05
Auramine	492-80-8	year	4.0E-03	6.5E-01	3.2E-02
Azaserine	115-02-6	year	3.2E-04	5.2E-02	2.6E-03
Azathioprine	446-86-6	year	2.0E-03	3.2E-01	1.6E-02
Azobenzene	103-33-3	year	3.2E-02	5.2E+00	2.6E-01
Barium chromate	10294-40-3	year	2.0E-05	3.2E-03	1.6E-04
Benz[a]anthracene	56-55-3	year	5.5E-03	8.9E-01	4.5E-02
Benzene	71-43-2	year	1.3E-01	2.1E+01	1.0E+00
Benzidine	92-87-5	year	4.3E-06	7.0E-04	3.5E-05
Benzo[a]pyrene	50-32-8	year	1.0E-03	1.6E-01	8.2E-03
Benzo[b]fluoranthene	205-99-2	year	5.5E-03	8.9E-01	4.5E-02
Benzo[j]fluoranthene	205-82-3	year	5.5E-03	8.9E-01	4.5E-02
Benzo[k]fluoranthene	207-08-9	year	5.5E-03	8.9E-01	4.5E-02
Benzyl chloride	100-44-7	year	2.0E-02	3.3E+00	1.7E-01
Benzyl violet 4B	1694-09-3	year	1.8E-01	2.8E+01	1.4E+00
Beryllium & compounds, NOS	—	year	4.2E-04	6.8E-02	3.4E-03
Beryllium oxide	1304-56-9	year	4.2E-04	6.8E-02	3.4E-03
Beryllium sulfate	13510-49-1	year	1.2E-06	1.9E-04	9.4E-06
beta-Butyrolactone	3068-88-0	year	3.4E-03	5.6E-01	2.8E-02
beta-Propiolactone	57-57-8	year	2.5E-04	4.1E-02	2.0E-03
Bis(2-chloroethyl) ether	111-44-4	year	1.4E-03	2.3E-01	1.1E-02
Bis(chloromethyl) ether	542-88-1	year	7.7E-05	1.2E-02	6.2E-04
Boron & compounds, NOS	—	24-hr	3.0E+02	2.2E+01	1.1E+00
Bromobenzene	108-86-1	24-hr	6.0E+01	4.4E+00	2.2E-01

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
Bromodichloromethane	75-27-4	year	2.7E-02	4.4E+00	2.2E-01
Bromoform	75-25-2	year	9.1E-01	1.5E+02	7.4E+00
Bromomethane (methyl bromide)	74-83-9	24-hr	5.0E+00	3.7E-01	1.9E-02
1-Bromopropane	106-94-5	24-hr	1.0E+02	7.4E+00	3.7E-01
1,3-Butadiene	106-99-0	year	3.3E-02	5.4E+00	2.7E-01
Butylated hydroxyanisole	25013-16-5	year	1.8E+01	2.8E+03	1.4E+02
C.I. basic red 9 monohydrochloride	569-61-9	year	1.4E-02	2.3E+00	1.1E-01
Cadmium & compounds, NOS	—	year	2.4E-04	3.9E-02	1.9E-03
Caprolactam	105-60-2	24-hr	2.2E+00	1.6E-01	8.2E-03
Captafol	2425-06-1	year	2.3E-02	3.8E+00	1.9E-01
Captan	133-06-2	year	1.5E+00	2.5E+02	1.2E+01
Carbon disulfide	75-15-0	24-hr	8.0E+02	5.9E+01	3.0E+00
Carbon monoxide	630-08-0	1-hr	2.3E+04	4.3E+01	1.1E+00
Carbon tetrachloride	56-23-5	year	1.7E-01	2.7E+01	1.4E+00
Carbonyl sulfide	463-58-1	24-hr	1.0E+01	7.4E-01	3.7E-02
Cerium oxide	1306-38-3	24-hr	9.0E-01	6.7E-02	3.3E-03
Chlorambucil	305-03-3	year	7.7E-06	1.2E-03	6.2E-05
Chlordane	57-74-9	year	1.0E-02	1.6E+00	8.1E-02
Chlordecone	143-50-0	year	2.2E-04	3.5E-02	1.8E-03
Chlorendic acid	115-28-6	year	3.8E-02	6.2E+00	3.1E-01
Chlorinated paraffins	108171-26-2	year	4.0E-02	6.5E+00	3.2E-01
Chlorine	7782-50-5	24-hr	1.5E-01	1.1E-02	5.6E-04
Chlorine dioxide	10049-04-4	24-hr	6.0E-01	4.4E-02	2.2E-03
1-Chloro-1,1-difluoroethane	75-68-3	24-hr	5.0E+04	3.7E+03	1.9E+02
3-Chloro-2-methyl-1-propene	563-47-3	year	2.5E-02	4.1E+00	2.0E-01
2-Chloroacetophenone	532-27-4	24-hr	3.0E-02	2.2E-03	1.1E-04
Chloroalkanes C10-13 (chlorinated paraffins)	85535-84-8	year	4.0E-02	6.5E+00	3.2E-01
Chlorobenzene	108-90-7	24-hr	1.0E+03	7.4E+01	3.7E+00
Chlorobenzilate	510-15-6	year	3.2E-02	5.2E+00	2.6E-01
Chlorodifluoromethane (Freon 22)	75-45-6	24-hr	5.0E+04	3.7E+03	1.9E+02
Chloroethane (ethyl chloride)	75-00-3	24-hr	3.0E+04	2.2E+03	1.1E+02
Chloroform	67-66-3	year	4.3E-02	7.1E+00	3.5E-01
Chloromethane (methyl chloride)	74-87-3	24-hr	9.0E+01	6.7E+00	3.3E-01
Chloromethyl methyl ether	107-30-2	year	1.4E-03	2.4E-01	1.2E-02
4-Chloro-o-phenylenediamine	95-83-0	year	2.2E-01	3.5E+01	1.8E+00
p-Chloro-o-toluidine	95-69-2	year	1.3E-02	2.1E+00	1.1E-01
Chloropicrin	76-06-2	24-hr	4.0E-01	3.0E-02	1.5E-03
Chloroprene	126-99-8	year	2.0E-03	3.3E-01	1.6E-02
Chlorothalonil	1897-45-6	year	1.1E+00	1.8E+02	9.1E+00
Chlorozotocin	54749-90-5	year	1.4E-05	2.4E-03	1.2E-04
Chromic trioxide	1333-82-0	year	7.7E-06	1.3E-03	6.3E-05
Chromic(VI) acid	7738-94-5	year	9.1E-06	1.5E-03	7.4E-05
Chromium(III), insoluble particulates, NOS	—	24-hr	5.0E+00	3.7E-01	1.9E-02
Chromium(III), soluble particulates, NOS	—	24-hr	1.0E-01	7.4E-03	3.7E-04
Chromium(VI) & compounds, NOS	—	year	4.0E-06	6.5E-04	3.3E-05
Chrysene	218-01-9	year	5.5E-02	8.9E+00	4.5E-01
Cinnamyl anthranilate	87-29-6	year	7.7E-01	1.2E+02	6.2E+00
Cobalt and compounds, NOS	7440-48-4	24-hr	1.0E-01	7.4E-03	3.7E-04
Coke oven emissions	—	year	9.7E-04	1.6E-01	7.9E-03
Copper & compounds	—	1-hr	1.0E+02	1.9E-01	9.3E-03
p-Cresidine	120-71-8	year	2.3E-02	3.8E+00	1.9E-01
Cresols (mixture), including m-cresol, o-cresol, p-cresol	1319-77-3	24-hr	6.0E+02	4.4E+01	2.2E+00

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
m-Cresol (3-methylphenol)	108-39-4	24-hr	6.0E+02	4.4E+01	2.2E+00
o-Cresol (2-methylphenol)	95-48-7	24-hr	6.0E+02	4.4E+01	2.2E+00
p-Cresol (4-methylphenol)	106-44-5	24-hr	6.0E+02	4.4E+01	2.2E+00
Cumene	98-82-8	24-hr	4.0E+02	3.0E+01	1.5E+00
Cupferron	135-20-6	year	1.6E-02	2.6E+00	1.3E-01
Cyclohexane	110-82-7	24-hr	6.0E+03	4.4E+02	2.2E+01
Cyclophosphamide (anhydrous)	50-18-0	year	5.9E-03	9.6E-01	4.8E-02
Cyclophosphamide (hydrated)	6055-19-2	year	6.3E-03	1.0E+00	5.1E-02
D & C red no. 9	5160-02-1	year	6.7E-01	1.1E+02	5.4E+00
Dacarbazine	4342-03-4	year	7.1E-05	1.2E-02	5.8E-04
Dantron	117-10-2	year	4.5E-02	7.4E+00	3.7E-01
Di(2-ethylhexl)phthalate	117-81-7	year	4.2E-01	6.8E+01	3.4E+00
2,4-Diaminoanisole	615-05-4	year	1.5E-01	2.5E+01	1.2E+00
2,4-Diaminoanisole sulfate	39156-41-7	year	2.7E-01	4.4E+01	2.2E+00
4,4'-Diaminodiphenyl ether	101-80-4	year	2.5E-02	4.1E+00	2.0E-01
2,4-Diaminotoluene (2,4-toluene diamine)	95-80-7	year	9.1E-04	1.5E-01	7.4E-03
Diazinon	333-41-5	24-hr	1.0E+01	7.4E-01	3.7E-02
Dibenz[a,h]acridine	226-36-8	year	5.5E-03	8.9E-01	4.5E-02
Dibenz[a,h]anthracene	53-70-3	year	5.0E-04	8.2E-02	4.1E-03
Dibenz[a,j]acridine	224-42-0	year	5.5E-03	8.9E-01	4.5E-02
Dibenzo[a,e]pyrene	192-65-4	year	5.5E-04	8.9E-02	4.5E-03
Dibenzo[a,h]pyrene	189-64-0	year	5.5E-05	8.9E-03	4.5E-04
Dibenzo[a,i]pyrene	189-55-9	year	5.5E-05	8.9E-03	4.5E-04
Dibenzo[a,l]pyrene	191-30-0	year	5.5E-05	8.9E-03	4.5E-04
7H-Dibenzo[c,g]carbazole	194-59-2	year	5.5E-04	8.9E-02	4.5E-03
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	year	3.2E-04	5.2E-02	2.6E-03
Tris(2,3-dibromopropyl)phosphate	126-72-7	year	1.5E-03	2.5E-01	1.2E-02
1,4-Dichlorobenzene	106-46-7	year	9.1E-02	1.5E+01	7.4E-01
3,3'-Dichlorobenzidine	91-94-1	year	2.9E-03	4.8E-01	2.4E-02
DDD (dichlorodiphenyldichloroethane)	72-54-8	year	1.4E-02	2.4E+00	1.2E-01
DDE (dichlorodiphenyldichloroethylene)	72-55-9	year	1.0E-02	1.7E+00	8.4E-02
DDT(dichlorodiphenyltrichloroethane)	50-29-3	year	1.0E-02	1.7E+00	8.4E-02
1,1-Dichloroethane (ethylidene dichloride)	75-34-3	year	6.3E-01	1.0E+02	5.1E+00
trans-1,2-Dichloroethene	156-60-5	24-hr	8.1E+02	6.0E+01	3.0E+00
1,1-Dichloroethylene (1,1-DCE)	75-35-4	24-hr	2.0E+02	1.5E+01	7.4E-01
Dichloromethane	75-09-2	year	6.0E+01	9.8E+03	4.9E+02
1,2-Dichloropropane (propylene dichloride)	78-87-5	year	1.0E-01	1.6E+01	8.1E-01
1,3-Dichloropropene	542-75-6	year	2.5E-01	4.1E+01	2.0E+00
2,3-Dichloropropene	78-88-6	24-hr	9.2E+00	6.8E-01	3.4E-02
Dichlorvos (DDVP)	62-73-7	year	1.2E-02	2.0E+00	9.8E-02
Dieldrin	60-57-1	year	2.2E-04	3.5E-02	1.8E-03
Diesel engine exhaust, particulate	—	year	3.3E-03	5.4E-01	2.7E-02
Diethanolamine	111-42-2	24-hr	3.0E+00	2.2E-01	1.1E-02
Diethylstilbestrol	56-53-1	year	1.0E-05	1.6E-03	8.1E-05
1,1-Difluoroethane	75-37-6	24-hr	4.0E+04	3.0E+03	1.5E+02
Diglycidyl resorcinol ether	101-90-6	year	2.0E-03	3.3E-01	1.7E-02
Dihydrosafrole	94-58-6	year	7.7E-02	1.2E+01	6.2E-01
4-Dimethylaminoazobenzene	60-11-7	year	7.7E-04	1.2E-01	6.2E-03
trans-2[(dimethylamino)-methylimino]-5-[2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole	55738-54-0	year	7.7E-03	1.2E+00	6.2E-02
7,12-Dimethylbenz[a]anthracene	57-97-6	year	8.5E-06	1.4E-03	6.9E-05
Dimethyl carbamoyl chloride	79-44-7	year	2.7E-04	4.4E-02	2.2E-03

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
1,1-Dimethylhydrazine	57-14-7	24-hr	5.0E-01	3.7E-02	1.9E-03
1,2-Dimethylhydrazine	540-73-8	year	6.3E-06	1.0E-03	5.1E-05
Dimethylvinylchloride	513-37-1	year	7.7E-02	1.2E+01	6.2E-01
1,6-Dinitropyrene	42397-64-8	year	5.5E-05	8.9E-03	4.5E-04
1,8-Dinitropyrene	42397-65-9	year	5.5E-04	8.9E-02	4.5E-03
2,4-Dinitrotoluene	121-14-2	year	1.1E-02	1.8E+00	9.1E-02
1,4-Dioxane	123-91-1	year	2.0E-01	3.2E+01	1.6E+00
1,2-Diphenylhydrazine (hydrazobenzene)	122-66-7	year	4.0E-03	6.5E-01	3.2E-02
Direct black 38	1937-37-7	year	4.8E-04	7.7E-02	3.9E-03
Direct blue 6	2602-46-2	year	4.8E-04	7.7E-02	3.9E-03
Direct brown 95	16071-86-6	year	5.3E-04	8.5E-02	4.3E-03
Disperse blue 1	2475-45-8	year	7.7E-01	1.2E+02	6.2E+00
Disulfoton	298-04-4	24-hr	2.0E-01	1.5E-02	7.4E-04
Epichlorohydrin	106-89-8	year	4.3E-02	7.1E+00	3.5E-01
1,2-Epoxybutane	106-88-7	24-hr	2.0E+01	1.5E+00	7.4E-02
Estradiol 17B	50-28-2	year	9.1E-05	1.5E-02	7.4E-04
Ethyl benzene	100-41-4	year	4.0E-01	6.5E+01	3.2E+00
Ethyl carbamate (urethane)	51-79-6	year	2.1E-03	3.4E-01	1.7E-02
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	year	1.7E-03	2.7E-01	1.4E-02
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	year	3.8E-02	6.2E+00	3.1E-01
Ethylene glycol	107-21-1	24-hr	4.0E+02	3.0E+01	1.5E+00
Ethylene glycol monobutyl ether	111-76-2	24-hr	8.2E+01	6.1E+00	3.0E-01
Ethylene glycol monoethyl ether (2-ethoxyethanol)	110-80-5	24-hr	7.0E+01	5.2E+00	2.6E-01
Ethylene glycol monoethyl ether acetate	111-15-9	24-hr	3.0E+02	2.2E+01	1.1E+00
Ethylene glycol monomethyl ether (2-methoxyethanol)	109-86-4	24-hr	6.0E+01	4.4E+00	2.2E-01
Ethylene glycol monomethyl ether acetate	110-49-6	24-hr	9.0E+01	6.7E+00	3.3E-01
Ethylene oxide	75-21-8	year	2.0E-04	3.3E-02	1.6E-03
Ethylene thiourea	96-45-7	year	7.7E-02	1.2E+01	6.2E-01
Ethyleneimine	151-56-4	year	5.3E-05	8.5E-03	4.3E-04
Ferric sulfate	10028-22-5	1-hr	1.2E+02	2.2E-01	1.1E-02
Fluorides (fluoride containing chemicals), NOS	—	24-hr	1.3E+01	9.6E-01	4.8E-02
Fluorine gas F_2	7782-41-4	24-hr	1.6E+01	1.2E+00	5.9E-02
Formaldehyde	50-00-0	year	1.7E-01	2.7E+01	1.4E+00
Furmecyclox	60568-05-0	year	1.2E-01	1.9E+01	9.4E-01
Furylfuramide	3688-53-7	year	1.4E-02	2.4E+00	1.2E-01
Glu-P-1	67730-11-4	year	7.1E-04	1.2E-01	5.8E-03
Glu-P-2	67730-10-3	year	2.5E-03	4.1E-01	2.0E-02
Glutaraldehyde	111-30-8	24-hr	8.0E-02	5.9E-03	3.0E-04
Guthion (azinphos-methyl)	86-50-0	24-hr	1.0E+01	7.4E-01	3.7E-02
Gyromitrin	16568-02-8	year	3.4E-04	5.6E-02	2.8E-03
HC blue 1	2784-94-3	year	6.7E-02	1.1E+01	5.4E-01
Heptachlor	76-44-8	year	7.7E-04	1.2E-01	6.2E-03
Heptachlor epoxide	1024-57-3	year	3.8E-04	6.2E-02	3.1E-03
Heptachlorodibenzo-p-dioxin, NOS	37871-00-4	year	2.6E-06	4.3E-04	2.1E-05
Hexachlorobenzene	118-74-1	year	2.2E-03	3.5E-01	1.8E-02
Hexachlorobutadiene	87-68-3	year	4.5E-02	7.4E+00	3.7E-01
Hexachlorocyclohexane	608-73-1	year	9.1E-04	1.5E-01	7.4E-03
alpha-Hexachlorocyclohexane	319-84-6	year	1.3E-03	2.1E-01	1.1E-02
beta-Hexachlorocyclohexane	319-85-7	year	2.3E-03	3.8E-01	1.9E-02
gamma-Hexachlorocyclohexane (lindane)	58-89-9	year	3.2E-03	5.2E-01	2.6E-02
Hexachlorocyclopentadiene	77-47-4	24-hr	2.0E-01	1.5E-02	7.4E-04
Hexachlorodibenzo-p-dioxins, NOS	34465-46-8	year	2.6E-07	4.3E-05	2.1E-06

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
Hexachloroethane	67-72-1	year	9.1E-02	1.5E+01	7.4E-01
Hexamethylene diisocyanate	822-06-0	24-hr	7.0E-02	5.2E-03	2.6E-04
n-Hexane	110-54-3	24-hr	7.0E+02	5.2E+01	2.6E+00
2-Hexanone	591-78-6	24-hr	3.0E+01	2.2E+00	1.1E-01
Hydrazine	302-01-2	year	2.0E-04	3.3E-02	1.7E-03
Hydrazine sulfate	10034-93-2	year	1.2E-03	1.9E-01	9.4E-03
Hydrogen chloride	7647-01-0	24-hr	9.0E+00	6.7E-01	3.3E-02
Hydrogen cyanide	74-90-8	24-hr	8.0E-01	5.9E-02	3.0E-03
Hydrogen fluoride	7664-39-3	24-hr	1.4E+01	1.0E+00	5.2E-02
Hydrogen sulfide	7783-06-4	24-hr	2.0E+00	1.5E-01	7.4E-03
Indeno[1,2,3-cd]pyrene	193-39-5	year	5.5E-03	8.9E-01	4.5E-02
Isophorone	78-59-1	24-hr	2.0E+03	1.5E+02	7.4E+00
Isopropyl alcohol	67-63-0	1-hr	3.2E+03	5.9E+00	3.0E-01
Lasiocarpine	303-34-4	year	4.5E-04	7.4E-02	3.7E-03
Lead & compounds, NOS	—	year	8.3E-02	1.4E+01	1.0E+01
Lead acetate	301-04-2	year	1.3E-02	2.0E+00	1.0E-01
Lead chromate oxide	18454-12-1	year	4.2E-05	6.9E-03	3.4E-04
Lead chromate	7758-97-6	year	2.5E-05	4.1E-03	2.0E-04
Lead phosphate	7446-27-7	year	8.3E-02	1.4E+01	6.8E-01
Lead subacetate	1335-32-6	year	9.1E-02	1.5E+01	7.4E-01
Malathion	121-75-5	24-hr	2.0E+01	1.5E+00	7.4E-02
Maleic anhydride	108-31-6	24-hr	7.0E-01	5.2E-02	2.6E-03
Manganese & compounds	—	24-hr	3.0E-01	2.2E-02	1.1E-03
Melphalan	148-82-3	year	2.7E-05	4.4E-03	2.2E-04
Mercury, elemental	7439-97-6	24-hr	3.0E-02	2.2E-03	1.1E-04
Diethyl mercury	627-44-1	24-hr	1.4E-01	1.0E-02	5.2E-04
Dimethyl mercury	593-74-8	24-hr	1.4E-01	1.0E-02	5.2E-04
Methyl alchohol (methanol)	67-56-1	24-hr	2.0E+04	1.5E+03	7.4E+01
3-Methylcholanthrene	56-49-5	year	9.6E-05	1.6E-02	7.8E-04
5-Methylchrysene	3697-24-3	year	5.5E-04	8.9E-02	4.5E-03
4,4'-Methylenebis(2-chloroaniline) (MOCA)	101-14-4	year	1.4E-03	2.3E-01	1.1E-02
4,4'-Methylenebis(2-methylaniline)	838-88-0	year	3.8E-03	6.2E-01	3.1E-02
4,4'-Methylenebis(N,N'-dimethyl)aniline	101-61-1	year	7.7E-02	1.2E+01	6.2E-01
4,4'-Methylenedianiline	101-77-9	year	2.2E-03	3.5E-01	1.8E-02
4,4'-Methylenedianiline dihydrochloride	13552-44-8	year	2.2E-03	3.5E-01	1.8E-02
Methylene diphenyl diisocyanate (MDI)	101-68-8	24-hr	8.0E-02	5.9E-03	3.0E-04
Methyl ethyl ketone	78-93-3	24-hr	5.0E+03	3.7E+02	1.9E+01
Methyl isobutyl ketone (MIBK, hexone)	108-10-1	24-hr	3.0E+03	2.2E+02	1.1E+01
Methyl isocyanate	624-83-9	24-hr	1.0E+00	7.4E-02	3.7E-03
Methyl methacrylate	80-62-6	24-hr	7.0E+02	5.2E+01	2.6E+00
Methyl methanesulfonate	66-27-3	year	3.6E-02	5.8E+00	2.9E-01
2-Methyl-1-nitroanthraquinone	129-15-7	year	8.3E-04	1.4E-01	6.8E-03
N-Methyl-N-nitro-N-nitrosoguanidine	70-25-7	year	4.2E-04	6.8E-02	3.4E-03
Methyl tert-butyl ether	1634-04-4	year	3.8E+00	6.2E+02	3.1E+01
Methylthiouracil	56-04-2	year	9.1E-03	1.5E+00	7.4E-02
Michler's ketone	90-94-8	year	4.0E-03	6.5E-01	3.2E-02
Mirex	2385-85-5	year	2.0E-04	3.2E-02	1.6E-03
Mitomycin C	50-07-7	year	4.3E-07	7.1E-05	3.5E-06
Monocrotaline	315-22-0	year	3.4E-04	5.6E-02	2.8E-03
N,N-Dimethylformamide	68-12-2	24-hr	8.0E+01	5.9E+00	3.0E-01
Naphthalene	91-20-3	year	2.9E-02	4.8E+00	2.4E-01
2-Naphthylamine	91-59-8	year	2.0E-03	3.2E-01	1.6E-02

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
Nickel & compounds, NOS	—	year	3.8E-03	6.2E-01	3.1E-02
Nickel acetate	373-02-4	year	1.2E-02	1.9E+00	9.4E-02
Nickel carbonate	3333-67-3	year	7.8E-03	1.3E+00	6.3E-02
Nickel carbonate hydroxide	12607-70-4	year	6.6E-03	1.1E+00	5.4E-02
Nickel carbonyl	13463-39-3	year	1.1E-02	1.8E+00	9.1E-02
Nickel chloride	7718-54-9	year	8.5E-03	1.4E+00	6.9E-02
Nickel hydroxide	12054-48-7	year	6.1E-03	9.9E-01	4.9E-02
Nickel nitrate hexahydrate	13478-00-7	year	1.9E-02	3.1E+00	1.5E-01
Nickel oxide (nickel monoxide, nickel(II) oxide)	1313-99-1	year	4.9E-03	7.9E-01	4.0E-02
Nickel oxide black (nickel sesquioxide, nickel(III) oxide)	1314-06-3	year	5.4E-03	8.8E-01	4.4E-02
Nickel refinery dust	—	year	4.2E-03	6.8E-01	3.4E-02
Nickel subsulfide	12035-72-2	year	2.1E-03	3.4E-01	1.7E-02
Nickel sulfate	7786-81-4	year	1.0E-02	1.6E+00	8.2E-02
Nickel sulfate hexahydrate	10101-97-0	year	1.7E-02	2.8E+00	1.4E-01
Nickel sulfide	11113-75-0	year	6.0E-03	9.7E-01	4.8E-02
Nickelocene	1271-28-9	year	1.2E-02	2.0E+00	1.0E-01
Nifurthiazole	3570-75-0	year	1.5E-03	2.5E-01	1.2E-02
Nitric acid	7697-37-2	1-hr	8.6E+01	1.6E-01	8.0E-03
Nitrilotriacetic acid	139-13-9	year	6.7E-01	1.1E+02	5.4E+00
Nitrilotriacetic acid, trisodium salt monohydrate	18662-53-8	year	3.4E-01	5.6E+01	2.8E+00
Nitrobenzene	98-95-3	year	2.5E-02	4.1E+00	2.0E-01
Nitrofen	1836-75-5	year	4.3E-02	7.1E+00	3.5E-01
2-Nitrofluorene	607-57-8	year	5.5E-02	8.9E+00	4.5E-01
Nitrofurazone	59-87-0	year	2.7E-03	4.4E-01	2.2E-02
1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone	555-84-0	year	2.0E-03	3.2E-01	1.6E-02
N-[4-(5-nitro-2-furyl)-2-thiazolyl]-acetamide	531-82-8	year	2.3E-03	3.8E-01	1.9E-02
Nitrogen dioxide	10102-44-0	1-hr	4.7E+02	8.7E-01	4.6E-01
2-Nitropropane	79-46-9	24-hr	2.0E+01	1.5E+00	7.4E-02
1-Nitropyrene	5522-43-0	year	5.5E-03	8.9E-01	4.5E-02
4-Nitropyrene	57835-92-4	year	5.5E-03	8.9E-01	4.5E-02
5-Nitroacenaphthene	602-87-9	year	1.6E-02	2.6E+00	1.3E-01
6-Nitrochrysene	7496-02-8	year	5.5E-05	8.9E-03	4.5E-04
N-Nitrosodiethanolamine	1116-54-7	year	1.3E-03	2.0E-01	1.0E-02
N-Nitrosodiethylamine	55-18-5	year	6.0E-05	1.0E-02	4.9E-04
N-Nitrosodimethylamine	62-75-9	year	1.3E-04	2.1E-02	1.1E-03
N-Nitrosodi-N-butylamine	924-16-3	year	3.2E-04	5.2E-02	2.6E-03
N-Nitrosodi-N-propylamine	621-64-7	year	5.0E-04	8.1E-02	4.1E-03
N-Nitrosodiphenylamine	86-30-6	year	3.8E-01	6.2E+01	3.1E+00
p-Nitrosodiphenylamine	156-10-5	year	1.6E-01	2.6E+01	1.3E+00
N-Nitrosomorpholine	59-89-2	year	5.3E-04	8.5E-02	4.3E-03
N-Nitroso-N-ethylurea	759-73-9	year	7.8E-05	1.3E-02	6.4E-04
N-Nitroso-N-methylethylamine	10595-95-6	year	1.6E-04	2.6E-02	1.3E-03
N-Nitroso-N-methylurea	684-93-5	year	1.8E-05	2.9E-03	1.4E-04
N-Nitroso-N-methylurethane	615-53-2	year	3.2E-05	5.2E-03	2.6E-04
N-Nitrosonornicotine	16543-55-8	year	2.5E-03	4.1E-01	2.0E-02
N-Nitrosopiperidine	100-75-4	year	3.7E-04	6.0E-02	3.0E-03
N-Nitrosopyrrolidine	930-55-2	year	1.7E-03	2.7E-01	1.4E-02
Oleum	8014-95-7	1-hr	1.2E+02	2.2E-01	1.1E-02
Ozone	10028-15-6	1-hr	1.8E+02	3.3E-01	2.0E-02
Parathion	56-38-2	24-hr	2.0E-05	1.5E-06	7.4E-08
Pentachlorophenol	87-86-5	year	2.2E-01	3.5E+01	1.8E+00
Perchloroethylene	127-18-4	year	1.6E-01	2.7E+01	1.3E+00

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
Phenacetin	62-44-2	year	1.6E+00	2.6E+02	1.3E+01
Phenazopyridine	94-78-0	year	2.0E-02	3.3E+00	1.7E-01
Phenazopyridine hydrochloride	136-40-3	year	2.3E-02	3.8E+00	1.9E-01
Phenesterin	3546-10-9	year	2.3E-05	3.8E-03	1.9E-04
Phenobarbital	50-06-6	year	7.7E-03	1.2E+00	6.2E-02
Phenol	108-95-2	24-hr	2.0E+02	1.5E+01	7.4E-01
Phenoxybenzamine	59-96-1	year	1.1E-03	1.8E-01	9.1E-03
Phenoxybenzamine hydrochloride	63-92-3	year	1.3E-03	2.1E-01	1.1E-02
o-Phenylphenate, sodium	132-27-4	year	1.2E+00	1.9E+02	9.4E+00
Phosgene	75-44-5	24-hr	3.0E-01	2.2E-02	1.1E-03
Phosphine	7803-51-2	24-hr	8.0E-01	5.9E-02	3.0E-03
Phosphoric acid	7664-38-2	24-hr	7.0E+00	5.2E-01	2.6E-02
Phosphorus	7723-14-0	24-hr	2.0E+01	1.5E+00	7.4E-02
Phosphorus, white	12185-10-3	24-hr	2.0E+01	1.5E+00	7.4E-02
Phthalic anhydride	85-44-9	24-hr	2.0E+01	1.5E+00	7.4E-02
Polybrominated biphenyls	—	year	1.2E-04	1.9E-02	9.4E-04
Polybrominated diphenyl ethers (PBDEs) [containing less than 10 bromine atoms]	—	24-hr	6.0E+00	4.4E-01	2.2E-02
Polychlorinated biphenyls (PCBs), NOS	1336-36-3	year	1.8E-03	2.8E-01	1.4E-02
PCB 77 (3,3',4,4'-tetrachlorobiphenyl)	32598-13-3	year	2.6E-04	4.3E-02	2.1E-03
PCB 81 (3,4,4',5-tetrachlorobiphenyl)	70362-50-4	year	9.1E-05	1.5E-02	7.4E-04
PCB 105 (2,3,3',4,4'-pentachlorobiphenyl)	32598-14-4	year	9.1E-04	1.5E-01	7.4E-03
PCB 114 (2,3,4,4',5-pentachlorobiphenyl)	74472-37-0	year	9.1E-04	1.5E-01	7.4E-03
PCB 118 (2,3',4,4',5-pentachlorobiphenyl)	31508-00-6	year	9.1E-04	1.5E-01	7.4E-03
PCB 123 (2,3',4,4',5'-pentachlorobiphenyl)	65510-44-3	year	9.1E-04	1.5E-01	7.4E-03
PCB 126 (3,3',4,4',5-pentachlorobiphenyl)	57465-28-8	year	2.6E-07	4.3E-05	2.1E-06
PCB 156 (2,3,3',4,4',5-hexachlorobiphenyl)	38380-08-4	year	9.1E-04	1.5E-01	7.4E-03
PCB 157 (2,3,3',4,4',5'-hexachlorobiphenyl)	69782-90-7	year	9.1E-04	1.5E-01	7.4E-03
PCB 167 (2,3',4,4',5,5'-hexachlorobiphenyl)	52663-72-6	year	9.1E-04	1.5E-01	7.4E-03
PCB 169 (3,3',4,4',5,5'-hexachlorobiphenyl)	32774-16-6	year	9.1E-07	1.5E-04	7.4E-06
PCB 189 (2,3,3',4,4',5,5'-heptachlorobiphenyl)	39635-31-9	year	9.1E-04	1.5E-01	7.4E-03
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	year	2.6E-06	4.3E-04	2.1E-05
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	year	9.1E-05	1.5E-02	7.4E-04
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	year	2.6E-08	4.3E-06	2.1E-07
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	year	2.6E-08	4.3E-06	2.1E-07
2,3,7,8-Tetrachlorodibenzo-p-dioxin & related compounds, NOS	—	year	2.6E-08	4.3E-06	2.1E-07
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	year	2.6E-06	4.3E-04	2.1E-05
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	year	2.6E-06	4.3E-04	2.1E-05
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	year	2.6E-07	4.3E-05	2.1E-06
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	year	2.6E-07	4.3E-05	2.1E-06
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	year	9.1E-05	1.5E-02	7.4E-04
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	year	9.1E-07	1.5E-04	7.4E-06
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	year	9.1E-08	1.5E-05	7.4E-07
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	year	2.6E-07	4.3E-05	2.1E-06
Ponceau 3R	3564-09-8	year	2.2E-01	3.5E+01	1.8E+00
Ponceau MX	3761-53-3	year	7.7E-01	1.2E+02	6.2E+00
Potassium bromate	7758-01-2	year	7.1E-03	1.2E+00	5.8E-02

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/ averaging period)
Procarbazine	671-16-9	year	2.5E-04	4.1E-02	2.0E-03
Procarbazine hydrochloride	366-70-1	year	2.9E-04	4.8E-02	2.4E-03
1,3-Propane sultone	1120-71-4	year	1.4E-03	2.4E-01	1.2E-02
Propionaldehyde	123-38-6	24-hr	8.0E+00	5.9E-01	3.0E-02
Propylene	115-07-1	24-hr	3.0E+03	2.2E+02	1.1E+01
Propylene glycol	57-55-6	24-hr	2.8E+01	2.1E+00	1.1E-01
Propylene glycol dinitrate	6423-43-4	24-hr	2.8E-01	2.1E-02	1.0E-03
Propylene glycol monomethyl ether	107-98-2	24-hr	7.0E+03	5.2E+02	2.6E+01
Propylene oxide	75-56-9	year	2.7E-01	4.4E+01	2.2E+00
Propylthiouracil	51-52-5	year	3.4E-03	5.6E-01	2.8E-02
Refractory ceramic fibers (fibers/cubic centimeter)	—	24-hr	3.0E-02	2.2E-03	1.1E-04
Reserpine	50-55-5	year	3.2E-04	5.2E-02	2.6E-03
Safrole	94-59-7	year	9.6E-03	1.6E+00	7.8E-02
Selenide, hydrogen	7783-07-5	1-hr	5.0E+00	9.3E-03	4.6E-04
Selenium & selenium compounds (other than hydrogen selenide)	—	24-hr	2.0E+01	1.5E+00	7.4E-02
Silica, crystalline (respirable)	7631-86-9	24-hr	3.0E+00	2.2E-01	1.1E-02
Sodium hydroxide	1310-73-2	1-hr	8.0E+00	1.5E-02	7.4E-04
Sodium sulfate	7757-82-6	1-hr	1.2E+02	2.2E-01	1.1E-02
Sterigmatocystin	10048-13-2	year	1.0E-04	1.6E-02	8.1E-04
Streptozotocin	18883-66-4	year	3.2E-05	5.2E-03	2.6E-04
Styrene	100-42-5	24-hr	8.7E+02	6.5E+01	3.2E+00
Styrene oxide	96-09-3	year	2.2E-02	3.5E+00	1.8E-01
Sulfallate	95-06-7	year	1.9E-02	3.0E+00	1.5E-01
Sulfur dioxide	7446-09-5	1-hr	6.6E+02	1.2E+00	4.6E-01
Sulfur mustard	505-60-2	24-hr	2.0E-02	1.5E-03	7.4E-05
Sulfur trioxide	7446-11-9	1-hr	1.2E+02	2.2E-01	1.1E-02
Sulfuric acid	7664-93-9	24-hr	1.0E+00	7.4E-02	3.7E-03
Tertiary-butyl acetate	540-88-5	year	7.7E-01	1.2E+02	6.2E+00
1,1,1,2-Tetrachloroethane	630-20-6	year	1.4E-01	2.2E+01	1.1E+00
1,1,2,2-Tetrachloroethane	79-34-5	year	1.7E-02	2.8E+00	1.4E-01
1,1,1,2-Tetrafluoroethane	811-97-2	24-hr	8.0E+04	5.9E+03	3.0E+02
Tetrahydrofuran	109-99-9	24-hr	2.0E+03	1.5E+02	7.4E+00
Thioacetamide	62-55-5	year	5.9E-04	1.0E-01	4.8E-03
4,4-Thiodianiline	139-65-1	year	2.3E-04	3.8E-02	1.9E-03
Thiourea	62-56-6	year	4.8E-02	7.7E+00	3.9E-01
Titanium tetrachloride	7550-45-0	24-hr	1.0E-01	7.4E-03	3.7E-04
Toluene	108-88-3	24-hr	5.0E+03	3.7E+02	1.9E+01
Toluene diisocyanates (2,4- and 2,6-)	26471-62-5	24-hr	8.0E-03	5.9E-04	3.0E-05
Toluene-2,4-diisocyanate	584-84-9	24-hr	8.0E-03	5.9E-04	3.0E-05
Toluene-2,6-diisocyanate	91-08-7	24-hr	8.0E-03	5.9E-04	3.0E-05
o-Toluidine	95-53-4	year	2.0E-02	3.2E+00	1.6E-01
o-Toluidine hydrochloride	636-21-5	year	2.7E-02	4.4E+00	2.2E-01
Toxaphene (polychlorinated camphenes)	8001-35-2	year	2.9E-03	4.8E-01	2.4E-02
1,1,1-Trichloroethane (methyl chloroform)	71-55-6	24-hr	5.0E+03	3.7E+02	1.9E+01
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	year	6.3E-02	1.0E+01	5.1E-01
Trichloroethylene (TCE)	79-01-6	year	2.1E-01	3.4E+01	1.7E+00
2,4,6-Trichlorophenol	88-06-2	year	3.2E-01	5.2E+01	2.6E+00
1,2,3-Trichloropropane	96-18-4	24-hr	3.0E-01	2.2E-02	1.1E-03
Triethylamine	121-44-8	24-hr	2.0E+02	1.5E+01	7.4E-01
1,2,3-Trimethylbenzene	526-73-8	24-hr	6.0E+01	4.4E+00	2.2E-01
1,2,4-Trimethylbenzene	95-63-6	24-hr	6.0E+01	4.4E+00	2.2E-01

Common Name	CAS #	Averaging Period	ASIL ($\mu g/m^3$)	SQER (lb/averaging period)	De Minimis (lb/averaging period)
1,3,5-Trimethylbenzene	108-67-8	24-hr	6.0E+01	4.4E+00	2.2E-01
Tryptophan-P-1	62450-06-0	year	1.4E-04	2.2E-02	1.1E-03
Tryptophan-P-2	62450-07-1	year	1.1E-03	1.8E-01	8.9E-03
Uranium, insoluble compounds, NOS	—	24-hr	8.0E-01	5.9E-02	3.0E-03
Uranium, soluble salts, NOS	—	24-hr	4.0E-02	3.0E-03	1.5E-04
Vanadium (fume or dust)	7440-62-2	24-hr	1.0E-01	7.4E-03	3.7E-04
Vanadium pentoxide	1314-62-1	1-hr	3.0E+01	5.6E-02	2.8E-03
Vinyl acetate	108-05-4	24-hr	2.0E+02	1.5E+01	7.4E-01
Vinyl bromide	593-60-2	24-hr	3.0E+00	2.2E-01	1.1E-02
Vinyl chloride	75-01-4	year	1.1E-01	1.8E+01	9.2E-01
Xylene (mixture), including m-xylene, o-xylene, p-xylene	1330-20-7	24-hr	2.2E+02	1.6E+01	8.2E-01
m-Xylene	108-38-3	24-hr	2.2E+02	1.6E+01	8.2E-01
o-Xylene	95-47-6	24-hr	2.2E+02	1.6E+01	8.2E-01
p-Xylene	106-42-3	24-hr	2.2E+02	1.6E+01	8.2E-01

NOS - Not otherwise specified. This applies to situations where emission factors for a group of pollutants is reported, but specific isomers, congeners, or chemicals are not reported.

[Statutory Authority: Chapter 70.94 RCW. WSR 19-24-025 (Order 18-07), § 173-460-150, filed 11/22/19, effective 12/23/19. Statutory Authority: Washington Clean Air Act, RCW 70.94.152. WSR 09-11-131 (Order 05-19), § 173-460-150, filed 5/20/09, effective 6/20/09. Statutory Authority: Chapter 70.94 RCW. WSR 94-03-072 (Order 93-19), § 173-460-150, filed 1/14/94, effective 2/14/94. Statutory Authority: RCW 70.94.331. WSR 91-13-079 (Order 90-62), § 173-460-150, filed 6/18/91, effective 9/18/91.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.