



**CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC)
HUMAN AND ECOLOGICAL RISK OFFICE (HERO)**

HUMAN HEALTH RISK ASSESSMENT (HHRA) NOTE

HERO HHRA NOTE NUMBER: 10, Toxicity Criteria

ISSUE DATE: 25 February 2019

ISSUE: Required Toxicity Criteria under sections (§) 69021(a), (b), and (c) of the Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals Rule and Specification of DTSC-Recommended Toxicity Criteria for Other Analytes Evaluated in Human Health Risk Assessments, Screening-Levels, and Remediation-Goal Calculations.

SUMMARY

On September 4, 2018 the *Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals* rule (hereafter “Rule”) was approved by the State of California Office of Administrative Law and became effective immediately.¹ The Rule requires human health risk assessments, risk-based screening levels and remediation goals prepared pursuant to the Hazardous Substances Account Act (Health and Safety Code [HSC] §25300 et seq., “Chapter 6.8”) to be based on specified toxicity criteria, and prioritizes three ranks of toxicity criteria for use in the following order:

- 1) §69021(a) - toxicity criteria for a given contaminant listed in Appendix I Tables A and B of the Rule (herein referred to as promulgated criteria);
- 2) §69021(b) - toxicity criteria for contaminants that are not listed in the Rule’s Appendix I but are listed in the current U.S. Environmental Protection Agency (USEPA) Integrated Risk Information System (IRIS) database (herein referred to as promulgated criteria); and
- 3) §69021(c) - toxicity values for a given contaminant from “other sources” including but not limited to: the Office of Environmental Health Hazard Assessment (OEHHA) toxicity values that are not listed in the Rule’s Appendix I, USEPA Provisional Peer Reviewed Toxicity Values (PPRTVs), Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Levels (MRLs), USEPA PPRTV Appendix Screening Toxicity Values, USEPA Superfund Health Effects Assessment Summary Table (HEAST) values, and other additional sources (herein referred to recommended criteria). The use of the toxicity criteria under §69021(c) requires approval from the HERO Supervising Toxicologist prior to use.

¹ <https://www.dtsc.ca.gov/LawsRegsPolicies/Regs/Toxicity-Criteria-for-Human-Health-Risk-Assessment.cfm>

This HHRA Note addresses the specification of promulgated criteria under §69021(a) and (b). HHRA Note 10 also addresses the recommendation and approval of recommended criteria under §69021(c) by the HERO Supervising Toxicologist. When evaluating toxicity criteria pursuant to §69021(c), HERO will continue its current practice, as described later herein.

WHAT’S NEW (February 2019)

- This inaugural version of HHRA Note 10 specifies the required (by Rule) and recommended (in practice) toxicity criteria for use in human-health risk assessments, screening-level derivations, and remediation-goal calculations.
- For future reference, HERO will maintain and semiannually update (if necessary) the informational list of promulgated criteria and recommended criteria, and their sources. The criteria can be found in Table 1. Necessary updates can be anticipated to be released approximately in June or December of each year, and changes will be noted in this introductory “What’s New” subsection.

Primary HERO authors: Kimberly Day Gettmann, Ph.D., Staff Toxicologist, HERO
Edward A. Fendick, Ph.D., Staff Toxicologist, HERO
James Polisini, Ph.D., Supervising Toxicologist, HERO

HERO ISSUE CONTACT PERSON:	Kimberly Day Gettmann, Ph.D. Staff Toxicologist 916.255.6685 Voice Kimberly.Gettmann@dtsc.ca.gov
-----------------------------------	--

BACKGROUND

This HHRA Note addresses the specification and approval of promulgated and recommended criteria under §69021(a), (b), and (c) of the *Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals* Rule. Appendix I of the Toxicity Criteria Rule is a list of required toxicity criteria for specific contaminants to be used in human health risk assessments, human health risk-based screening levels, and human health risk-based remediation goals. This HHRA Note provides a complete list of promulgated toxicity criteria listed in Appendix I (§69021(a)), the promulgated criteria specified by §69021(b), and the pre-approved recommended criteria under §69021(c). These criteria are listed in Table 1 of this HHRA Note.

RISK-BASED SCREENING LEVELS

A separate Note, HERO's HHRA Note 3 - DTSC-Modified Screening Levels, has been updated to reflect the requirements of the Rule with respect to risk-based screening levels and should be consulted when conducting a screening-level HHRA or selecting screening levels or project action levels during the work plan stage of a site investigation. HHRA Note 3 can be located at the HERO website.²

HUMAN HEALTH RISK ASSESSMENTS AND RISK-BASED REMEDIATION GOALS

When selecting toxicity criteria for evaluating human health risk assessments or deriving risk-based remediation goals, the following applies:

- 1) First, users should consult the Rule's Appendix I Tables A and B. If Appendix I lists a toxicity criterion for a chemical of potential concern (COPC), then that criterion must be used as long as the Appendix I toxicity criterion is more stringent than current USEPA IRIS toxicity criterion, e.g., if a more stringent IRIS toxicity criterion exists, then that criterion must be used instead of less stringent values in Appendix I.
- 2) If Appendix I does not list a toxicity criterion for the COPC, then the toxicity criterion listed in IRIS for the COPC must be used.
- 3) If neither of these two sources contains a toxicity criterion, then users must use toxicity criteria from another source such as those listed in §69021(c) of the Rule or listed previously in this HHRA Note. The use of the toxicity criteria under §69021(c) require approval from the HERO Supervising Toxicologist prior to use. There are IRIS toxicity criteria available for a majority of the

² <https://www.dtsc.ca.gov/assessingrisk/humanrisk2.cfm>

analytes evaluated at cleanup sites, and application of §69021(b) criteria account for a majority of the promulgated criteria. If there is more than one non-IRIS toxicity value available for a given COPC, the DTSC HERO Supervising Toxicologist will have reviewed the values and selected a representative value following the process discussed later.

- 4) A list of promulgated criteria and recommended criteria is provided in Table 1 of this HHRA Note. Table 2 provides the selection rationale for those few analytes that lack an IRIS toxicity value, but had multiple options from “other sources”.

Section (§) 69021(c)

Under the Rule, toxicity criteria from §69021(c) must apply the best available science, be health based, and be approved by the DTSC HERO Supervising Toxicologist. This is consistent with historical practice in the absence of OEHHA and IRIS toxicity values. To aid in the selection of toxicity criteria under §69021(c), DTSC has included Table 1 in this HHRA Note with ‘other source’ toxicity criteria pre-approved by the HERO Supervising Toxicologist. The toxicity criteria listed in Table 1 meet the requirements of HSC §25356.1.5 and the conditions of §57004, as much as possible. These recommended criteria will not necessarily meet all the conditions under HSC §57004, but represent the best available toxicity criteria until either OEHHA or USEPA IRIS develop and adopt a new toxicity criterion. Where multiple non-IRIS toxicity values are available, Table 2 provides the selection rationale as reviewed and approved by the HERO Supervising Toxicologist.

Toxicity values presented in Table 2 were selected based on multiple criteria, including: quality (scientific rigor) of the different toxicity studies; range of adverse effects evaluated in toxicity experiments; the relative size of the scientific literature supporting a proposed toxicity value; the relative magnitude of difference between toxicity values developed by different groups; and, subjective evaluation of ‘best science’.

HERO will maintain and semiannually update (as necessary) the informational list of toxicity criteria in Table 1 and their sources. Use of a toxicity criterion that is not listed in Table 1 of this HHRA Note will require approval by the HERO Supervising Toxicologist or his/her designee. These proposed toxicity criteria should be discussed among the project team during preparation of the HHRA work plan and submitted to HERO for concurrence prior to preparation of the draft HHRA. Approval by HERO is required for acceptance of the final human health risk assessment. To ensure that the toxicity criteria best meet the conditions of HSC §25356.1.5, and as closely as possible, the conditions of §57004, DTSC will consult with OEHHA and other appropriate CalEPA

Boards and Departments, before approving the toxicity criteria. The decision will be documented in a memorandum.

Total Petroleum Hydrocarbon Toxicity Criteria

The Rule defines total petroleum hydrocarbons (TPH) as “...a term to describe a large family of several hundred chemical compounds derived from crude oil.” Until OEHHA or USEPA IRIS issues final toxicity criteria for TPH mixtures, DTSC will continue its long-standing practice of using toxicity criteria for TPH fractions that are consistent with HSC §25356.1.5(c). The individual TPH compounds and carbon ranges detected at a site will vary according to the original composition of the petroleum product, time elapsed since the release, and site conditions. Given this, the selection of TPH toxicity criteria to use in a human health risk assessment and risk-based decision making depends on the specific analytical method(s) and TPH fraction definition used to analyze the contaminated media at the site. Selection of the appropriate toxicity criteria will depend on these factors and will necessarily be site-specific. Specific TPH-related compounds with established toxicity criteria should be used in the human health risk assessment and include benzene, ethylbenzene, toluene, xylenes (BTEX), hexane, methyl tert-butyl ether (MTBE), and polycyclic aromatic hydrocarbons (PAHs), including naphthalene. There are several sources of toxicity values for TPH mixtures including the USEPA PPRTVs³, Massachusetts Department of Environmental Protection (MA DEP)⁴, and Total Petroleum Hydrocarbon Criteria Working Group (TPHCWG)⁵. As stated in the Rule, the USEPA PPRTV TPH toxicity values can be used when appropriate, however, another source of toxicity values may be more appropriate. The project team should discuss and consult the DTSC toxicologist when selecting the most appropriate TPH toxicity values based on site-specific conditions. HERO also recommends consulting the recently released Interstate Technology & Regulatory Council (ITRC) TPH Risk Evaluation at Petroleum-Contaminated Sites (November 2018) guidance document for additional information on sources of TPH toxicity criteria and assessing and evaluating TPH risk and/or hazard at petroleum-contaminated sites.⁶ These recommended TPH-category toxicity values, and the more detailed rationale for their selection, will be provided in a petroleum/TPH document currently being developed by HERO.

bis(2-Chloro-1-methylethyl)ether (CAS #108-60-1)

HERO has previously recommended a HEAST cancer inhalation unit risk (IUR) toxicity value for bis(2-chloro-1-methylethyl)ether. However, a 2011 USEPA PPRTV evaluation of the analyte states that there is a lack of data to support carcinogenicity for the

³ https://hhpprtv.ornl.gov/issue_papers/TotalPetroleumHydrocarbonsAromaticLow.pdf

⁴ <https://www.mass.gov/files/documents/2016/08/ok/tphtox03.pdf>

⁵ TPHCWG, 1997. Total Petroleum Hydrocarbon Criteria Working Group. Volume 4. Development of Fraction Specific Reference Doses (RfD) and Reference Concentrations (RfC) for Total Petroleum Hydrocarbons (TPH). Amherst Scientific Publishers, Amherst, MA.

⁶ <https://www.itrcweb.org/Guidance/ListDocuments?TopicID=61&SubTopicID=63>

analyte. If this analyte is a COPC at your site, HERO recommends consulting with a HERO toxicologist.

ROUTE-TO-ROUTE EXTRAPOLATION

For volatile analytes where no inhalation toxicity values are available but oral toxicity values are available, HERO recommends using a route-to-route extrapolation of the oral toxicity values to calculate inhalation toxicity values. The recommended route-to-route extrapolated toxicity values are included in Table 1 and noted as such under the 'Reference' column, e.g., Route (IRIS), Route (PPRTV), Route (OEHHA). The route-to-route extrapolation equations are listed in the footnotes of Table 1.

UNIFORM APPLICATION OF TOXICITY CRITERIA

To ensure the appropriate toxicity criteria are consistently applied to all cleanup sites, HERO risk assessment review memoranda undergo a two-stage internal review: 1) a review by a HERO toxicologist in the unit familiar with the site/facility and/or risk assessment issues; and 2) a concurrence review for policy and program issues by the HERO unit supervisor, a Senior Toxicologist.

CONCLUSIONS

This HHRA Note discusses: 1) the specification of promulgated toxicity criteria under §69021(a) and (b); 2) the selection and approval of recommended toxicity criteria under §69021(c); and, 3) selection of TPH mixture toxicity criteria. Table 1 of this HHRA Note lists all the approved toxicity criteria for use in human health risk assessments, screening levels, and remediation goals. For toxicity criteria not listed in Table 1 of this HHRA Note, the HERO Supervising Toxicologist or his/her designee will have to approve use of the proposed toxicity criteria.

If you have any questions on this HHRA Note, please contact Kimberly Gettmann, Ph.D., HERO Staff Toxicologist at (916) 255-6685, or via Kimberly.Gettmann@dtsc.ca.gov.

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values				
		Oral Slope Factor		Inhalation Unit Risk			Reference Dose - Oral		Reference Concentration		
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference	
1,1,1,2-Tetrachloroethane	630-20-6	--	2.6E-02	IRIS	7.4E-06	IRIS	3.0E-02	IRIS	1.2E+02	Route (IRIS)	
1,1,1,2-Tetrafluoroethane	811-97-2	--	--	--	--	--	--	--	8.0E+04	IRIS	
1,1,1-Trichloroethane	71-55-6	--	--	--	--	--	2.0E+00	IRIS	1.0E+03	OEHHA	
1,1,1-Trifluoroethane	420-46-2	--	--	--	--	--	--	--	2.0E+04	PPRTV	
1,1,2,2-Tetrachloroethane	79-34-5	--	2.0E-01	IRIS	5.8E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route (IRIS)	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	--	--	--	--	--	3.0E+01	IRIS	5.0E+03	PPRTV	
1,1,2-Trichloroethane	79-00-5	--	5.7E-02	IRIS	1.6E-05	IRIS	4.0E-03	IRIS	2.0E-01	sPPRTV	
1,1,2-Trichloropropane	598-77-6	--	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route (IRIS)	
1,1-Dichloroethane	75-34-3	--	5.7E-03	OEHHA	1.6E-06	OEHHA	2.0E-01	PPRTV	8.0E+02	Route (PPRTV)	
1,1-Dichloroethene	75-35-4	--	--	--	--	--	5.0E-02	IRIS	7.0E+01	OEHHA	
1,1-Difluoroethane	75-37-6	--	--	--	--	--	--	--	4.0E+04	IRIS	
1,1-Dimethylhydrazine	57-14-7	--	--	--	--	--	1.0E-04	sPPRTV	2.0E-03	sPPRTV	
1,2,3-Trichlorobenzene	87-61-6	--	--	--	--	--	8.0E-04	sPPRTV	3.2E+00	Route (sPPRTV)	
1,2,3-Trichloropropane	96-18-4	M	3.0E+01	IRIS	7.5E-03	Route (IRIS)	4.0E-03	IRIS	3.0E-01	IRIS	
1,2,3-Trichloropropene	96-19-5	--	--	--	--	--	3.0E-03	sPPRTV	3.0E-01	PPRTV	
1,2,3-Trimethylbenzene	526-73-8	--	--	--	--	--	1.0E-02	IRIS	6.0E+01	IRIS	
1,2,4,5-Tetrachlorobenzene	95-94-3	--	--	--	--	--	3.0E-04	IRIS	1.2E+00	Route (IRIS)	
1,2,4-Tribromobenzene	615-54-3	--	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route (IRIS)	
1,2,4-Trichlorobenzene	120-82-1	--	2.9E-02	PPRTV	7.3E-06	Route (PPRTV)	1.0E-02	IRIS	2.0E+00	PPRTV	
1,2,4-Trimethylbenzene	95-63-6	--	--	--	--	--	1.0E-02	IRIS	6.0E+01	IRIS	
1,2-Dibromo-3-chloropropane	96-12-8	M	7.0E+00	OEHHA	6.0E-03	PPRTV	2.0E-04	PPRTV	2.0E-01	IRIS	
1,2-Dichlorobenzene	95-50-1	--	--	--	--	--	9.0E-02	IRIS	2.0E+02	HEAST	
1,2-Dichloroethane	107-06-2	--	9.1E-02	IRIS	2.6E-05	IRIS	6.0E-03	sPPRTV	7.0E+00	PPRTV	
1,2-Dichloropropane	78-87-5	--	3.6E-02	OEHHA	3.7E-06	PPRTV	4.0E-02	PPRTV	4.0E+00	IRIS	
1,2-Dimethylhydrazine	540-73-8	--	5.5E+02	OEHHA	1.6E-01	OEHHA	--	--	--	--	
1,2-Dinitrobenzene	528-29-0	--	--	--	--	--	1.0E-04	PPRTV	--	--	
1,2-Diphenylhydrazine	122-66-7	--	8.0E-01	IRIS	2.2E-04	IRIS	--	--	--	--	
1,2-Epoxybutane	106-88-7	--	--	--	--	--	--	--	2.0E+01	IRIS	
1,2-Phenylenediamine	95-54-5	--	1.2E-01	PPRTV	--	--	4.0E-03	PPRTV	--	--	
1,3,5-Trimethylbenzene	108-67-8	--	--	--	--	--	1.0E-02	IRIS	6.0E+01	IRIS	
1,3,5-Trinitrobenzene	99-35-4	--	--	--	--	--	3.0E-02	IRIS	--	--	
1,3-Butadiene	106-99-0	--	6.0E-01	OEHHA	1.7E-04	OEHHA	--	--	2.0E+00	OEHHA	
1,3-Dibromobenzene	108-36-1	--	--	--	--	--	4.0E-04	sPPRTV	1.6E+00	Route (sPPRTV)	
1,3-Dichloropropane	142-28-9	--	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route (PPRTV)	
1,3-Dichloropropene	542-75-6	--	1.0E-01	IRIS	4.0E-06	IRIS	3.0E-02	IRIS	2.0E+01	IRIS	
1,3-Dinitrobenzene	99-65-0	--	--	--	--	--	1.0E-04	IRIS	--	--	
1,3-Phenylenediamine	108-45-2	--	--	--	--	--	6.0E-03	IRIS	--	--	
1,4-Benzenediamine-2-methyl sulfate	6369-59-1	--	1.0E-01	sPPRTV	--	--	3.0E-04	sPPRTV	--	--	
1,4-Dibromobenzene	106-37-6	--	--	--	--	--	1.0E-02	IRIS	4.0E+01	Route (IRIS)	
1,4-Dichloro-2-butene	764-41-0	--	--	--	4.2E-03	PPRTV	--	--	--	--	
1,4-Dichlorobenzene	106-46-7	--	5.4E-03	OEHHA	1.1E-05	OEHHA	7.0E-02	ATSDR	8.0E+02	IRIS	
1,4-Dinitrobenzene	100-25-4	--	--	--	--	--	1.0E-04	PPRTV	--	--	
1,4-Dioxane	123-91-1	--	1.0E-01	IRIS	5.0E-06	IRIS	3.0E-02	IRIS	3.0E+01	IRIS	
1,4-Dithiane	505-29-3	--	--	--	--	--	1.0E-02	IRIS	4.0E+01	Route (IRIS)	
1,4-Phenylenediamine	106-50-3	--	--	--	--	--	1.0E-03	sPPRTV	--	--	
1,6-Hexamethylene diisocyanate	822-06-0	--	--	--	--	--	--	--	1.0E-02	IRIS	
1-Bromo-2-chloroethane	107-04-0	--	2.0E+00	sPPRTV	6.0E-04	sPPRTV	--	--	--	--	
1-Bromo-3-fluorobenzene	1073-06-9	--	--	--	--	--	3.0E-04	sPPRTV	1.2E+00	Route (sPPRTV)	
1-Bromo-4-fluorobenzene	460-00-4	--	--	--	--	--	3.0E-04	sPPRTV	1.2E+00	Route (sPPRTV)	
1-Bromopropane	106-94-5	--	--	--	--	--	--	--	1.0E+02	ATSDR	
1-Chloro-1,1-difluoroethane	75-68-3	--	--	--	--	--	--	--	5.0E+04	IRIS	

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Oral Slope Factor		Inhalation Unit Risk			Reference Dose - Oral		Reference Concentration	
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
1-Chlorobutane	109-69-3	--	--	--	--	--	4.0E-02	PPRTV	1.6E+02	Route (PPRTV)
1-Methoxy-2-propanol	107-98-2	--	--	--	--	--	7.0E-01	HEAST	2.0E+03	IRIS
1-Methylnaphthalene	90-12-0	--	2.9E-02	PPRTV	7.3E-06	Route (PPRTV)	7.0E-02	ATSDR	2.8E+02	Route (ATSDR)
2-(2-methoxyethoxy)-Ethanol	111-77-3	--	--	--	--	--	4.0E-02	PPRTV	--	--
2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	1163-19-5	--	7.0E-04	IRIS	--	--	7.0E-03	IRIS	--	--
2,2',4,4',5,5'-Hexabromodiphenyl ether	68631-49-2	--	--	--	--	--	2.0E-04	IRIS	--	--
2,2',4,4',5-Pentabromodiphenyl ether	60348-60-9	--	--	--	--	--	1.0E-04	IRIS	--	--
2,2',4,4'-Tetrabromodiphenyl ether	5436-43-1	--	--	--	--	--	1.0E-04	IRIS	--	--
2,2-Difluoropropane	420-45-1	--	--	--	--	--	--	--	3.0E+04	sPPRTV
2,3,4,6-Tetrachlorophenol	58-90-2	--	--	--	--	--	3.0E-02	IRIS	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	--	1.3E+05	OEHHA	3.8E+01	OEHHA	7.0E-10	IRIS	4.0E-05	OEHHA
2,3-Dichloropropanol	616-23-9	--	--	--	--	--	3.0E-03	IRIS	--	--
2,4,4-Trimethylpentene	25167-70-8	--	--	--	--	--	1.0E-02	sPPRTV	4.0E+01	Route (sPPRTV)
2,4,5-Trichlorophenol	95-95-4	--	--	--	--	--	1.0E-01	IRIS	--	--
2,4,5-Trichlorophenoxyacetic acid	93-76-5	--	--	--	--	--	1.0E-02	IRIS	--	--
2,4,6-Tribromophenol	118-79-6	--	--	--	--	--	9.0E-03	sPPRTV	--	--
2,4,6-Trichloroaniline	634-93-5	--	7.0E-03	sPPRTV	--	--	3.0E-05	sPPRTV	--	--
2,4,6-Trichloroaniline hydrochloride	33663-50-2	--	2.9E-02	HEAST	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	--	7.0E-02	OEHHA	2.0E-05	OEHHA	1.0E-03	PPRTV	--	--
2,4,6-Trinitrotoluene	118-96-7	--	3.0E-02	IRIS	--	--	5.0E-04	IRIS	--	--
2,4/2,6-Dinitrotoluenes	E1615210	--	6.8E-01	IRIS	--	--	9.0E-04	sPPRTV	--	--
2,4-Dichlorophenol	120-83-2	--	--	--	--	--	3.0E-03	IRIS	--	--
2,4-Dichlorophenoxyacetic acid	94-75-7	--	--	--	--	--	1.0E-02	IRIS	--	--
2,4-Dichlorophenoxybutyric acid	94-82-6	--	--	--	--	--	3.0E-02	OPP	--	--
2,4-Dimethylaniline	95-68-1	--	2.0E-01	PPRTV	--	--	2.0E-03	sPPRTV	--	--
2,4-Dimethylaniline hydrochloride	21436-96-4	--	5.8E-01	HEAST	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	--	--	--	--	--	2.0E-02	IRIS	--	--
2,4-Dinitrophenol	51-28-5	--	--	--	--	--	2.0E-03	IRIS	--	--
2,4-Dinitrotoluene	121-14-2	--	3.1E-01	OEHHA	8.9E-05	OEHHA	2.0E-03	IRIS	--	--
2,6-Dimethylphenol	576-26-1	--	--	--	--	--	6.0E-04	IRIS	--	--
2,6-Dinitrotoluene	606-20-2	--	1.5E+00	PPRTV	--	--	3.0E-04	sPPRTV	--	--
2-Acetylaminofluorene	53-96-3	--	3.8E+00	OEHHA	1.3E-03	OEHHA	--	--	--	--
2-Amino-4,6-dinitrotoluene	35572-78-2	--	--	--	--	--	2.0E-03	RSL (2,4-DNT)	--	--
2-Butanone	78-93-3	--	--	--	--	--	6.0E-01	IRIS	5.0E+03	IRIS
2-Butoxyethanol	111-76-2	--	--	--	--	--	1.0E-01	IRIS	1.6E+03	IRIS
2-chloro-1,3-Butadiene	126-99-8	--	--	--	3.0E-04	IRIS	2.0E-02	HEAST	2.0E+01	IRIS
2-Chloroacetophenone	532-27-4	--	--	--	--	--	--	--	3.0E-02	IRIS
2-Chloroethanol	107-07-3	--	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route (PPRTV)
2-Chloronaphthalene	91-58-7	--	--	--	--	--	8.0E-02	IRIS	3.2E+02	Route (IRIS)
2-Chloronitrobenzene	88-73-3	--	3.0E-01	PPRTV	--	--	3.0E-03	PPRTV	1.0E-02	sPPRTV
2-Chlorophenol	95-57-8	--	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route (IRIS)
2-Chlorotoluene	95-49-8	--	--	--	--	--	2.0E-02	IRIS	8.0E+01	Route (IRIS)
2-Ethoxyethanol	110-80-5	--	--	--	--	--	9.0E-02	PPRTV	2.0E+02	IRIS
2-Ethoxyethanol acetate	111-15-9	--	--	--	--	--	1.0E-01	PPRTV	6.0E+01	PPRTV
2-Hexanone	591-78-6	--	--	--	--	--	5.0E-03	IRIS	3.0E+01	IRIS
2-Mercaptobenzothiazole	149-30-4	--	1.1E-02	PPRTV	--	--	4.0E-03	PPRTV	--	--
2-Methoxy-5-nitroaniline	99-59-2	--	4.9E-02	OEHHA	1.4E-05	OEHHA	--	--	--	--
2-Methoxyethanol	109-86-4	--	--	--	--	--	5.0E-03	PPRTV	2.0E+01	IRIS
2-Methoxyethanol acetate	110-49-6	--	--	--	--	--	8.0E-03	PPRTV	1.0E+00	PPRTV
2-Methyl-1,4-benzenediamine dihydrochloride	615-45-2	--	--	--	--	--	3.0E-04	sPPRTV	--	--
2-Methyl-5-nitroaniline	99-55-8	--	9.0E-03	PPRTV	--	--	2.0E-02	sPPRTV	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration	
			SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
2-Methylaniline hydrochloride	636-21-5	--	1.3E-01	OEHHA	3.7E-05	OEHHA	--	--	--	--
2-Methylbenzene,1-4-diamine monohydrochloride	74612-12-7	--	--	--	--	--	2.0E-04	sPPRTV	--	--
2-Methylbenzene-1,4-diamine sulfate	615-50-9	--	1.0E-01	sPPRTV	--	--	3.0E-04	sPPRTV	--	--
2-Methylnaphthalene	91-57-6	--	--	--	--	--	4.0E-03	IRIS	1.6E+01	Route (IRIS)
2-Methylphenol	95-48-7	--	--	--	--	--	5.0E-02	IRIS	6.0E+02	cresols; OEHHA
2-Naphthylamine	91-59-8	--	1.8E+00	OEHHA	4.5E-04	Route (OEHHA)	--	--	--	--
2-Nitroaniline	88-74-4	--	--	--	--	--	1.0E-02	sPPRTV	5.0E-02	sPPRTV
2-Nitropropane	79-46-9	--	--	--	2.7E-03	HEAST	--	--	2.0E+01	IRIS
2-Nitrotoluene	88-72-2	--	2.2E-01	PPRTV	5.5E-05	Route (PPRTV)	9.0E-04	PPRTV	3.6E+00	Route (PPRTV)
2-Phenylphenol	90-43-7	--	1.9E-03	HEAST	--	--	--	--	--	--
2-Propanol	67-63-0	--	--	--	--	--	2.0E+00	PPRTV	2.0E+02	PPRTV
3,3'-Dichlorobenzidine	91-94-1	--	1.2E+00	OEHHA	3.4E-04	OEHHA	--	--	--	--
3,3'-Dimethoxybenzidine	119-90-4	--	1.6E+00	PPRTV	--	--	--	--	--	--
3,3'-Dimethylbenzidine	119-93-7	--	1.1E+01	PPRTV	--	--	--	--	--	--
3,4-Dimethylphenol	95-65-8	--	--	--	--	--	1.0E-03	IRIS	--	--
3-Methylcholanthrene	56-49-5	M	2.2E+01	OEHHA ECP	6.3E-03	OEHHA ECP	--	--	--	--
3-Methylphenol	108-39-4	--	--	--	--	--	5.0E-02	IRIS	6.0E+02	cresols; OEHHA
3-Nitrotoluene	99-08-1	--	--	--	--	--	1.0E-04	sPPRTV	--	--
4-(2-Methyl-4-chlorophenoxy)butyric acid	94-81-5	--	--	--	--	--	4.4E-03	OPP	--	--
4,4'-DDD	72-54-8	--	2.4E-01	IRIS	6.9E-05	OEHHA	3.0E-05	sPPRTV	--	--
4,4'-DDE	72-55-9	--	3.4E-01	OEHHA	9.7E-05	OEHHA	3.0E-04	sPPRTV	1.2E+00	Route (sPPRTV)
4,4'-DDT	50-29-3	--	3.4E-01	IRIS	9.7E-05	IRIS	5.0E-04	IRIS	--	--
4,4'-Dichlorobenzophenone	90-98-2	--	--	--	--	--	9.0E-03	sPPRTV	--	--
4,4'-Dichlorodiphenyl sulfone	80-07-9	--	--	--	--	--	8.0E-04	PPRTV	--	--
4,4'-Methylene bis(N,N'-dimethyl)aniline	101-61-1	--	4.6E-02	IRIS	1.3E-05	OEHHA	--	--	--	--
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	M	1.5E+00	OEHHA	4.3E-04	OEHHA	2.0E-03	PPRTV	--	--
4,4'-Methylenebisbenzeneamine	101-77-9	--	1.6E+00	OEHHA	4.6E-04	OEHHA	--	--	2.0E+01	OEHHA
4,6-Dinitro-2-methylphenol	534-52-1	--	--	--	--	--	8.0E-05	sPPRTV	--	--
4,6-Dinitro-o-cyclohexyl phenol	131-89-5	--	--	--	--	--	2.0E-03	IRIS	--	--
4-Amino-2,6-dinitrotoluene	19406-51-0	--	--	--	--	--	2.0E-03	RSL (2,4-DNT)	--	--
4-Aminobiphenyl	92-67-1	--	2.1E+01	OEHHA	6.0E-03	OEHHA	--	--	--	--
4-Chloro-2-methylaniline hydrochloride	3165-93-3	--	4.6E-01	HEAST	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	--	--	--	--	--	1.0E-01	ATSDR	--	--
4-Chloroaniline	106-47-8	--	2.0E-01	PPRTV	--	--	4.0E-03	IRIS	--	--
4-Chlorobenzotrifluoride	98-56-6	--	--	--	--	--	3.0E-03	PPRTV	3.0E+02	PPRTV
4-Chloronitrobenzene	100-00-5	--	6.0E-02	PPRTV	--	--	7.0E-04	PPRTV	2.0E+00	PPRTV
4-Chlorotoluene	106-43-4	--	--	--	--	--	2.0E-02	sPPRTV	8.0E+01	Route (sPPRTV)
4-Dimethylaminoazobenzene	60-11-7	--	4.6E+00	OEHHA	1.3E-03	OEHHA	--	--	--	--
4-Methyl-2-pentanol	108-11-2	--	--	--	--	--	--	--	3.0E+03	sPPRTV
4-Methyl-2-pentanone	108-10-1	--	--	--	--	--	--	--	3.0E+03	IRIS
4-Methylphenol	106-44-5	--	--	--	--	--	1.0E-01	ATSDR	6.0E+02	cresols; OEHHA
4-Nitroaniline	100-01-6	--	2.0E-02	PPRTV	--	--	4.0E-03	PPRTV	6.0E+00	PPRTV
4-Nitropyrene	57835-92-4	--	1.2E+00	OEHHA TSD	1.1E-04	OEHHA TSD	--	--	--	--
4-Nitrotoluene	99-99-0	--	1.6E-02	PPRTV	--	--	4.0E-03	PPRTV	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	M	2.5E+02	OEHHA ECP	7.1E-02	OEHHA ECP	--	--	--	--
9,10-Anthraquinone	84-65-1	--	4.0E-02	PPRTV	--	--	2.0E-03	sPPRTV	--	--
Acenaphthene	83-32-9	--	--	--	--	--	6.0E-02	IRIS	2.4E+02	Route (IRIS)
Acephate	30560-19-1	--	--	--	--	--	1.2E-03	OPP	--	--
Acetaldehyde	75-07-0	--	1.0E-02	OEHHA	2.7E-06	OEHHA	--	--	9.0E+00	IRIS
Acetochlor	34256-82-1	--	--	--	--	--	2.0E-02	IRIS	--	--
Acetone	67-64-1	--	--	--	--	--	9.0E-01	IRIS	3.1E+04	ATSDR

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values				Noncancer Health-Hazard Values				
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Acetone cyanohydrin	75-86-5	--	--	--	--	--	--	--	2.0E+00	sPPRTV
Acetonitrile	75-05-8	--	--	--	--	--	--	--	6.0E+01	IRIS
Acetophenone	98-86-2	--	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route (IRIS)
Acifluorfen sodium	62476-59-9	--	--	--	--	--	1.3E-02	IRIS	--	--
Acrolein	107-02-8	--	--	--	--	--	5.0E-04	IRIS	2.0E-02	IRIS
Acrylamide	79-06-1	M	5.0E-01	IRIS	1.0E-04	IRIS	2.0E-03	IRIS	6.0E+00	IRIS
Acrylic acid	79-10-7	--	--	--	--	--	5.0E-01	IRIS	1.0E+00	IRIS
Acrylonitrile	107-13-1	--	5.4E-01	IRIS	6.8E-05	IRIS	4.0E-02	ATSDR	2.0E+00	IRIS
Adiponitrile	111-69-3	--	--	--	--	--	--	--	6.0E+00	PPRTV
Alachlor	15972-60-8	--	5.6E-02	OEHHA	--	--	1.0E-02	IRIS	--	--
Aldicarb	116-06-3	--	--	--	--	--	1.0E-03	IRIS	--	--
Aldicarb sulfone	1646-88-4	--	--	--	--	--	1.0E-03	IRIS	--	--
Aldicarb sulfoxide	1646-87-3	--	--	--	--	--	--	--	--	--
Aldrin	309-00-2	--	1.7E+01	IRIS	4.9E-03	OEHHA	3.0E-05	IRIS	1.2E-01	Route (IRIS)
Allyl alcohol	107-18-6	--	--	--	--	--	5.0E-03	IRIS	1.0E-01	sPPRTV
Allyl chloride	107-05-1	--	2.1E-02	OEHHA	6.0E-06	OEHHA	--	--	1.0E+00	IRIS
alpha-HCH	319-84-6	--	6.3E+00	IRIS	1.8E-03	IRIS	8.0E-03	ATSDR	--	--
Aluminum	7429-90-5	--	--	--	--	--	1.0E+00	PPRTV	5.0E+00	PPRTV
Aluminum metaphosphate	13776-88-0	--	--	--	--	--	4.9E+01	PPRTV	--	--
Aluminum phosphide	20859-73-8	--	--	--	--	--	4.0E-04	IRIS	--	--
Ametryn	834-12-8	--	--	--	--	--	9.0E-03	IRIS	--	--
Amitraz	33089-61-1	--	--	--	--	--	2.5E-03	IRIS	--	--
Ammonia	7664-41-7	--	--	--	--	--	--	--	2.0E+02	OEHHA
Ammonium perchlorate	7790-98-9	--	--	--	--	--	7.0E-04	IRIS	--	--
Ammonium polyphosphate	68333-79-9	--	--	--	--	--	4.9E+01	PPRTV	--	--
Ammonium sulfamate	7773-06-0	--	--	--	--	--	2.0E-01	IRIS	--	--
Aniline	62-53-3	--	5.7E-03	IRIS	1.6E-06	OEHHA	7.0E-03	PPRTV	1.0E+00	IRIS
Anthracene	120-12-7	--	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route (IRIS)
Antimony	7440-36-0	--	--	--	--	--	4.0E-04	IRIS	--	--
Antimony pentoxide	1314-60-9	--	--	--	--	--	5.0E-04	HEAST	--	--
Antimony tetroxide	1332-81-6	--	--	--	--	--	4.0E-04	HEAST	--	--
Antimony trioxide	1309-64-4	--	--	--	--	--	--	--	2.0E-01	IRIS
Aramite ^b	140-57-8	--	2.5E-02	IRIS	7.1E-06	IRIS	5.0E-02	HEAST	--	--
Aroclor 1016	12674-11-2	--	7.0E-02	IRIS	2.0E-05	OEHHA	7.0E-05	IRIS	2.8E-01	Route (IRIS)
Aroclor 1221	11104-28-2	--	2.0E+00	IRIS (PCB mixture)	5.7E-04	IRIS (PCB mixture)	--	--	--	--
Aroclor 1232	11141-16-5	--	2.0E+00	IRIS (PCB mixture)	5.7E-04	IRIS (PCB mixture)	--	--	--	--
Aroclor 1242	53469-21-9	--	2.0E+00	IRIS (PCB mixture)	5.7E-04	IRIS (PCB mixture)	--	--	--	--
Aroclor 1248	12672-29-6	--	2.0E+00	IRIS (PCB mixture)	5.7E-04	IRIS (PCB mixture)	--	--	--	--
Aroclor 1254	11097-69-1	--	2.0E+00	IRIS	5.7E-04	OEHHA	2.0E-05	IRIS	8.0E-02	Route (IRIS)
Aroclor 1260	11096-82-5	--	2.0E+00	IRIS (PCB mixture)	5.7E-04	IRIS (PCB mixture)	--	--	--	--
Aroclor 5460	11126-42-4	--	--	--	--	--	6.0E-04	sPPRTV	2.4E+00	Route (sPPRTV)
Arsenic	7440-38-2	--	9.5E+00	OEHHA PHG	4.3E-03	IRIS	3.5E-06	OEHHA	1.5E-02	OEHHA
Arsine	7784-42-1	--	--	--	--	--	3.5E-06	OEHHA	1.5E-02	OEHHA
Asulam	3337-71-1	--	--	--	--	--	3.6E-02	OPP	--	--
Atrazine	1912-24-9	--	2.3E-01	OEHHA	--	--	3.5E-02	IRIS	--	--
Auramine	492-80-8	--	8.8E-01	OEHHA	2.5E-04	OEHHA	--	--	--	--
Avermectin B1a	65195-55-3	--	--	--	--	--	4.0E-04	IRIS	--	--
Azinphos-methyl	86-50-0	--	--	--	--	--	3.0E-03	ATSDR	1.0E+01	ATSDR
Azobenzene	103-33-3	--	1.1E-01	IRIS	3.1E-05	IRIS	--	--	--	--
Azodicarbonamide	123-77-3	--	--	--	--	--	1.0E+00	PPRTV	7.0E-03	sPPRTV
Barium	7440-39-3	--	--	--	--	--	2.0E-01	IRIS	5.0E-01	HEAST

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values				
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		
			(mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference	
Benfluralin	1861-40-1	--	--	--	--	--	--	5.0E-03	OPP	2.0E+01	Route (OPP)
Benomyl	17804-35-2	--	--	--	--	--	--	5.0E-02	IRIS	--	--
Bensulfuron methyl	83055-99-6	--	--	--	--	--	--	2.0E-01	IRIS	--	--
Bentazon	25057-89-0	--	--	--	--	--	--	3.0E-02	IRIS	--	--
Benzaldehyde	100-52-7	--	4.0E-03	PPRTV	1.0E-06	Route (PPRTV)	1.0E-01	IRIS	4.0E+02	Route (IRIS)	
Benzene	71-43-2	--	1.0E-01	OEHHA	2.9E-05	OEHHA	4.0E-03	IRIS	3.0E+00	OEHHA	
Benzidine	92-87-5	M	5.0E+02	OEHHA	1.4E-01	OEHHA	3.0E-03	IRIS	--	--	
Benzo[a]anthracene	56-55-3	M	1.0E-01	ECAO	1.1E-04	OEHHA TSD	--	--	--	--	
Benzo[a]pyrene	50-32-8	M	1.0E+00	IRIS	1.1E-03	OEHHA PHG	3.0E-04	IRIS	2.0E-03	IRIS	
Benzo[b]fluoranthene	205-99-2	M	1.0E-01	ECAO	1.1E-04	OEHHA TSD	--	--	--	--	
Benzo[j]fluoranthene	205-82-3	--	1.2E+00	OEHHA TSD	1.1E-04	OEHHA TSD	--	--	--	--	
Benzo[k]fluoranthene	207-08-9	M	1.0E-02	ECAO	1.1E-04	OEHHA TSD	--	--	--	--	
Benzoic acid	65-85-0	--	--	--	--	--	4.0E+00	IRIS	--	--	
Benzotrichloride	98-07-7	--	1.3E+01	IRIS	3.3E-03	Route (IRIS)	--	--	--	--	
Benzyl alcohol	100-51-6	--	--	--	--	--	1.0E-01	PPRTV	--	--	
Benzyl chloride	100-44-7	--	1.7E-01	IRIS	4.9E-05	OEHHA	2.0E-03	PPRTV	1.0E+00	PPRTV	
Beryllium	7440-41-7	--	--	--	2.4E-03	IRIS	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	
Beryllium Oxide	1304-56-9	--	--	--	2.4E-03	IRIS	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	
Beryllium Sulfate	13510-49-1	--	--	--	2.4E-03	IRIS	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	
beta-HCH	319-85-7	--	1.8E+00	IRIS	5.3E-04	IRIS	--	--	--	--	
Bifenox	42576-02-3	--	--	--	--	--	9.0E-03	PPRTV	--	--	
Biphenhrin	82657-04-3	--	--	--	--	--	1.5E-02	IRIS	--	--	
Biphenyl	92-52-4	--	8.0E-03	IRIS	2.0E-06	Route (IRIS)	5.0E-01	IRIS	4.0E-01	sPPRTV	
bis(2-Chloroethoxy) methane	111-91-1	--	--	--	--	--	3.0E-03	PPRTV	--	--	
bis(2-Chloroethyl) Ether	111-44-4	--	2.5E+00	OEHHA	7.1E-04	OEHHA	--	--	--	--	
bis(2-Ethylhexyl) phthalate	117-81-7	--	1.4E-02	IRIS	2.4E-06	OEHHA	2.0E-02	IRIS	--	--	
bis(Chloromethyl) Ether	542-88-1	--	2.2E+02	IRIS	6.2E-02	IRIS	--	--	--	--	
bis-(2-chloro-1-methylethyl) Ether	108-60-1	--	--	--	--	--	4.0E-02	IRIS	1.6E+02	Route (IRIS)	
Bisphenol A	80-05-7	--	--	--	--	--	5.0E-02	IRIS	--	--	
Boron	7440-42-8	--	--	--	--	--	2.0E-01	IRIS	2.0E+01	HEAST	
Boron Trichloride	10294-34-5	--	--	--	--	--	2.0E+00	PPRTV	2.0E+01	PPRTV	
Boron Trifluoride	7637-07-2	--	--	--	--	--	4.0E-02	OEHHA	1.3E+01	OEHHA	
Bromate	15541-45-4	--	7.0E-01	IRIS	--	--	4.0E-03	IRIS	--	--	
Bromobenzene	108-86-1	--	--	--	--	--	8.0E-03	IRIS	6.0E+01	IRIS	
Bromochloromethane	74-97-5	--	--	--	--	--	--	--	4.0E+01	sPPRTV	
Bromodichloromethane	75-27-4	--	6.2E-02	IRIS	3.7E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route (IRIS)	
Bromoform	75-25-2	--	7.9E-03	IRIS	1.1E-06	IRIS	2.0E-02	IRIS	8.0E+01	Route (IRIS)	
Bromophos	2104-96-3	--	--	--	--	--	5.0E-03	HEAST	2.0E+01	Route (HEAST)	
Bromoxynil	1689-84-5	--	1.0E-01	OPP	--	--	1.5E-02	OPP	--	--	
Bromoxynil octanoate	1689-99-2	--	1.0E-01	OPP	--	--	1.5E-02	OPP	6.0E+01	Route (OPP)	
Butyl benzyl phthalate	85-68-7	--	1.9E-03	PPRTV	--	--	2.0E-01	IRIS	--	--	
Butylate	2008-41-5	--	--	--	--	--	5.0E-02	IRIS	2.0E+02	Route (IRIS)	
Butylated hydroxyanisole	25013-16-5	--	2.0E-04	OEHHA	5.7E-08	OEHHA	--	--	--	--	
Butylated Hydroxytoluene	128-37-0	--	3.6E-03	PPRTV	--	--	3.0E-01	PPRTV	--	--	
Butylphthalyl butylglycolate	85-70-1	--	--	--	--	--	1.0E+00	IRIS	--	--	
Cacodylic acid	75-60-5	--	--	--	--	--	2.0E-02	ATSDR	--	--	
Cadmium	7440-43-9	--	--	--	4.2E-03	OEHHA	1.0E-03	IRIS	1.0E-02	ATSDR	
Cadmium (diet)	7440-43-9 (diet)	--	--	--	4.2E-03	OEHHA	1.0E-03	IRIS	1.0E-02	ATSDR	
Cadmium (water)	7440-43-9 (water)	--	--	--	4.2E-03	OEHHA	5.0E-04	IRIS	1.0E-02	ATSDR	
Calcium cyanide	592-01-8	--	--	--	--	--	1.0E-03	IRIS (HCN and CN- Salts)	--	--	
Calcium pyrophosphate	7790-76-3	--	--	--	--	--	4.9E+01	PPRTV	--	--	

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values				
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		
			SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference	
Caprolactam	105-60-2	--	--	--	--	--	--	5.0E-01	IRIS	2.2E+00	OEHHA
Captafol	2425-06-1	--	1.5E-01	OEHHA	4.3E-05	OEHHA	2.0E-03	IRIS	--	--	--
Captan	133-06-2	--	2.3E-03	OEHHA	6.6E-07	OEHHA	1.3E-01	IRIS	--	--	--
Carbaryl	63-25-2	--	--	--	--	--	1.0E-01	IRIS	--	--	--
Carbofuran	1563-66-2	--	--	--	--	--	5.0E-03	IRIS	--	--	--
Carbon disulfide	75-15-0	--	--	--	--	--	1.0E-01	IRIS	7.0E+02	--	IRIS
Carbon tetrachloride	56-23-5	--	7.0E-02	IRIS	6.0E-06	IRIS	4.0E-03	IRIS	4.0E+01	OEHHA	OEHHA
Carbonyl sulfide	463-58-1	--	--	--	--	--	--	--	1.0E+01	OEHHA	OEHHA
Carbosulfan	55285-14-8	--	--	--	--	--	1.0E-02	IRIS	--	--	--
Carboxin	5234-68-4	--	--	--	--	--	1.0E-01	IRIS	--	--	--
Ceric oxide	1306-38-3	--	--	--	--	--	--	--	9.0E-01	--	IRIS
Chloral hydrate	302-17-0	--	--	--	--	--	1.0E-01	IRIS	4.0E+02	--	Route (IRIS)
Chloramben	133-90-4	--	--	--	--	--	1.5E-02	IRIS	--	--	--
Chloranil	118-75-2	--	4.0E-01	HEAST	--	--	--	--	--	--	--
Chlordane (technical)	12789-03-6	--	3.5E-01	IRIS	1.0E-04	IRIS	5.0E-04	IRIS	7.0E-01	--	IRIS
Chlorfenvinphos	470-90-6	--	--	--	--	--	7.0E-04	ATSDR	--	--	--
Chlorimuron-ethyl	90982-32-4	--	--	--	--	--	9.0E-02	OPP	--	--	--
Chlorine	7782-50-5	--	--	--	--	--	1.0E-01	IRIS	1.5E-01	--	ATSDR
Chlorine Dioxide	10049-04-4	--	--	--	--	--	3.0E-02	IRIS	2.0E-01	--	IRIS
Chlorite (sodium salt)	7758-19-2	--	--	--	--	--	3.0E-02	IRIS	--	--	--
Chloroacetaldehyde	107-20-0	--	2.7E-01	sPPRTV	6.8E-05	Route (sPPRTV)	--	--	--	--	--
Chloroacetic acid	79-11-8	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	--	--	--	--	--	2.0E-02	IRIS	5.0E+01	--	PPRTV
Chlorobenzilate	510-15-6	--	1.1E-01	OEHHA	3.1E-05	OEHHA	2.0E-02	IRIS	--	--	--
Chlorodibromomethane	124-48-1	--	8.4E-02	IRIS	2.1E-05	Route (IRIS)	2.0E-02	IRIS	8.0E+01	--	Route (IRIS)
Chlorodifluoromethane	75-45-6	--	--	--	--	--	--	--	5.0E+04	--	IRIS
Chloroethane	75-00-3	--	--	--	--	--	--	--	1.0E+04	--	IRIS
Chloroform	67-66-3	--	3.1E-02	OEHHA	2.3E-05	IRIS	1.0E-02	IRIS	9.8E+01	--	ATSDR
Chloromethane	74-87-3	--	--	--	--	--	--	--	9.0E+01	--	IRIS
chloromethyl methyl Ether	107-30-2	--	2.4E+00	OEHHA	6.9E-04	OEHHA	--	--	--	--	--
Chloropicrin	76-06-2	--	--	--	--	--	--	--	4.0E-01	--	OEHHA
Chlorothalonil	1897-45-6	--	1.7E-02	OEHHA	8.9E-07	OEHHA	1.5E-02	IRIS	--	--	--
Chlorozotocin	54749-90-5	--	2.4E+02	OEHHA	6.9E-02	OEHHA	--	--	--	--	--
Chlorpropham	101-21-3	--	--	--	--	--	5.0E-02	OPP	--	--	--
Chlorpyrifos	2921-88-2	--	--	--	--	--	1.0E-03	ATSDR	--	--	--
Chlorpyrifos-methyl	5598-13-0	--	--	--	--	--	1.0E-02	HEAST	--	--	--
Chlorsulfuron	64902-72-3	--	--	--	--	--	5.0E-02	OPP	--	--	--
Chlorthal-dimethyl	1861-32-1	--	--	--	--	--	1.0E-02	IRIS	--	--	--
Chlorthiophos	60238-56-4	--	--	--	--	--	8.0E-04	HEAST	--	--	--
Chromium	7440-47-3	--	--	--	--	--	--	--	--	--	--
Chromium (III)	16065-83-1	--	--	--	--	--	1.5E+00	IRIS	--	--	--
Chromium (VI)	18540-29-9	M	5.0E-01	OEHHA PHG	1.5E-01	OEHHA	3.0E-03	IRIS	1.0E-01	--	IRIS
Chrysene	218-01-9	M	1.0E-03	ECAO	1.1E-05	OEHHA TSD	--	--	--	--	--
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	2.0E-03	IRIS	8.0E+00	--	Route (IRIS)
cis-1,4-Dichloro-2-butene	1476-11-5	--	--	--	4.2E-03	PPRTV	--	--	--	--	--
Clofentezine	74115-24-5	--	--	--	--	--	1.3E-02	IRIS	--	--	--
Cobalt	7440-48-4	--	--	--	9.0E-03	PPRTV	3.0E-04	PPRTV	6.0E-03	--	PPRTV
Coke Oven Emissions	Coke Oven Emissions	M	--	--	6.2E-04	IRIS	--	--	--	--	--
Copper	7440-50-8	--	--	--	--	--	4.0E-02	HEAST	--	--	--
Copper cyanide	544-92-3	--	--	--	--	--	5.0E-03	IRIS	--	--	--
Cupferron	135-20-6	--	2.2E-01	OEHHA	6.3E-05	OEHHA	--	--	--	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values				
		Oral Slope Factor			Inhalation Unit Risk		Reference Dose - Oral			Reference Concentration	
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference	
Cyanazine	21725-46-2	--	8.4E-01	HEAST	--	--	2.0E-03	HEAST	--	--	
Cyanide	57-12-5	--	--	--	--	--	6.0E-04	IRIS	8.0E-01	IRIS	
Cyanogen	460-19-5	--	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route (IRIS)	
Cyanogen bromide	506-68-3	--	--	--	--	--	9.0E-02	IRIS	3.6E+02	Route (IRIS)	
Cyanogen chloride	506-77-4	--	--	--	--	--	5.0E-02	IRIS	2.0E+02	Route (IRIS)	
Cyclohexane	110-82-7	--	--	--	--	--	--	--	6.0E+03	IRIS	
Cyclohexanone	108-94-1	--	--	--	--	--	5.0E+00	IRIS	7.0E+02	PPRTV	
Cyclohexene	110-83-8	--	--	--	--	--	5.0E-03	PPRTV	1.0E+03	sPPRTV	
Cyclohexylamine	108-91-8	--	--	--	--	--	2.0E-01	IRIS	8.0E+02	Route (IRIS)	
Cyfluthrin	68359-37-5	--	--	--	--	--	2.5E-02	IRIS	--	--	
Cyhalothrin	68085-85-8	--	--	--	--	--	1.0E-03	OPP	--	--	
Cyromazine	66215-27-8	--	--	--	--	--	5.0E-01	OPP	--	--	
Dalapon	75-99-0	--	--	--	--	--	3.0E-02	IRIS	--	--	
Daminozide	1596-84-5	--	1.8E-02	OEHHHA	5.1E-06	OEHHHA	1.5E-01	IRIS	--	--	
Danitol	39515-41-8	--	--	--	--	--	2.5E-02	IRIS	--	--	
Demeton	8065-48-3	--	--	--	--	--	4.0E-05	IRIS	--	--	
Di(2-ethylhexyl)adipate	103-23-1	--	1.2E-03	IRIS	--	--	6.0E-01	IRIS	--	--	
Diallate	2303-16-4	--	6.1E-02	HEAST	--	--	--	--	--	--	
Diammonium phosphate	7783-28-0	--	--	--	--	--	4.9E+01	PPRTV	--	--	
Diazinon	333-41-5	--	--	--	--	--	7.0E-04	ATSDR	--	--	
Dibenz[a,h]anthracene	53-70-3	M	4.1E+00	OEHHHA ECP	1.2E-03	OEHHHA ECP	--	--	--	--	
Dibenzo[a,e]pyrene	192-65-4	--	1.2E+01	OEHHHA TSD	1.1E-03	OEHHHA TSD	--	--	--	--	
Dibenzofuran	132-64-9	--	--	--	--	--	1.0E-03	sPPRTV	4.0E+00	Route (sPPRTV)	
Dibenzothiophene	132-65-0	--	--	--	--	--	1.0E-02	sPPRTV	4.0E+01	Route (sPPRTV)	
Dibutyltin Compounds	E1790660	--	--	--	--	--	3.0E-04	PPRTV	--	--	
Dicalcium phosphate	7757-93-9	--	--	--	--	--	4.9E+01	PPRTV	--	--	
Dicamba	1918-00-9	--	--	--	--	--	3.0E-02	IRIS	--	--	
Dichloroacetic acid	79-43-6	--	5.0E-02	IRIS	--	--	4.0E-03	IRIS	--	--	
Dichlorodifluoromethane	75-71-8	--	--	--	--	--	2.0E-01	IRIS	1.0E+02	sPPRTV	
Dichlorvos	62-73-7	--	2.9E-01	IRIS	8.3E-05	OEHHHA	5.0E-04	IRIS	5.0E-01	IRIS	
Dicrotophos	141-66-2	--	--	--	--	--	3.0E-05	OPP	--	--	
Dicyclopentadiene	77-73-6	--	--	--	--	--	8.0E-02	PPRTV	3.0E-01	sPPRTV	
Dieldrin	60-57-1	--	1.6E+01	OEHHHA	4.6E-03	OEHHHA	5.0E-05	IRIS	2.0E-01	Route (IRIS)	
Diesel engine exhaust	E17136615	--	--	--	3.0E-04	OEHHHA	--	--	5.0E+00	IRIS	
Diethanolamine	111-42-2	--	--	--	--	--	2.0E-03	PPRTV	2.0E-01	PPRTV	
Diethyl phthalate	84-66-2	--	--	--	--	--	8.0E-01	IRIS	--	--	
Diethylene glycol monobutyl Ether	112-34-5	--	--	--	--	--	3.0E-02	PPRTV	1.0E-01	PPRTV	
Diethylene glycol monoethyl Ether	111-90-0	--	--	--	--	--	6.0E-02	PPRTV	3.0E-01	PPRTV	
Diethylformamide	617-84-5	--	--	--	--	--	1.0E-03	PPRTV	4.0E+00	Route (PPRTV)	
Diethylstilbestrol	56-53-1	--	3.5E+02	OEHHHA	1.0E-01	OEHHHA	--	--	--	--	
Difenzoquat	43222-48-6	--	--	--	--	--	8.3E-02	OPP	--	--	
Diflubenzuron	35367-38-5	--	--	--	--	--	2.0E-02	IRIS	--	--	
Dihydrosafrole	94-58-6	--	4.4E-02	OEHHHA	1.3E-05	OEHHHA	--	--	--	--	
diisopropyl Ether	108-20-3	--	--	--	--	--	--	--	7.0E+02	PPRTV	
diisopropyl Methylphosphonate	1445-75-6	--	--	--	--	--	8.0E-02	IRIS	3.2E+02	Route (IRIS)	
Dimagnesium phosphate	7782-75-4	--	--	--	--	--	4.9E+01	PPRTV	--	--	
Dimethipin	55290-64-7	--	--	--	--	--	2.2E-02	OPP	--	--	
Dimethoate	60-51-5	--	--	--	--	--	2.2E-03	OPP	--	--	
Dimethyl methylphosphonate	756-79-6	--	1.7E-03	PPRTV	--	--	6.0E-02	PPRTV	--	--	
Dimethyl terephthalate	120-61-6	--	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route (IRIS)	
Dimethylvinylchloride	513-37-1	--	4.5E-02	OEHHHA	1.3E-05	OEHHHA	--	--	--	--	

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Oral Slope Factor		Inhalation Unit Risk			Reference Dose - Oral		Reference Concentration	
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
di-n-Butyl Phthalate	84-74-2	--	--	--	--	--	1.0E-01	IRIS	--	--
Dinitrotoluenes	25321-14-6	--	4.5E-01	sPPRTV	--	--	9.0E-04	sPPRTV	--	--
di-n-Octyl Phthalate	117-84-0	--	--	--	--	--	1.0E-02	PPRTV	--	--
Dinoseb	88-85-7	--	--	--	--	--	1.0E-03	IRIS	--	--
Diphenamid	957-51-7	--	--	--	--	--	3.0E-02	IRIS	--	--
Diphenyl Ether	101-84-8	--	--	--	--	--	--	--	4.0E-01	sPPRTV
Diphenyl Sulfone	127-63-9	--	--	--	--	--	8.0E-04	sPPRTV	--	--
Diphenylamine	122-39-4	--	--	--	--	--	1.0E-01	OPP	--	--
Diphenyl-p-phenylenediamine	74-31-7	--	--	--	--	--	3.0E-04	sPPRTV	--	--
Dipotassium phosphate	7758-11-4	--	--	--	--	--	4.9E+01	PPRTV	--	--
Diquat	85-00-7	--	--	--	--	--	2.2E-03	IRIS	--	--
Direct Black 38	1937-37-7	--	7.4E+00	OEHHA	2.1E-03	OEHHA	--	--	--	--
Direct Blue 6	2602-46-2	--	7.4E+00	OEHHA	2.1E-03	OEHHA	--	--	--	--
Direct Brown 95	16071-86-6	--	6.7E+00	OEHHA	1.9E-03	OEHHA	--	--	--	--
Disodium phosphate	7558-79-4	--	--	--	--	--	4.9E+01	PPRTV	--	--
Disulfoton	298-04-4	--	--	--	--	--	4.0E-05	IRIS	--	--
Diuron	330-54-1	--	--	--	--	--	2.0E-03	IRIS	--	--
Dodine	2439-10-3	--	--	--	--	--	2.0E-02	OPP	--	--
Endosulfan	115-29-7	--	--	--	--	--	6.0E-03	IRIS	2.4E+01	Route (IRIS)
Endothall	145-73-3	--	--	--	--	--	2.0E-02	IRIS	--	--
Endrin	72-20-8	--	--	--	--	--	3.0E-04	IRIS	--	--
Epichlorohydrin	106-89-8	--	8.0E-02	OEHHA	2.3E-05	OEHHA	6.0E-03	PPRTV	1.0E+00	IRIS
Ethephon	16672-87-0	--	--	--	--	--	5.0E-03	IRIS	--	--
Ethion	563-12-2	--	--	--	--	--	5.0E-04	IRIS	--	--
Ethyl acetate	141-78-6	--	--	--	--	--	9.0E-01	IRIS	7.0E+01	PPRTV
Ethyl acrylate	140-88-5	--	--	--	--	--	5.0E-03	PPRTV	8.0E+00	PPRTV
Ethyl Ether	60-29-7	--	--	--	--	--	2.0E-01	IRIS	8.0E+02	Route (IRIS)
Ethyl methacrylate	97-63-2	--	--	--	--	--	--	--	3.0E+02	PPRTV
Ethyl p-nitrophenyl phenylphosphorothioate	2104-64-5	--	--	--	--	--	1.0E-05	IRIS	--	--
Ethylbenzene	100-41-4	--	1.1E-02	OEHHA	2.5E-06	OEHHA	1.0E-01	IRIS	1.0E+03	IRIS
Ethylene cyanohydrin	109-78-4	--	--	--	--	--	7.0E-02	PPRTV	--	--
Ethylene diamine	107-15-3	--	--	--	--	--	9.0E-02	PPRTV	3.6E+02	Route (PPRTV)
Ethylene dibromide	106-93-4	--	2.0E+00	IRIS	6.0E-04	IRIS	9.0E-03	IRIS	8.0E-01	OEHHA
Ethylene glycol	107-21-1	--	--	--	--	--	2.0E+00	IRIS	4.0E+02	OEHHA
Ethylene oxide	75-21-8	M	3.1E-01	OEHHA	3.0E-03	IRIS	--	--	3.0E+01	OEHHA
Ethylene thiourea	96-45-7	--	1.1E-01	HEAST	1.3E-05	OEHHA	8.0E-05	IRIS	--	--
Ethyleneimine	151-56-4	--	6.5E+01	OEHHA	1.9E-02	OEHHA	--	--	--	--
Ethylphthalyl ethylglycolate	84-72-0	--	--	--	--	--	3.0E+00	IRIS	--	--
Fenamiphos	22224-92-6	--	--	--	--	--	2.5E-04	IRIS	--	--
Fenvalerate	51630-58-1	--	--	--	--	--	2.5E-02	IRIS	--	--
Fluometuron	2164-17-2	--	--	--	--	--	1.3E-02	IRIS	--	--
Fluoranthene	206-44-0	--	--	--	--	--	4.0E-02	IRIS	--	--
Fluorene	86-73-7	--	--	--	--	--	4.0E-02	IRIS	1.6E+02	Route (IRIS)
Fluoride	16984-48-8	--	--	--	--	--	4.0E-02	OEHHA	1.3E+01	OEHHA
Fluoridone	59756-60-4	--	--	--	--	--	8.0E-02	IRIS	--	--
Fluorine	7782-41-4	--	--	--	--	--	6.0E-02	IRIS	1.3E+01	"fluorides" OEHHA
Flurprimidol	56425-91-3	--	--	--	--	--	4.0E-02	OPP	--	--
Flusilazole	85509-19-9	--	--	--	--	--	2.0E-03	OPP	--	--
Flutolanil	66332-96-5	--	--	--	--	--	5.0E-01	OPP	--	--
Fluvalinate	69409-94-5	--	--	--	--	--	1.0E-02	IRIS	--	--
Folpet	133-07-3	--	--	--	--	--	9.0E-02	OPP	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Fomesafen	72178-02-0	--	--	--	--	--	2.5E-03	OPP	--	--
Fonofos	944-22-9	--	--	--	--	--	2.0E-03	IRIS	--	--
Formaldehyde	50-00-0	--	2.1E-02	OEHHA	1.3E-05	IRIS	2.0E-01	IRIS	9.0E+00	OEHHA
Formic Acid	64-18-6	--	--	--	--	--	9.0E-01	PPRTV	3.0E-01	sPPRTV
Fosetyl-al	39148-24-8	--	--	--	--	--	2.5E+00	OPP	--	--
Furan	110-00-9	--	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route (IRIS)
Furazolidone	67-45-8	--	3.8E+00	HEAST	--	--	--	--	--	--
Furfural	98-01-1	--	--	--	--	--	3.0E-03	IRIS	5.0E+01	HEAST
Furium	531-82-8	--	1.5E+00	OEHHA	4.3E-04	OEHHA	--	--	--	--
Furmecyclox	60568-05-0	--	3.0E-02	IRIS	8.6E-06	OEHHA	--	--	--	--
gamma-HCH	58-89-9	--	1.1E+00	OEHHA	3.1E-04	OEHHA	3.0E-04	IRIS	--	--
Glufosinate-ammonium	77182-82-2	--	--	--	--	--	6.0E-03	OPP	--	--
Glutaraldehyde	111-30-8	--	--	--	--	--	1.0E-01	ATSDR	8.0E-02	OEHHA
Glycidaldehyde	765-34-4	--	--	--	--	--	4.0E-04	IRIS	1.0E+00	HEAST
Glyphosate	1071-83-6	--	--	--	--	--	1.0E-01	IRIS	--	--
Guanidine	113-00-8	--	--	--	--	--	1.0E-02	sPPRTV	4.0E+01	Route (sPPRTV)
Guanidine Chloride	50-01-1	--	--	--	--	--	2.0E-02	PPRTV	--	--
Guanidine Nitrate	506-93-4	--	--	--	--	--	3.0E-02	sPPRTV	--	--
Haloxypop-methyl	69806-40-2	--	--	--	--	--	5.0E-05	IRIS	--	--
HCH (mixed isomers)	608-73-1	--	4.0E+00	OEHHA	1.1E-03	OEHHA	--	--	--	--
Heptachlor	76-44-8	--	4.5E+00	IRIS	1.3E-03	IRIS	5.0E-04	IRIS	2.0E+00	Route (IRIS)
Heptachlor Epoxide	1024-57-3	--	9.1E+00	IRIS	2.6E-03	IRIS	1.3E-05	IRIS	5.2E-02	Route (IRIS)
Hexabromobenzene	87-82-1	--	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route (IRIS)
Hexachlorobenzene	118-74-1	--	1.8E+00	OEHHA	5.1E-04	OEHHA	8.0E-04	IRIS	3.2E+00	Route (IRIS)
Hexachlorobutadiene	87-68-3	--	7.8E-02	IRIS	2.2E-05	IRIS	1.0E-03	PPRTV	4.0E+00	Route (PPRTV)
Hexachlorocyclopentadiene	77-47-4	--	--	--	--	--	6.0E-03	IRIS	2.0E-01	IRIS
Hexachloroethane	67-72-1	--	4.0E-02	IRIS	1.1E-05	OEHHA	7.0E-04	IRIS	3.0E+01	IRIS
Hexachlorophene	70-30-4	--	--	--	--	--	3.0E-04	IRIS	--	--
Hexamethylphosphoramide	680-31-9	--	--	--	--	--	4.0E-04	PPRTV	--	--
Hexane	110-54-3	--	--	--	--	--	--	--	7.0E+02	IRIS
Hexanedioic Acid	124-04-9	--	--	--	--	--	2.0E+00	PPRTV	--	--
Hexazinone	51235-04-2	--	--	--	--	--	3.3E-02	IRIS	--	--
Hexythiazox	78587-05-0	--	--	--	--	--	2.5E-02	IRIS	--	--
HMX	2691-41-0	--	--	--	--	--	5.0E-02	IRIS	--	--
HxCDD Mixture ^c	HxCDD Mixture	--	6.2E+03	IRIS	3.8E+00	OEHHA	--	--	--	--
Hydramethylnon	67485-29-4	--	--	--	--	--	1.7E-02	OPP	--	--
Hydrazine	302-01-2	--	3.0E+00	IRIS	4.9E-03	IRIS	--	--	3.0E-02	PPRTV
Hydrazine Sulfate	10034-93-2	--	3.0E+00	IRIS	4.9E-03	IRIS	--	--	--	--
Hydrogen Chloride	7647-01-0	--	--	--	--	--	--	--	9.0E+00	OEHHA
Hydrogen Cyanide	74-90-8	--	--	--	--	--	6.0E-04	IRIS	8.0E-01	IRIS
Hydrogen Fluoride	7664-39-3	--	--	--	--	--	4.0E-02	OEHHA	1.4E+01	OEHHA
Hydrogen Sulfide	7783-06-4	--	--	--	--	--	--	--	2.0E+00	IRIS
Hydroquinone	123-31-9	--	6.0E-02	PPRTV	--	--	4.0E-02	PPRTV	--	--
Imazalil	35554-44-0	--	6.1E-02	OPP	--	--	2.5E-03	OPP	--	--
Imazaquin	81335-37-7	--	--	--	--	--	2.5E-01	IRIS	--	--
Imazethapyr	81335-77-5	--	--	--	--	--	2.5E+00	OPP	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	M	1.0E-01	ECAO	1.1E-04	OEHHA TSD	--	--	--	--
Iodine	7553-56-2	--	--	--	--	--	1.0E-02	ATSDR	--	--
Iprodione	36734-19-7	--	--	--	--	--	4.0E-02	IRIS	--	--
Iron	7439-89-6	--	--	--	--	--	7.0E-01	PPRTV	--	--
Isobutanol	78-83-1	--	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route (IRIS)

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Mutagen?	Oral	Inhalation		Reference Dose -		Reference		
			Slope Factor	Unit Risk	Oral	Concentration				
		(mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference	
Isophorone	78-59-1	--	9.5E-04	IRIS	--	--	2.0E-01	IRIS	2.0E+03	OEHHA
Isopropalin	33820-53-0	--	--	--	--	--	1.5E-02	IRIS	6.0E+01	Route (IRIS)
Isopropyl methyl phosphonic acid	1832-54-8	--	--	--	--	--	1.0E-01	IRIS	--	--
Isopropylbenzene	98-82-8	--	--	--	--	--	1.0E-01	IRIS	4.0E+02	IRIS
Isoxaben	82558-50-7	--	--	--	--	--	5.0E-02	IRIS	--	--
JP-7	E1737665	--	--	--	--	--	--	--	3.0E+02	ATSDR
Kepone	143-50-0	--	1.0E+01	IRIS	4.6E-03	OEHHA	3.0E-04	IRIS	--	--
Lactofen	77501-63-4	--	--	--	--	--	8.0E-03	OPP	--	--
Lactonitrile	78-97-7	--	--	--	--	--	2.0E-04	sPPRTV	--	--
Lanthanum	7439-91-0	--	--	--	--	--	5.0E-05	PPRTV	--	--
Lanthanum Acetate Hydrate	100587-90-4	--	--	--	--	--	2.1E-05	PPRTV	--	--
Lanthanum Chloride Heptahydrate	10025-84-0	--	--	--	--	--	1.9E-05	PPRTV	--	--
Lanthanum Chloride, Anhydrous	10099-58-8	--	--	--	--	--	2.8E-05	PPRTV	--	--
Lanthanum Nitrate Hexahydrate	10277-43-7	--	--	--	--	--	1.6E-05	PPRTV	--	--
Lead ^d	7439-92-1	HHRA Note 3 ^d								
Lead acetate	301-04-2	--	2.8E-01	OEHHA	8.0E-05	OEHHA	--	--	--	--
Lead phosphate	7446-27-7	--	8.5E-03	OEHHA	1.2E-05	OEHHA	--	--	--	--
Lead subacetate	1335-32-6	--	3.8E-02	OEHHA	1.1E-05	OEHHA	--	--	--	--
Lewisite	541-25-3	--	--	--	--	--	5.0E-06	PPRTV	2.0E-02	Route (PPRTV)
Linuron	330-55-2	--	--	--	--	--	7.7E-03	OPP	--	--
Lithium	7439-93-2	--	--	--	--	--	2.0E-03	PPRTV	--	--
Lithium Perchlorate	7791-03-9	--	--	--	--	--	7.0E-04	IRIS	--	--
Malathion	121-75-5	--	--	--	--	--	2.0E-02	IRIS	--	--
Maleic anhydride	108-31-6	--	--	--	--	--	1.0E-01	IRIS	7.0E-01	OEHHA
Maleic hydrazide	123-33-1	--	--	--	--	--	5.0E-01	IRIS	--	--
Malononitrile	109-77-3	--	--	--	--	--	1.0E-04	PPRTV	--	--
m-Aminophenol	591-27-5	--	--	--	--	--	8.0E-02	PPRTV	--	--
Mancozeb	8018-01-7	--	--	--	--	--	3.0E-02	HEAST	--	--
Maneb	12427-38-2	--	--	--	--	--	5.0E-03	IRIS	--	--
Manganese (diet)	7439-96-5 (diet)	--	--	--	--	--	--	--	--	--
Manganese (non-diet)	7439-96-5 (non-diet)	--	--	--	--	--	2.4E-02	IRIS	5.0E-02	IRIS
MCPA	94-74-6	--	--	--	--	--	5.0E-04	IRIS	--	--
Mecoprop	93-65-2	--	--	--	--	--	1.0E-03	IRIS	--	--
Mephosfolan	950-10-7	--	--	--	--	--	9.0E-05	HEAST	--	--
Mepiquat	24307-26-4	--	--	--	--	--	3.0E-02	IRIS	--	--
Mercuric Chloride	7487-94-7	--	--	--	--	--	1.6E-04	OEHHA REL	3.0E-02	OEHHA
Mercury	7439-97-6	--	--	--	--	--	1.6E-04	OEHHA REL	3.0E-02	OEHHA
Merphos	150-50-5	--	--	--	--	--	3.0E-05	IRIS	1.2E-01	Route (IRIS)
Merphos oxide	78-48-8	--	--	--	--	--	1.0E-04	OPP	--	--
Metalaxyl	57837-19-1	--	--	--	--	--	6.0E-02	IRIS	--	--
Methacrylonitrile	126-98-7	--	--	--	--	--	1.0E-04	IRIS	3.0E+01	PPRTV
Methamidophos	10265-92-6	--	--	--	--	--	5.0E-05	IRIS	--	--
Methanol	67-56-1	--	--	--	--	--	2.0E+00	IRIS	2.0E+04	IRIS
Methidathion	950-37-8	--	--	--	--	--	1.5E-03	OPP	--	--
Methomyl	16752-77-5	--	--	--	--	--	2.5E-02	IRIS	--	--
Methoxychlor	72-43-5	--	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route (IRIS)
Methyl acetate	79-20-9	--	--	--	--	--	1.0E+00	sPPRTV	4.0E+03	Route (sPPRTV)
Methyl acrylate	96-33-3	--	--	--	--	--	--	--	2.0E+01	PPRTV
Methyl bromide	74-83-9	--	--	--	--	--	1.4E-03	IRIS	5.0E+00	IRIS
Methyl hydrazine	60-34-4	--	--	--	1.0E-03	sPPRTV	1.0E-03	PPRTV	2.0E-02	sPPRTV
Methyl Isocyanate	624-83-9	--	--	--	--	--	--	--	1.0E+00	OEHHA

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Oral Slope Factor		Inhalation Unit Risk			Reference Dose - Oral		Reference Concentration	
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Methyl methacrylate	80-62-6	--	--	--	--	--	1.4E+00	IRIS	7.0E+02	IRIS
Methyl Parathion	298-00-0	--	--	--	--	--	2.5E-04	IRIS	--	--
Methyl styrene (alpha)	98-83-9	--	--	--	--	--	7.0E-02	HEAST	2.8E+02	Route (HEAST)
Methyl styrene (mixture)	25013-15-4	--	--	--	--	--	6.0E-03	HEAST	4.0E+01	HEAST
methyl tert-butyl Ether	1634-04-4	--	1.8E-03	OEHHA	2.6E-07	OEHHA	--	--	3.0E+03	IRIS
Methylarsonic acid	124-58-3	--	--	--	--	--	1.0E-02	ATSDR	--	--
Methylcyclohexane	108-87-2	--	--	--	--	--	--	--	6.0E+03	Cyclohexane
Methylene bromide	74-95-3	--	--	--	--	--	--	--	4.0E+00	sPPRTV
Methylene Chloride	75-09-2	M	2.0E-03	IRIS	1.0E-06	OEHHA	6.0E-03	IRIS	4.0E+02	OEHHA
Methylene diphenyl diisocyanate	101-68-8	--	--	--	--	--	--	--	8.0E-02	OEHHA
Methylmercury ion	22967-92-6	--	--	--	--	--	1.0E-04	IRIS	--	--
Methylmethanesulfonate	66-27-3	--	9.9E-02	OEHHA	2.8E-05	OEHHA	--	--	--	--
Methylphenols	1319-77-3	--	--	--	--	--	1.0E-01	ATSDR	6.0E+02	OEHHA
Methylphosphonic acid	993-13-5	--	--	--	--	--	6.0E-02	sPPRTV	--	--
Metolachlor	51218-45-2	--	--	--	--	--	1.5E-01	IRIS	--	--
Metribuzin	21087-64-9	--	--	--	--	--	2.5E-02	IRIS	--	--
Metsulfuron-methyl	74223-64-6	--	--	--	--	--	2.5E-01	IRIS	--	--
Mineral oils (l)	8012-95-1	--	--	--	--	--	3.0E+00	PPRTV	1.2E+04	Route (PPRTV)
Mirex	2385-85-5	--	1.8E+01	OEHHA	5.1E-03	OEHHA	2.0E-04	IRIS	8.0E-01	Route (IRIS)
Molinate	2212-67-1	--	--	--	--	--	2.0E-03	IRIS	--	--
Molybdenum	7439-98-7	--	--	--	--	--	5.0E-03	IRIS	--	--
Monoaluminum phosphate	13530-50-2	--	--	--	--	--	4.9E+01	PPRTV	--	--
Monoammonium phosphate	7722-76-1	--	--	--	--	--	4.9E+01	PPRTV	--	--
Monocalcium phosphate	7758-23-8	--	--	--	--	--	4.9E+01	PPRTV	--	--
Monochloramine	10599-90-3	--	--	--	--	--	1.0E-01	IRIS	--	--
Monomagnesium phosphate	7757-86-0	--	--	--	--	--	4.9E+01	PPRTV	--	--
Monomethylaniline	100-61-8	--	--	--	--	--	2.0E-03	PPRTV	--	--
Monopotassium phosphate	7778-77-0	--	--	--	--	--	4.9E+01	PPRTV	--	--
Monosodium phosphate	7558-80-7	--	--	--	--	--	4.9E+01	PPRTV	--	--
m-Xylene	108-38-3	--	--	--	--	--	2.0E-01	IRIS (xylenes)	1.0E+02	IRIS (xylenes)
Myclobutanil	88671-89-0	--	--	--	--	--	2.5E-02	IRIS	--	--
N,N-Dimethylaniline	121-69-7	--	2.7E-02	PPRTV	6.8E-06	Route (PPRTV)	2.0E-03	IRIS	8.0E+00	Route (IRIS)
N,N-Dimethylformamide	68-12-2	--	--	--	--	--	1.0E-01	PPRTV	3.0E+01	IRIS
Naled	300-76-5	--	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route (IRIS)
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	--	--	--	--	--	3.0E-02	sPPRTV	1.0E+02	PPRTV
Naphthalene	91-20-3	--	1.2E-01	OEHHA	3.4E-05	OEHHA	2.0E-02	IRIS	3.0E+00	IRIS
Napropamide	15299-99-7	--	--	--	--	--	1.2E-01	OPP	--	--
n-Butyl alcohol	71-36-3	--	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route (IRIS)
n-Butylbenzene	104-51-8	--	--	--	--	--	5.0E-02	PPRTV	2.0E+02	Route (PPRTV)
n-Heptanal	111-71-7	--	--	--	--	--	--	--	3.0E+00	sPPRTV
n-Heptane	142-82-5	--	--	--	--	--	3.0E-04	sPPRTV	4.0E+02	PPRTV
Nickel	7440-02-0	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel Acetate	373-02-4	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel Carbonate	3333-67-3	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel Carbonyl	13463-39-3	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel Hydroxide	12054-48-7	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel Oxide	1313-99-1	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	2.0E-02	OEHHA
Nickel refinery dust	E715532	--	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickel subsulfide	12035-72-2	--	1.7E+00	OEHHA	4.8E-04	IRIS	1.1E-02	OEHHA	1.4E-02	OEHHA
Nickelocene	1271-28-9	--	9.1E-01	OEHHA	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA
Nitrate	14797-55-8	--	--	--	--	--	1.6E+00	IRIS	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Oral Slope Factor		Inhalation Unit Risk			Reference Dose - Oral		Reference Concentration	
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Nitrate-Nitrite	E701177	--	--	--	--	--	--	--	--	--
Nitrite	14797-65-0	--	--	--	--	--	1.0E-01	IRIS	--	--
Nitrobenzene	98-95-3	--	--	--	4.0E-05	IRIS	2.0E-03	IRIS	9.0E+00	IRIS
Nitrocellulose	9004-70-0	--	--	--	--	--	3.0E+03	PPRTV	--	--
Nitrofurantoin	67-20-9	--	--	--	--	--	7.0E-02	HEAST	--	--
Nitrofurazone	59-87-0	--	1.3E+00	OEHHA	3.7E-04	OEHHA	--	--	--	--
Nitroglycerin	55-63-0	--	1.7E-02	PPRTV	--	--	1.0E-04	PPRTV	--	--
Nitroguanidine	556-88-7	--	--	--	--	--	1.0E-01	IRIS	--	--
Nitromethane	75-52-5	--	--	--	8.8E-06	PPRTV	--	--	5.0E+00	PPRTV
N-Methyl-N'-nitro-N-nitrosoguanidine	70-25-7	--	8.3E+00	OEHHA	2.4E-03	OEHHA	--	--	--	--
N-Nitrosodiethanolamine	1116-54-7	--	2.8E+00	IRIS	8.0E-04	OEHHA	--	--	--	--
N-Nitrosodiethylamine	55-18-5	M	1.5E+02	IRIS	4.3E-02	IRIS	--	--	--	--
N-Nitrosodimethylamine	62-75-9	M	5.1E+01	IRIS	1.4E-02	IRIS	8.0E-06	PPRTV	4.0E-02	sPPRTV
N-Nitroso-di-n-butylamine	924-16-3	--	1.1E+01	OEHHA	3.1E-03	OEHHA	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	--	4.9E-03	IRIS	2.6E-06	OEHHA	--	--	--	--
N-Nitrosodipropylamine	621-64-7	--	7.0E+00	IRIS	2.0E-03	OEHHA	--	--	--	--
N-Nitrosomorpholine	59-89-2	--	6.7E+00	OEHHA	1.9E-03	OEHHA	--	--	--	--
N-Nitroso-N-ethylurea	759-73-9	M	2.7E+01	OEHHA	7.7E-03	OEHHA	--	--	--	--
N-Nitroso-N-methylethylamine	10595-95-6	--	2.2E+01	IRIS	6.3E-03	OEHHA	--	--	--	--
N-Nitroso-N-methylurea	684-93-5	M	1.2E+02	OEHHA	3.4E-02	OEHHA	--	--	--	--
N-Nitrosopiperidine	100-75-4	--	9.4E+00	OEHHA	2.7E-03	OEHHA	--	--	--	--
N-Nitrosopyrrolidine	930-55-2	--	2.1E+00	IRIS	6.1E-04	IRIS	--	--	--	--
n-Nonane	111-84-2	--	--	--	--	--	3.0E-04	sPPRTV	2.0E+01	PPRTV
Norflurazon	27314-13-2	--	--	--	--	--	1.5E-02	OPP	--	--
n-Pentane	109-66-0	--	--	--	--	--	--	--	1.0E+03	PPRTV
n-Propylbenzene	103-65-1	--	--	--	--	--	1.0E-01	sPPRTV	1.0E+03	sPPRTV
o-Aminophenol	95-55-6	--	--	--	--	--	4.0E-03	sPPRTV	--	--
Octabromodiphenyl Ethers	32536-52-0	--	--	--	--	--	3.0E-03	IRIS	--	--
Octamethylpyrophosphoramidate	152-16-9	--	--	--	--	--	2.0E-03	HEAST	--	--
Oryzalin	19044-88-3	--	7.8E-03	OPP	--	--	1.4E-01	OPP	--	--
o-Toluidine	95-53-4	--	1.8E-01	OEHHA	5.1E-05	OEHHA	--	--	--	--
Oxadiazon	19666-30-9	--	--	--	--	--	5.0E-03	IRIS	--	--
Oxamyl	23135-22-0	--	--	--	--	--	2.5E-02	IRIS	--	--
Oxyfluorfen	42874-03-3	--	7.3E-02	OPP	--	--	3.0E-02	OPP	--	--
o-Xylene	95-47-6	--	--	--	--	--	2.0E-01	IRIS (xylenes)	1.0E+02	IRIS (xylenes)
p,a,a,a-Tetrachlorotoluene	5216-25-1	--	2.0E+01	HEAST	5.0E-03	Route (HEAST)	--	--	--	--
Paclbutrazol	76738-62-0	--	--	--	--	--	1.3E-02	IRIS	--	--
p-Aminophenol	123-30-8	--	--	--	--	--	2.0E-02	PPRTV	--	--
Paraquat dichloride	1910-42-5	--	--	--	--	--	4.5E-03	IRIS	--	--
Parathion	56-38-2	--	--	--	--	--	6.0E-03	HEAST	--	--
PCB-077	32598-13-3	--	1.3E+01	OEHHA TEF	3.8E-03	OEHHA TEF	7.0E-06	RSL	4.0E-01	OEHHA TEF
PCB-081	70362-50-4	--	3.9E+01	OEHHA TEF	1.1E-02	OEHHA TEF	2.3E-06	RSL	1.3E-01	OEHHA TEF
PCB-105	32598-14-4	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-114	74472-37-0	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-118	31508-00-6	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-123	65510-44-3	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-126	57465-28-8	--	1.3E+04	OEHHA TEF	3.8E+00	OEHHA TEF	7.0E-09	RSL	4.0E-04	OEHHA TEF
PCB-156	38380-08-4	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-157	69782-90-7	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-167	52663-72-6	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCB-169	32774-16-6	--	3.9E+03	OEHHA TEF	1.1E+00	OEHHA TEF	2.3E-08	RSL	1.3E-03	OEHHA TEF

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration	
			SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
PCB-189	39635-31-9	--	3.9E+00	OEHHA TEF	1.1E-03	OEHHA TEF	2.3E-05	RSL	1.3E+00	OEHHA TEF
PCBs (Total)	1336-36-3	--	2.0E+00	IRIS	5.7E-04	IRIS	--	--	--	--
PCBs (Total; low risk)	PCBs (low)	--	4.0E-01	IRIS	1.0E-04	IRIS	--	--	--	--
PCBs (Total; lowest risk)	PCBs (lowest)	--	7.0E-02	IRIS	2.0E-05	IRIS	--	--	--	--
p-Chlorobenzene sulfonic acid	98-66-8	--	--	--	--	--	1.0E-01	sPPRTV	--	--
p-Chlorobenzoic acid	74-11-3	--	--	--	--	--	3.0E-02	sPPRTV	--	--
p-Chloro-o-toluidine	95-69-2	--	2.7E-01	OEHHA	7.7E-05	OEHHA	3.0E-03	sPPRTV	--	--
Pebulate	1114-71-2	--	--	--	--	--	5.0E-02	HEAST	2.0E+02	Route (HEAST)
Pendimethalin	40487-42-1	--	--	--	--	--	3.0E-01	OPP	--	--
Pentabromo-6-chloro cyclohexane	87-84-3	--	2.0E-02	sPPRTV	--	--	2.0E-02	sPPRTV	--	--
Pentabromodiphenyl Ethers	32534-81-9	--	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route (IRIS)
Pentachlorobenzene	608-93-5	--	--	--	--	--	8.0E-04	IRIS	3.2E+00	Route (IRIS)
Pentachloroethane	76-01-7	--	9.0E-02	PPRTV	2.3E-05	Route (PPRTV)	--	--	--	--
Pentachloronitrobenzene	82-68-8	--	2.6E-01	HEAST	6.5E-05	Route (HEAST)	3.0E-03	IRIS	1.2E+01	Route (IRIS)
Pentachlorophenol	87-86-5	--	4.0E-01	IRIS	5.1E-06	OEHHA	5.0E-03	IRIS	--	--
Pentaerythritol tetranitrate (PETN)	78-11-5	--	4.0E-03	sPPRTV	--	--	2.0E-03	PPRTV	--	--
Perchlorate Ion	14797-73-0	--	--	--	--	--	7.0E-04	IRIS	--	--
Perfluorobutane sulfonic acid	375-73-5	--	--	--	--	--	2.0E-02	PPRTV	--	--
Perfluorobutanesulfonate	45187-15-3	--	--	--	--	--	2.0E-02	PPRTV	--	--
Permethrin	52645-53-1	--	--	--	--	--	5.0E-02	IRIS	--	--
Phenacetin	62-44-2	--	2.2E-03	OEHHA	6.3E-07	OEHHA	--	--	--	--
Phenmedipham	13684-63-4	--	--	--	--	--	2.4E-01	OPP	--	--
Phenol	108-95-2	--	--	--	--	--	3.0E-01	IRIS	2.0E+02	OEHHA
Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	--	--	--	--	--	4.0E-03	IRIS	--	--
Phenothiazine	92-84-2	--	--	--	--	--	5.0E-04	sPPRTV	--	--
Phenyl Isothiocyanate	103-72-0	--	--	--	--	--	2.0E-04	sPPRTV	8.0E-01	Route (sPPRTV)
Phenylmercaptan	108-98-5	--	--	--	--	--	1.0E-03	PPRTV	4.0E+00	Route (PPRTV)
Phenylmercuric acetate	62-38-4	--	--	--	--	--	8.0E-05	IRIS	--	--
Phorate	298-02-2	--	--	--	--	--	2.0E-04	HEAST	--	--
Phosgene	75-44-5	--	--	--	--	--	--	--	3.0E-01	IRIS
Phosmet	732-11-6	--	--	--	--	--	2.0E-02	IRIS	--	--
Phosphine	7803-51-2	--	--	--	--	--	3.0E-04	IRIS	3.0E-01	IRIS
Phosphoric acid	7664-38-2	--	--	--	--	--	4.9E+01	PPRTV	1.0E+01	IRIS
Phosphorus, White	7723-14-0	--	--	--	--	--	2.0E-05	IRIS	8.0E-02	Route (IRIS)
Phthalic anhydride	85-44-9	--	--	--	--	--	2.0E+00	IRIS	2.0E+01	OEHHA
Picloram	1918-02-1	--	--	--	--	--	7.0E-02	IRIS	--	--
Picramic Acid	96-91-3	--	--	--	--	--	1.0E-04	sPPRTV	--	--
Picric Acid	88-89-1	--	--	--	--	--	9.0E-04	sPPRTV	--	--
Pirimiphos-methyl	29232-93-7	--	--	--	--	--	7.0E-05	OPP	--	--
Polybrominated Biphenyls (BP-6)	59536-65-1	--	3.0E+01	OEHHA	8.6E-03	OEHHA	7.0E-06	HEAST	--	--
Polymeric methylenediphenyl diisocyanate	9016-87-9	--	--	--	--	--	--	--	8.0E-02	OEHHA
Polyphosphoric acid	8017-16-1	--	--	--	--	--	4.9E+01	PPRTV	--	--
Potassium Cyanide	151-50-8	--	--	--	--	--	2.0E-03	IRIS	--	--
Potassium Perchlorate	7778-74-7	--	--	--	--	--	7.0E-04	IRIS	--	--
Potassium Perfluorobutane Sulfonate	29420-49-3	--	--	--	--	--	2.0E-02	PPRTV	--	--
Potassium Silver Cyanide	506-61-6	--	--	--	--	--	5.0E-03	IRIS	--	--
Potassium tripolyphosphate	13845-36-8	--	--	--	--	--	4.9E+01	PPRTV	--	--
p-Phthalic acid	100-21-0	--	--	--	--	--	1.0E+00	HEAST	--	--
Prochloraz	67747-09-5	--	1.5E-01	IRIS	--	--	9.0E-03	IRIS	--	--
Profluralin	26399-36-0	--	--	--	--	--	6.0E-03	HEAST	2.4E+01	Route (HEAST)
Prometon	1610-18-0	--	--	--	--	--	1.5E-02	IRIS	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration	
			(mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Prometryn	7287-19-6	--	--	--	--	--	4.0E-02	OPP	--	--
Propachlor	1918-16-7	--	--	--	--	--	1.3E-02	IRIS	--	--
Propanil	709-98-8	--	--	--	--	--	5.0E-03	IRIS	--	--
Propargite	2312-35-8	--	1.9E-01	OPP	--	--	4.0E-02	OPP	--	--
Propargyl alcohol	107-19-7	--	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route (IRIS)
Propazine	139-40-2	--	--	--	--	--	2.0E-02	IRIS	--	--
Propham	122-42-9	--	--	--	--	--	2.0E-02	IRIS	--	--
Propiconazole	60207-90-1	--	--	--	--	--	1.0E-01	OPP	--	--
Propionaldehyde	123-38-6	--	--	--	--	--	--	--	8.0E+00	IRIS
Propylene	115-07-1	--	--	--	--	--	--	--	3.0E+03	OEHHA
Propylene glycol	57-55-6	--	--	--	--	--	2.0E+01	PPRTV	--	--
Propylene glycol dinitrate	6423-43-4	--	--	--	--	--	--	--	2.7E-01	ATSDR
Propylene oxide	75-56-9	--	2.4E-01	IRIS	3.7E-06	IRIS	--	--	3.0E+01	IRIS
Propyzamide	23950-58-5	--	--	--	--	--	7.5E-02	IRIS	--	--
p-Toluic Acid	99-94-5	--	--	--	--	--	5.0E-03	PPRTV	--	--
p-Toluidine	106-49-0	--	3.0E-02	PPRTV	--	--	4.0E-03	sPPRTV	--	--
p-Xylene	106-42-3	--	--	--	--	--	2.0E-01	IRIS (xylenes)	1.0E+02	IRIS (xylenes)
Pyrene	129-00-0	--	--	--	--	--	3.0E-02	IRIS	1.2E+02	Route (IRIS)
Pyridine	110-86-1	--	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route (IRIS)
Quinalphos	13593-03-8	--	--	--	--	--	5.0E-04	IRIS	--	--
Quinoline	91-22-5	--	3.0E+00	IRIS	--	--	--	--	--	--
Quizalofop-ethyl	76578-14-8	--	--	--	--	--	9.0E-03	IRIS	--	--
RDX	121-82-4	--	8.0E-02	IRIS	--	--	4.0E-03	IRIS	--	--
Refractory ceramic fibers	E715557	--	--	--	--	--	--	--	3.0E+04	fibers/m3; ATSDR
Resmethrin	10453-86-8	--	--	--	--	--	3.0E-02	IRIS	--	--
Ronnel	299-84-3	--	--	--	--	--	5.0E-02	HEAST	2.0E+02	Route (HEAST)
Rotenone	83-79-4	--	--	--	--	--	4.0E-03	IRIS	--	--
Safrole	94-59-7	M	2.2E-01	OEHHA	6.3E-05	OEHHA	--	--	--	--
sec-Butyl alcohol	78-92-2	--	--	--	--	--	2.0E+00	PPRTV	3.0E+04	PPRTV
sec-Butylbenzene	135-98-8	--	--	--	--	--	1.0E-01	sPPRTV	4.0E+02	Route (sPPRTV)
Selenious acid	7783-00-8	--	--	--	--	--	5.0E-03	IRIS	--	--
Selenium	7782-49-2	--	--	--	--	--	5.0E-03	IRIS	2.0E+01	OEHHA
Selenium sulfide	7446-34-6	--	--	--	--	--	5.0E-03	OEHHA	2.0E+01	OEHHA
Sethoxydim	74051-80-2	--	--	--	--	--	1.4E-01	OPP	--	--
S-Ethyl dipropylthiocarbamate	759-94-4	--	--	--	--	--	5.0E-02	OPP	2.0E+02	Route (OPP)
Silica	7631-86-9	--	--	--	--	--	--	--	3.0E+00	OEHHA (crystalline respirable)
Silver	7440-22-4	--	--	--	--	--	5.0E-03	IRIS	--	--
Silver cyanide	506-64-9	--	--	--	--	--	1.0E-01	IRIS	--	--
Silvex	93-72-1	--	--	--	--	--	8.0E-03	IRIS	--	--
Simazine	122-34-9	--	1.2E-01	HEAST	--	--	5.0E-03	IRIS	--	--
Sodium acid pyrophosphate	7758-16-9	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium aluminum phosphate (acidic)	7785-88-8	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium aluminum phosphate (anhydrous)	10279-59-1	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium azide	26628-22-8	--	--	--	--	--	4.0E-03	IRIS	--	--
Sodium Cyanide	143-33-9	--	--	--	--	--	1.0E-03	IRIS	--	--
Sodium diethyldithiocarbamate	148-18-5	--	2.7E-01	HEAST	--	--	3.0E-02	IRIS	--	--
Sodium fluoride	7681-49-4	--	--	--	--	--	5.0E-02	ATSDR	1.3E+01	"fluorides" OEHHA
Sodium fluoroacetate	62-74-8	--	--	--	--	--	2.0E-05	IRIS	--	--
Sodium hexametaphosphate	10124-56-8	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium metavanadate	13718-26-8	--	--	--	--	--	1.0E-03	HEAST	--	--

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values				Noncancer Health-Hazard Values				
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		
		Mutagen?	SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Sodium perchlorate	7601-89-0	--	--	--	--	--	7.0E-04	IRIS	--	--
Sodium polyphosphate	68915-31-1	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium trimetaphosphate	7785-84-4	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium tripolyphosphate	7758-29-4	--	--	--	--	--	4.9E+01	PPRTV	--	--
Sodium Tungstate	13472-45-2	--	--	--	--	--	8.0E-04	PPRTV	--	--
Sodium Tungstate Dihydrate	10213-10-2	--	--	--	--	--	8.0E-04	PPRTV	--	--
Stirofos	961-11-5	--	2.4E-02	HEAST	--	--	3.0E-02	IRIS	--	--
Strontium	7440-24-6	--	--	--	--	--	6.0E-01	IRIS	--	--
Strychnine	57-24-9	--	--	--	--	--	3.0E-04	IRIS	--	--
Styrene	100-42-5	--	--	--	--	--	2.0E-01	IRIS	9.0E+02	OEHHA
Styrene-Acrylonitrile Trimer	SAN Trimer	--	--	--	--	--	3.0E-03	PPRTV	--	--
Sulfolane	126-33-0	--	--	--	--	--	1.0E-03	PPRTV	2.0E+00	PPRTV
Sulfur Trioxide	7446-11-9	--	--	--	--	--	--	--	1.0E+00	OEHHA
Sulfuric Acid	7664-93-9	--	--	--	--	--	--	--	1.0E+00	OEHHA
Tebuthiuron	34014-18-1	--	--	--	--	--	7.0E-02	IRIS	--	--
Temephos	3383-96-8	--	--	--	--	--	2.0E-02	HEAST	--	--
Terbacil	5902-51-2	--	--	--	--	--	1.3E-02	IRIS	--	--
Terbufos	13071-79-9	--	--	--	--	--	2.5E-05	HEAST	1.0E-01	Route (HEAST)
Terbutryn	886-50-0	--	--	--	--	--	1.0E-03	IRIS	--	--
tert-Amyl Alcohol	75-85-4	--	--	--	--	--	--	--	3.0E+00	sPPRTV
tert-butyl Acetate	540-88-5	--	5.0E-03	OEHHA	1.3E-06	OEHHA	--	--	--	--
tert-Butylbenzene	98-06-6	--	--	--	--	--	1.0E-01	sPPRTV	4.0E+02	Route (sPPRTV)
Tetrachloroethene	127-18-4	--	5.4E-01	OEHHA PHG	6.1E-06	OEHHA	6.0E-03	IRIS	4.0E+01	IRIS
Tetraethyl Lead	78-00-2	--	--	--	--	--	1.0E-07	IRIS	4.0E-04	Route (IRIS)
Tetraethyldithiopyrophosphate	3689-24-5	--	--	--	--	--	5.0E-04	IRIS	--	--
Tetrahydrofuran	109-99-9	--	--	--	--	--	9.0E-01	IRIS	2.0E+03	IRIS
Tetrapotassium phosphate	7320-34-5	--	--	--	--	--	4.9E+01	PPRTV	--	--
Tetrasodium pyrophosphate	7722-88-5	--	--	--	--	--	4.9E+01	PPRTV	--	--
Tetryl	479-45-8	--	--	--	--	--	2.0E-03	PPRTV	--	--
Thallic Oxide	1314-32-5	--	--	--	--	--	2.0E-05	RSL	--	--
Thallium	7440-28-0	--	--	--	--	--	1.0E-05	sPPRTV	--	--
Thallium acetate	563-68-8	--	--	--	--	--	1.0E-05	sPPRTV	4.0E-02	Route (sPPRTV)
Thallium carbonate	6533-73-9	--	--	--	--	--	2.0E-05	sPPRTV	8.0E-02	Route (sPPRTV)
Thallium chloride	7791-12-0	--	--	--	--	--	1.0E-05	sPPRTV	--	--
Thallium nitrate	10102-45-1	--	--	--	--	--	1.0E-05	RSL	--	--
Thallium selenite	12039-52-0	--	--	--	--	--	1.0E-05	RSL	--	--
Thallium sulfate	7446-18-6	--	--	--	--	--	2.0E-05	sPPRTV	--	--
Thifensulfuron-methyl	79277-27-3	--	--	--	--	--	4.3E-02	OPP	--	--
Thiobencarb	28249-77-6	--	--	--	--	--	1.0E-02	IRIS	--	--
Thiocyanates	E1790664	--	--	--	--	--	2.0E-04	PPRTV	--	--
Thiocyanic acid	463-56-9	--	--	--	--	--	2.0E-04	PPRTV	8.0E-01	Route (PPRTV)
Thiocyanic acid (2-benzothiazolylthio)methyl ester	21564-17-0	--	--	--	--	--	3.0E-02	HEAST	--	--
Thiodiglycol	111-48-8	--	--	--	--	--	7.0E-02	sPPRTV	--	--
Thiofanox	39196-18-4	--	--	--	--	--	3.0E-04	HEAST	--	--
Thiophanate-methyl	23564-05-8	--	1.2E-02	OPP	--	--	2.7E-02	OPP	--	--
Thiram	137-26-8	--	--	--	--	--	1.5E-02	OPP	--	--
Tin	7440-31-5	--	--	--	--	--	6.0E-01	HEAST	--	--
Titanium tetrachloride	7550-45-0	--	--	--	--	--	--	--	1.0E-01	ATSDR
Toluene	108-88-3	--	--	--	--	--	8.0E-02	IRIS	3.0E+02	OEHHA
Toluene-2,4/2,6-diisocyanates	26471-62-5	--	3.9E-02	OEHHA	1.1E-05	OEHHA	--	--	8.0E-03	OEHHA
Toluene-2,4-diisocyanate	584-84-9	--	3.9E-02	OEHHA	1.1E-05	OEHHA	--	--	8.0E-03	OEHHA

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values					Noncancer Health-Hazard Values			
		Mutagen?	Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration	
			SFo (mg/kg-d) ⁻¹	Reference	IUR (µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference
Toluene-2,5-diamine	95-70-5	--	1.8E-01	sPPRTV	--	--	2.0E-04	sPPRTV	--	--
Toluene-2,6-diisocyanate	91-08-7	--	3.9E-02	OEHHA	1.1E-05	OEHHA	--	--	8.0E-03	OEHHA
Toxaphene	8001-35-2	--	1.2E+00	OEHHA	3.2E-04	IRIS	--	--	--	--
Tralomethrin	66841-25-6	--	--	--	--	--	7.5E-03	IRIS	--	--
trans-1,2-Dichloroethene	156-60-5	--	--	--	--	--	2.0E-02	IRIS	8.0E+01	Route (IRIS)
trans-1,4-dichloro-2-Butene	110-57-6	--	--	--	4.2E-03	PPRTV	--	--	--	--
trans-Crotonaldehyde	123-73-9	--	1.9E+00	HEAST	4.8E-04	Route (HEAST)	1.0E-03	PPRTV	4.0E+00	Route (PPRTV)
Triacetin	102-76-1	--	--	--	--	--	8.0E+01	sPPRTV	--	--
Triadimefon	43121-43-3	--	--	--	--	--	3.4E-02	OPP	--	--
Triallate	2303-17-5	--	7.2E-02	OPP	1.8E-05	Route(OPP)	2.5E-02	OPP	1.0E+02	Route (OPP)
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	--	--	--	--	--	4.9E+01	PPRTV	--	--
Triasulfuron	82097-50-5	--	--	--	--	--	1.0E-02	IRIS	--	--
Tribenuron-methyl	101200-48-0	--	--	--	--	--	8.0E-03	IRIS	--	--
Tributyl phosphate	126-73-8	--	9.0E-03	PPRTV	--	--	1.0E-02	PPRTV	--	--
Tributyltin	688-73-3	--	--	--	--	--	3.0E-04	PPRTV	1.2E+00	Route (PPRTV)
Tributyltin Compounds	E1790678	--	--	--	--	--	3.0E-04	PPRTV	--	--
Tributyltin oxide	56-35-9	--	--	--	--	--	3.0E-04	IRIS	--	--
Tricalcium phosphate	7758-87-4	--	--	--	--	--	4.9E+01	PPRTV	--	--
Trichloroacetic acid	76-03-9	--	7.0E-02	IRIS	--	--	2.0E-02	IRIS	--	--
Trichloroethene	79-01-6	M	4.6E-02	IRIS	4.1E-06	IRIS	5.0E-04	IRIS	2.0E+00	IRIS
Trichlorofluoromethane	75-69-4	--	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route (IRIS)
Tricresyl Phosphates	1330-78-5	--	--	--	--	--	2.0E-02	ATSDR	--	--
Tridiphane	58138-08-2	--	--	--	--	--	3.0E-03	IRIS	--	--
Triethylamine	121-44-8	--	--	--	--	--	--	--	7.0E+00	IRIS
Triethyleneglycol	112-27-6	--	--	--	--	--	2.0E+00	PPRTV	--	--
Trifluralin	1582-09-8	--	7.7E-03	IRIS	1.9E-06	Route (IRIS)	7.5E-03	IRIS	3.0E+01	Route (IRIS)
Trimagnesium phosphate	7757-87-1	--	--	--	--	--	4.9E+01	PPRTV	--	--
Trimethyl phosphate	512-56-1	--	2.0E-02	PPRTV	--	--	1.0E-02	PPRTV	--	--
Triphenylphosphine oxide	791-28-6	--	--	--	--	--	2.0E-02	PPRTV	--	--
Tripotassium phosphate	7778-53-2	--	--	--	--	--	4.9E+01	PPRTV	--	--
Tris(1,3-dichloro-2-propyl)phosphate	13674-87-8	--	--	--	--	--	2.0E-02	ATSDR	--	--
Tris(1-chloro-2-propyl)phosphate	13674-84-5	--	--	--	--	--	1.0E-02	sPPRTV	--	--
Tris(2,3-dibromopropyl)phosphate	126-72-7	--	2.3E+00	OEHHA	6.6E-04	OEHHA	--	--	--	--
Tris(2-chloroethyl)phosphate	115-96-8	--	2.0E-02	PPRTV	--	--	7.0E-03	PPRTV	--	--
Tris(2-ethylhexyl)phosphate	78-42-2	--	3.2E-03	PPRTV	--	--	1.0E-01	PPRTV	--	--
Trisodium phosphate	7601-54-9	--	--	--	--	--	4.9E+01	PPRTV	--	--
Tungsten	7440-33-7	--	--	--	--	--	8.0E-04	PPRTV	--	--
Uranium, soluble salts	E715565	--	--	--	--	--	2.0E-04	ATSDR	4.0E-02	ATSDR
Urethane	51-79-6	M	1.0E+00	OEHHA	2.9E-04	OEHHA	--	--	--	--
Vanadium	7440-62-2	--	--	--	--	--	5.0E-03	RSL	1.0E-01	ATSDR
Vanadium pentoxide	1314-62-1	--	--	--	8.3E-03	PPRTV	9.0E-03	IRIS	7.0E-03	PPRTV
Vernolate	1929-77-7	--	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route (IRIS)
Vinclozolin	50471-44-8	--	--	--	--	--	1.2E-03	OPP	--	--
Vinyl acetate	108-05-4	--	--	--	--	--	1.0E+00	HEAST	2.0E+02	IRIS
Vinyl bromide	593-60-2	--	--	--	3.2E-05	HEAST	--	--	3.0E+00	IRIS
Vinyl chloride	75-01-4	M	7.2E-01	IRIS	7.8E-05	OEHHA	3.0E-03	IRIS	1.0E+02	IRIS
Warfarin	81-81-2	--	--	--	--	--	3.0E-04	IRIS	--	--
Xylenes	1330-20-7	--	--	--	--	--	2.0E-01	IRIS	1.0E+02	IRIS

Table 1. Toxicity Criteria Required By Rule and DTSC-Recommended Toxicity Criteria^a

Analyte	CAS #	Cancer-Risk Values				Noncancer Health-Hazard Values			
		Mutagen?	Oral	IUR	Reference	Reference Dose -		Reference	
			Slope Factor			Oral	Concentration		
(mg/kg-d) ⁻¹	Reference	(µg/m ³) ⁻¹	Reference	RfDo (mg/kg-d)	Reference	RfC (µg/m ³)	Reference		
Zinc	7440-66-6	--	--	--	--	3.0E-01	IRIS	--	--
Zinc cyanide	557-21-1	--	--	--	--	5.0E-02	IRIS	--	--
Zinc phosphide	1314-84-7	--	--	--	--	3.0E-04	IRIS	--	--
Zineb	12122-67-7	--	--	--	--	5.0E-02	IRIS	--	--
Zirconium	7440-67-7	--	--	--	--	8.0E-05	PPRTV	--	--

^a Summarized from the Rule and from HHRA Note 3; toxicity criteria and values are listed for USEPA RSL analytes;

"--" = indicates that toxicity values are not available from standard reference sources.

^b Named in the USEPA RSL tables as 2-Chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester sulfite

^c Named in the USEPA RSL tables as Hexachlorodibenzo-p-dioxin Mixture (2:1 1,2,3,7,8,9- and 1,2,3,6,7,8-)

^d Screening levels for lead are derived differently than other risk-based screening levels; see the text of HHRA Note 3 for details.

Shaded bold values indicate toxicity criteria required by Rule (a) criteria.

Plain text values are DTSC-recommended values for use in deriving screening concentrations for environmental media, or in screening-level human health risk assessments.

(mg/kg-d)⁻¹ = per (milligram per kilogram--day)

(µg/m³)⁻¹ = per (microgram per cubic meter)

µg/L = micrograms per liter

µg/m³ = micrograms per cubic meter

ATSDR = Agency for Toxic Substances and Disease Registry

CAS # = Chemical Abstracts Service Registry Number

DTSC = California Department of Toxic Substances Control

ECAO = Environmental Criteria and Assessment Office (RSLs)

ECP = Expedited Cancer Potency Factors

HEAST = Health Effects Assessment Summary Tables

HHRA Note 3 = DTSC Human Health Risk Assessment Note 3

HxCDD = hexachlorodibenzo-p-dioxin

IRIS = USEPA's *Integrated Risk Information System*

IUR = inhalation unit-risk factor

M = mutagen

mg/kg = milligrams per kilogram

mg/kg-d = milligrams per kilogram--day

OEHHA = Office of Environmental Health Hazard Assessment

OPP = USEPA Office of Pesticide Programs

PHG = Public Health Goal toxicity factor

PPRTV = provisional peer-reviewed toxicity value

REL = reference exposure level

RfC = reference concentration

RfDo = oral reference dose

Route('xyz') = route extrapolation from an oral toxicity value (from the 'xyz' source) to an inhalation toxicity value:

$$IUR (\mu\text{g}/\text{m}^3)^{-1} = SFo (\text{mg}/\text{kg}\text{-day})^{-1} \times (1/80 \text{ kg}) \times 20 \text{ m}^3/\text{day} \times 0.001 \text{ mg}/\mu\text{g}$$

$$RfC (\mu\text{g}/\text{m}^3) = RfDo (\text{mg}/\text{kg}\text{-day}) \times 80 \text{ kg} \times (1 \text{ day}/20 \text{ m}^3) \times 1000 \mu\text{g}/\text{mg}$$

RSL = USEPA Regional Screening Level

SFo = oral slope factor

SL = screening level

sPPRTV = screening PPRTV

TEF = toxicity equivalence factor (from WHO [World Health Organization], 1995)

TSD = technical support document

USEPA = U.S. Environmental Protection Agency

Table 2. DTSC-Recommended Toxicity Criteria for Analytes with more than one non-IRIS Toxicity Value

Ingestion Toxicity Values for Noncancer Health Hazards								
CAS#	Analyte	OEHHA Chronic REL (mg/kg-day)	OEHHA Chronic REL Reference	Other RfD (mg/kg-day)	Other RfD Reference	Selected RfD (mg/kg-day)	Reference	Selection Rationale
32598-13-3	PCB-077	1.0E-04	OEHHA (TEF_WHO-05)	7.0E-06	RSL tables	7.0E-06	RSL tables	based on IRIS TCDD RfD
70362-50-4	PCB-081	3.3E-05	OEHHA (TEF_WHO-05)	2.3E-06	RSL tables	2.3E-06	RSL tables	based on IRIS TCDD RfD
32598-14-4	PCB-105	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
74472-37-0	PCB-114	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
31508-00-6	PCB-118	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
65510-44-3	PCB-123	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
57465-28-8	PCB-126	1.0E-07	OEHHA (TEF_WHO-05)	7.0E-09	RSL tables	7.0E-09	RSL tables	based on IRIS TCDD RfD
38380-08-4	PCB-156	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
69782-90-7	PCB-157	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
52663-72-6	PCB-167	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
32774-16-6	PCB-169	3.3E-07	OEHHA (TEF_WHO-05)	2.3E-08	RSL tables	2.3E-08	RSL tables	based on IRIS TCDD RfD
39635-31-9	PCB-189	3.3E-04	OEHHA (TEF_WHO-05)	2.3E-05	RSL tables	2.3E-05	RSL tables	based on IRIS TCDD RfD
7681-49-4	Sodium Fluoride	4.0E-02	OEHHA "fluorides" REL	5.0E-02	ATSDR	5.0E-02	ATSDR	Used in USEPA RSLs
Ingestion Toxicity Values for Carcinogenic Risk								
CAS#	Analyte	OEHHA SFo (mg/kg-day) ⁻¹	OEHHA SFo Reference	Other SFo (mg/kg-day) ⁻¹	Other SFo Reference	Selected SFo (mg/kg-day) ⁻¹	Reference	Selection Rationale
15972-60-8	Alachlor	5.6E-02	OEHHA TC-DB	8.0E-02	HEAST	5.6E-02	OEHHA TC-DB	Used in USEPA RSLs
1912-24-9	Atrazine	2.3E-01	OEHHA TC-DB	2.2E-01	HEAST	2.3E-01	OEHHA TC-DB	Screening Protectiveness
56-55-3	Benzo[a]anthracene	1.2E+00	OEHHA TSD	1.0E-01	ECAO	1.0E-01	ECAO	based on IRIS B[a]P SFo
205-99-2	Benzo[b]fluoranthene	1.2E+00	OEHHA TSD	1.0E-01	ECAO	1.0E-01	ECAO	based on IRIS B[a]P SFo
207-08-9	Benzo[k]fluoranthene	1.2E+00	OEHHA TSD	1.0E-02	ECAO	1.0E-02	ECAO	based on IRIS B[a]P SFo
2425-06-1	Captafol	1.5E-01	OEHHA TC-DB	8.6E-03	HEAST	1.5E-01	OEHHA TC-DB	Screening Protectiveness
133-06-2	Captan	2.3E-03	OEHHA TC-DB	3.5E-03	HEAST	2.3E-03	OEHHA TC-DB	Used in USEPA RSLs
510-15-6	Chlorobenzilate	1.1E-01	OEHHA TC-DB	2.7E-01	HEAST	1.1E-01	OEHHA TC-DB	Used in USEPA RSLs
1897-45-6	Chlorothalonil	1.7E-02	OEHHA TC-DB	1.1E-02	HEAST	1.7E-02	OEHHA TC-DB	Used in USEPA RSLs
218-01-9	Chrysene	1.2E-01	OEHHA TSD	1.0E-03	ECAO	1.0E-03	ECAO	based on IRIS B[a]P SFo
96-12-8	1,2-Dibromo-3-chloropropane	7.0E+00	OEHHA TC-DB	8.0E-01	PPRTV	7.0E+00	OEHHA TC-DB	Screening Protectiveness
78-87-5	1,2-Dichloropropane	3.6E-02	OEHHA TC-DB	3.7E-02	PPRTV	3.6E-02	OEHHA TC-DB	Screening Protectiveness
106-46-7	1,4-Dichlorobenzene	5.4E-03	OEHHA TC-DB	2.4E-02	HEAST	5.4E-03	OEHHA TC-DB	Used in USEPA RSLs
56-53-1	Diethylstilbestrol	3.5E+02	OEHHA TC-DB	4.7E+03	HEAST	3.5E+02	OEHHA TC-DB	Used in USEPA RSLs
2602-46-2	Direct blue 6	7.4E+00	OEHHA TC-DB	8.1E+00	HEAST	7.4E+00	OEHHA TC-DB	Used in USEPA RSLs
16071-86-6	Direct brown 95	6.7E+00	OEHHA TC-DB	9.3E+00	HEAST	6.7E+00	OEHHA TC-DB	Used in USEPA RSLs
96-45-7	Ethylene thiourea	4.5E-02	OEHHA TC-DB	1.1E-01	HEAST	1.1E-01	HEAST	Screening Protectiveness
531-82-8	Furium	1.5E+00	OEHHA TC-DB	5.0E+01	HEAST	1.5E+00	OEHHA TC-DB	Used in USEPA RSLs
58-89-9	gamma-HCH	1.1E+00	OEHHA TC-DB	1.3E+00	HEAST	1.1E+00	OEHHA TC-DB	Used in USEPA RSLs
193-39-5	Indeno[1,2,3-cd]pyrene	1.2E+00	OEHHA TSD	1.0E-01	ECAO	1.0E-01	ECAO	based on IRIS B[a]P SFo
99-59-2	2-Methoxy-5-nitroaniline	4.9E-02	OEHHA TC-DB	4.6E-02	HEAST	4.9E-02	OEHHA TC-DB	Screening Protectiveness
636-21-5	2-Methylaniline hydrochloride	1.3E-01	OEHHA TC-DB	1.8E-01	HEAST	1.3E-01	OEHHA TC-DB	Used in USEPA RSLs
59-87-0	Nitrofurazone	1.3E+00	OEHHA TC-DB	1.5E+00	HEAST	1.3E+00	OEHHA TC-DB	Used in USEPA RSLs
95-53-4	ortho-Toluidine	1.8E-01	OEHHA TC-DB	1.6E-02	PPRTV	1.8E-01	OEHHA TC-DB	Screening Protectiveness
95-69-2	p-Chloro-o-Toluidine	2.7E-01	OEHHA TC-DB	1.0E-01	PPRTV	2.7E-01	OEHHA TC-DB	Screening Protectiveness
59536-65-1	Polybrominated biphenyls	3.0E+01	OEHHA TC-DB	8.9E+00	HEAST	3.0E+01	OEHHA TC-DB	Screening Protectiveness
120-82-1	1,2,4-Trichlorobenzene	3.6E-03	OEHHA TC-DB	2.9E-02	PPRTV	2.9E-02	PPRTV	Screening Protectiveness

Table 2. DTSC-Recommended Toxicity Criteria for Analytes with more than one non-IRIS Toxicity Value

Inhalation Toxicity Values for Noncancer Health Hazards								
CAS#	Analyte	OEHHA Chronic REL ($\mu\text{g}/\text{m}^3$)	OEHHA Chronic REL Reference	Other RfC ($\mu\text{g}/\text{m}^3$)	Other RfC Reference	Selected RfC ($\mu\text{g}/\text{m}^3$)	Reference	Selection Rationale
7637-07-2	Boron Trifluoride	1.3E+01	OEHHA "fluorides" REL	7.0E-01	HEAST	1.3E+01	OEHHA "fluorides" REL	Used in USEPA RSLs
7440-43-9	Cadmium	2.0E-02	OEHHA REL	1.0E-02	ATSDR	1.0E-02	ATSDR	Screening Protectiveness
7782-50-5	Chlorine	2.0E-01	OEHHA REL	1.45E-01	ATSDR	1.45E-01	ATSDR	Screening Protectiveness
108-90-7	Chlorobenzene	1.0E+03	OEHHA REL	5.0E+01	PPRTV	5.0E+01	PPRTV	Screening Protectiveness
67-66-3	Chloroform	3.0E+02	OEHHA REL	9.8E+01	ATSDR	9.8E+01	ATSDR	Screening Protectiveness
107-06-2	1,2-Dichloroethane	4.0E+02	OEHHA REL	7.0E+00	PPRTV	7.0E+00	PPRTV	Screening Protectiveness
111-42-2	Diethanolamine	3.0E+00	OEHHA REL	2.0E-01	PPRTV	2.0E-01	PPRTV	Screening Protectiveness
111-15-9	2-Ethoxyethanol acetate	3.0E+02	OEHHA REL	6.0E+01	PPRTV	6.0E+01	PPRTV	Screening Protectiveness
302-01-2	Hydrazine	2.0E-01	OEHHA REL	3.0E-02	PPRTV	3.0E-02	PPRTV	Screening Protectiveness
110-49-6	2-Methoxyethanol acetate	9.0E+01	OEHHA REL	1.0E+00	PPRTV	1.0E+00	PPRTV	Screening Protectiveness
85-44-9	Phthalic anhydride	2.0E+01	OEHHA REL	1.2E+02	HEAST	2.0E+01	OEHHA REL	Screening Protectiveness
67-63-0	2-Propanol	7.0E+03	OEHHA REL	2.0E+02	PPRTV	2.0E+02	PPRTV	Screening Protectiveness

Inhalation Toxicity Values for Carcinogenic Risk								
CAS#	Analyte	OEHHA IUR [$(\mu\text{g}/\text{m}^3)^{-1}$]	OEHHA IUR Reference	Other IUR [$(\mu\text{g}/\text{m}^3)^{-1}$]	Other IUR Reference	Selected IUR [$(\mu\text{g}/\text{m}^3)^{-1}$]	Reference	Selection Rationale
510-15-6	Chlorobenzilate	3.1E-05	OEHHA TC-DB	7.8E-05	HEAST	3.1E-05	OEHHA TC-DB	Used in USEPA RSLs
96-12-8	1,2-Dibromo-3-chloropropane	1.9E-03	OEHHA TC-DB	6.0E-03	PPRTV	6.0E-03	PPRTV	Screening Protectiveness
78-87-5	1,2-Dichloropropane	1.0E-05	OEHHA TC-DB	3.7E-06	PPRTV	3.7E-06	PPRTV	Recent literature
101-14-4	4,4'-Methylene-bis(2-chloroaniline)	4.3E-04	OEHHA TC-DB	3.7E-05	HEAST	4.3E-04	OEHHA TC-DB	Screening Protectiveness
1746-01-6	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin	3.8E+01	OEHHA (WHO-05 TEF)	3.3E+01	HEAST	3.8E+01	OEHHA (WHO-05 TEF)	Screening Protectiveness
95-53-4	<i>ortho</i> -Toluidine	5.1E-05	OEHHA TC-DB	4.0E-06	Route (PPRTV)	5.1E-05	OEHHA TC-DB	Screening Protectiveness

(mg/kg-d)⁻¹ = per (milligram per kilogram--day)

($\mu\text{g}/\text{m}^3$)⁻¹ = per (microgram per cubic meter)

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

ATSDR = Agency for Toxic Substances and Disease Registry

B[a]P = benzo[a]pyrene

CAS# = Chemical Abstracts Service Registry Number

DTSC = California Department of Toxic Substances Control

ECAO = Environmental Criteria and Assessment Office (USEPA RSL tables)

HEAST = Health Effects Assessment Summary Tables

IRIS = USEPA's *Integrated Risk Information System*

IUR = inhalation unit-risk factor

mg/kg = milligrams per kilogram

mg/kg-d = milligrams per kilogram--day

OEHHA = California Office of Environmental Health Hazard Assessment

PCB = polychlorinated biphenyl

PPRTV = provisional peer-reviewed toxicity value

REL = reference exposure level

RfC = reference concentration

RfD = oral reference dose

Route('source') = route extrapolation from a source's oral toxicity value;

$$\text{IUR } (\mu\text{g}/\text{m}^3)^{-1} = \text{SfO } (\text{mg}/\text{kg}\text{-day})^{-1} \times (1/80 \text{ kg}) \times 20 \text{ m}^3/\text{day} \times 0.001 \text{ mg}/\mu\text{g}$$

RSL = USEPA Regional Screening Level

SfO = oral slope factor

TC-DB = toxicity criteria database

TCDD = 2,3,7,8-tetrachlorodibenzo-*p*-dioxin

TEF = toxicity equivalency factor

TSD = technical support document

USEPA = U.S. Environmental Protection Agency

WHO-05 = 2005 World Health Organization's TEF values