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**REGULATION 2
PERMITS
RULE 5
NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS**

2-5-100 GENERAL

2-5-101 Description: The purpose of this rule is to provide for the review of new and modified sources of toxic air contaminant (TAC) emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. The rule ~~shall apply~~ applies to all new and modified sources of toxic air contaminants that are ~~subject to the requirements of~~ required to have an authority to construct or permit to operate pursuant to Regulation 2, Rule 1, Sections 301 or 302. New and modified sources with Hazardous Air Pollutant emissions may also be subject to the Maximum Achievable Control Technology (MACT) requirement of Regulation 2, Rule 2, Section 317.

2-5-110 Exemption, Low Emission Levels: A source shall not be subject to the provisions of this rule if for each toxic air contaminant, the total increase in emissions of each toxic air contaminant from all the new and modified sources in the project are is below the trigger levels listed in Table 2-5-1.

2-5-111 Limited Exemption, Emergency Standby Engines: This rule shall not apply to toxic air contaminant emissions occurring from emergency use of emergency standby engines, as defined in Regulation 9, Rule 8, Section 231 or from emission testing of emergency standby engines required by the APCO.

~~**2-5-112 Limited Exemption, Specific Findings:** The requirements of Section 2-5-302 shall not apply to any new or modified source of toxic air contaminants, provided that all of the following requirements have been met:~~

~~112.1 The specific findings petition requirement of Section 2-5-404.~~

~~112.2 The risk reduction measures requirement of Section 2-5-303.~~

~~112.3 The facility risk requirement of Section 2-5-304.~~

~~112.4 The specific findings report requirement of Section 2-5-406.~~

~~112.5 The publication and public comment requirement of Section 2-5-408.~~

~~112.6 The APCO, based on consideration of the specific findings report and any public comments received, is satisfied that the emissions from the proposed project would meet the requirement of Section 41700 of the California Health and Safety Code.~~

2-5-200 DEFINITIONS

2-5-201 Acute Hazard Index, or Acute HI: ~~An expression of non-cancer adverse health effects associated with short-term exposure to one or more toxic air contaminants. For a given toxic air contaminant, the hazard index is the ratio of the estimated short-term average exposure of the toxic air contaminant to its acute reference exposure level. Where multiple toxic air contaminants are being considered, the total Acute hazard index is the sum of the individual acute hazard indices for all quotients for toxic air contaminants identified as affecting the same target organ or organ system.~~

2-5-202 Acute Hazard Quotient, or Acute HQ: Acute hazard quotient is the ratio of the estimated short-term average concentration of the toxic air contaminant to its acute reference exposure level (estimated for inhalation exposure).

2-5-2032 Airborne Toxic Control Measure, or ATCM: A Recommended methods and, where appropriate, a range of methods, established by the California Air Resources Board (CARB) pursuant to the Tanner Act, California Health and Safety Code beginning at Section 39650,

that reduces, avoids, or eliminates the emissions of a toxic air contaminant established by the California Air Resources Board (CARB) pursuant to the Tanner Act, California Health and Safety Code beginning at Section 39650.

- ~~2-5-2043~~ **Air Toxics Hot Spots Program:** The Air Toxics “Hot Spots” Information and Assessment Act of 1987, California Health and Safety Code beginning at Section 44300.
- ~~2-5-2054~~ **Best Available Control Technology for Toxics, or TBACT:** For any new or modified source of toxic air contaminants, except cargo carriers, the ~~more~~ most stringent of the following emission controls, provided that under no circumstances shall the controls be less stringent than the emission control required by any applicable provision of federal, State or District laws, rules, regulations or requirements:
- ~~2054.1~~ The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or
- ~~2054.2~~ The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or
- ~~2054.3~~ Any control device or technique or any emission limitation that the APCO has determined to be technologically feasible for the type of equipment comprising such a source, while taking into consideration the cost of achieving emission reductions, any non-air quality health and environmental impacts, and energy requirements; or
- ~~2054.4~~ The most stringent emission control for a source type or category specified as MACT by U.S. EPA, or specified in an ATCM by CARB. ~~Under no circumstances shall the emission control required be less stringent than the emission control required by any applicable provision of federal, State or District laws, rules, regulations or requirements.~~
- ~~2-5-205~~ **Cancer Burden:** ~~An estimate of the increased number of cancer cases in a population due to lifetime exposure to emitted carcinogenic substances.~~
- ~~2-5-206~~ **Cancer Risk:** ~~An estimate of the probability (chance) that an individual will develop cancer at a given receptor location as a result of lifetime exposure to emitted carcinogens at a given receptor location. Cancer risk for residential receptor locations shall be based on 70-year exposure duration. Cancer risk for worker receptor locations shall be based on 40-year exposure duration.~~
- ~~2-5-207~~ **Carcinogen:** ~~A substance that produces or incites cancer. For the purpose of this rule, a carcinogen is any compound for which Cal/EPA’s Office of Environmental Health Hazard Assessment (OEHHA) has established a cancer potency factor for use in the Air Toxics Hot Spots Program.~~
- ~~2-5-208~~ **Chronic Hazard Index, or Chronic HI:** ~~An expression of non-cancer adverse health effects associated with long-term exposure to one or more toxic air contaminants. For a given toxic air contaminant, the chronic hazard index is the ratio of the estimated annual average exposure of the toxic air contaminant to its chronic reference exposure level. Where multiple toxic air contaminants are being considered, total Chronic hazard index is the sum of the individual chronic hazard quotients indices for all toxic air contaminants identified as affecting the same target organ or organ system.~~
- ~~2-5-209~~ **Chronic Hazard Quotient, or Chronic HQ:** ~~Chronic hazard quotient is the ratio of the estimated annual average exposure of the toxic air contaminant to its chronic reference exposure level (estimated for inhalation and non-inhalation exposures).~~
- ~~2-5-209~~ **Facility Risk:** ~~The health risk, resulting from the emissions of toxic air contaminants from all permitted sources at a given facility, determined based on emissions calculated pursuant to 2-5-601, as indicated by health risk screening analysis for the maximally exposed individual.~~
- ~~2-5-210~~ **Health Risk:** ~~The potential for adverse human health effects resulting from exposure to emissions of toxic air contaminants, that may range and ranging from relatively mild temporary conditions, such as eye or throat irritation, shortness of breath, or headaches, to permanent and serious conditions, such as birth defects, cancer or damage to lungs, nerves, liver, heart, or other organs. Measures of health risk include cancer risk, chronic hazard index, and acute hazard index.~~
- ~~2-5-211~~ **Health Risk Screening Analysis, or HRSA:** ~~An analysis that estimates the increased likelihood the measure of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic air contaminants, determined in accordance with~~

Section 2-5-603. ~~This analysis utilizes conservative simplifying assumptions that ensure protection of public health and safety and considers multi-pathway exposures to a TAC, whenever appropriate. Site-specific information may be used to refine the HRSA, if appropriate.~~

2-5-212 Maximally Exposed Individual, or MEI: A person that may be located at the receptor location where the highest exposure to toxic air contaminants emitted from a given source or project is predicted, as shown by an APCO-approved HRSA.

2-5-213 Maximum Achievable Control Technology, or MACT: An emission standard promulgated by U.S. EPA pursuant to Section 112(d) of the Clean Air Act.

2-5-214 Modified Source of Toxic Air Contaminants: ~~For the purpose of this rule, any~~ An existing source that is a modified source as defined in Regulation 2, Rule 1, Section 234 and ~~which that~~ after January 1, 1987, undergoes a physical change, change in the method of operation of, or increase in throughput or production, ~~which that~~ results or may result in any of the following:

214.1 An increase of ~~either in~~ the daily or annual emission level of any toxic air contaminant, or an increase in the production rate or capacity that is used to estimate ~~the~~ toxic air contaminant emission levels, ~~that exceeds above~~ emission or production levels approved by the District in any authority to construct.

214.2 An increase of ~~either in~~ the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate ~~the~~ toxic air contaminant emission levels, above levels contained in a permit condition in any current permit to operate or major facility review permit.

214.3 For sources ~~which that~~ have never been issued a District authority to construct, and ~~which that~~ do not have conditions limiting daily or annual toxic air contaminant emissions, an increase of ~~either in~~ the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate the emission level, above the ~~lowest lower~~ of the following authorized capacity as established pursuant to Section 2-5-214.3.1 or the functional capacity as established pursuant to Section 2-5-214.3.2:

3.1 The authorized capacity is the highest of the following:

3.1.1 The highest attainable design capacity, as shown in pre-construction design drawings, including process design drawings and vendor specifications.

3.1.2 The capacity listed in the District permit to operate.

3.1.3 The highest documented actual levels attained by the source prior to July 1, 2005. (insert date of rule adoption).

3.2 The functional capacity of the source, as limited by the capacity of any upstream or downstream process that acts as a bottleneck (a grandfathered source with an emission increase due to debottlenecking is considered to be modified).

For the purposes of applying Section 2-5-214.3, only increases in annual emission levels shall be considered for storage vessels.

214.4 The emission of any toxic air contaminant not previously emitted in a quantity that would result in a cancer risk greater than 1.0 in a million (10^{-6}) and/or a chronic hazard index greater than 0.20.

For the purposes of applying this definition, a daily capacity may be converted to an annual capacity or limit by multiplication by 365 days/year.

~~**2-5-215 Net Project Health Risk Demonstration:** An analysis that shows, to the satisfaction of the APCO, that the net difference in the health risks between the post-project and pre-project scenarios will not exceed any project risk limit specified in Section 2-5-302 at all receptor locations. For the pre-project scenario, the health risks shall be determined for any existing sources that will be shut-down or curtailed, or for any sources where emissions or health risks will be reduced due to implementation of risk reduction measures, based on the use of adjusted baseline emissions calculated in accordance with Section 2-5-602. For the post-project scenario, the health risks shall be determined for the same existing sources, but based on the use of new emission cap or emission rates accepted by the applicant as~~

~~enforceable limiting conditions. In addition, the health risks for the post-project scenario shall include emissions from all new and modified sources in the project, based on emissions calculated in accordance with Section 2-5-601. The pre-project health risks shall be determined using the same methodology as the post-project health risks, or health risk screening procedures that are no less refined than the procedures used to determine the post-project health risks.~~

2-5-2156 **New Source of Toxic Air Contaminants:** ~~For the purposes of this rule, any A source of toxic air contaminant emissions, except for a source that loses a permit exemption or exclusion in accordance with Regulations 2-1-424 or 2-1-425, that meets at least is one or more of the following criteria, except sources that lose a permit exemption or exclusion in accordance with Regulations 2-1-424 or 2-1-425:~~

~~2156.1 Any source constructed or proposed to be constructed after January 1, 1987 but which that never had a valid District authority to construct or permit to operate.~~

~~2156.2 Any source which that was not in operation for a period of one year or more and that did not hold a valid District permit to operate during this period of non-operation, occurring after January 1, 1987.~~

~~2156.3 Any relocation of an existing source, except for a portable source, to a non-contiguous property, except for a portable source, occurring after January 1, 1987.~~

~~2156.4 Any replacement of a source, including an identical replacement of a source, occurring after January 1, 1987, regardless ~~of~~ when the original source was constructed.~~

~~2156.5 Any replacement occurring after January 1, 1987 of an identifiable source within a group of sources permitted together under a single source number for the purpose of District permitting convenience, occurring after January 1, 1987.~~

~~2156.6 Any "rebricking" of a glass furnace occurring after January 1, 1987 where changes to the furnace design result in a change in heat generation or absorption, occurring after January 1, 1987.~~

2-5-2167 **Project:** Any source, or group of sources, at a facility that: (a) is part of a proposed construction or modification, (b) is subject to the requirements of Regulation 2-1-301 ~~and/or~~ 302, and (c) emits one or more toxic air contaminants. All new or modified sources of ~~toxic air contaminants~~ TACs included in a single permit application will be considered as a project. In addition, in order to discourage circumvention ~~which that~~ might be achieved by breaking a project into smaller pieces and submitting more than one permit application over a period of time, a project shall include any those new or modified sources of ~~toxic air contaminants~~ TACs at a facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the applicant can demonstrate to the satisfaction of the APCO that ~~the sources are not related by a functional or business purpose (i.e., the operation of one source does not depend on, or affect, the operation of another source).~~ construction or modification of the sources included in the current application was neither (1) a reasonably foreseeable consequence of the previous project, nor (2) a critical element or integral part of the previous project. For modified sources, any consecutive modifications of a source (e.g., increasing a source's permitted throughput), occurring after January 1, 1987, shall be considered together as a project.

2-5-2178 **Project Risk:** The health risk, resulting from the increase in emissions of toxic air contaminants from a given project, as indicated by an HRSA for the MEI.

2-5-2189 **Receptor Location:** Any location ~~at which a person, excluding workers at the facility being evaluated, could~~ where an individual may live (residential receptor) or work (worker receptor) or otherwise reasonably be expected to be exposed to toxic air contaminants for the particular chronic ~~and/or~~ acute exposures being evaluated in an HRSA. ~~Receptor locations used for evaluating cancer risk and chronic hazard index are sites where an individual may live (residential receptor) or work (worker receptor).~~ Locations include (a) locations outside of the property boundary of the facility being evaluated and (b) locations inside the property boundary where a person may reside (e.g., at military base housing, prisons, or universities). The APCO shall consider the potential for public exposure in determining appropriate receptor locations.

- 2-5-21920 Reference Exposure Level, or REL:** The air concentration or exposure level (for a specified exposure duration) at or below which no adverse non-cancer health effects are not anticipated to occur in the general human population.
- 2-5-2201 Residential Receptor:** Any receptor location where an individual may reside for a period of six months or more out of a year.
- ~~**2-5-222 Risk Reduction Measures:** The use of any article, machine, equipment, or other device, or the change of any operating procedure, production process, feedstock, product, fuel, solvent, or other material that will reduce or eliminate toxic air contaminant emissions, or will otherwise reduce human exposure to toxic air contaminant emissions. Risk reduction measures may include but are not limited to: (a) feedstock modifications, (b) product reformulations, (c) production system modifications, (d) material substitutions (e.g. using petroleum dry cleaning solvents to replace perchloroethylene), (e) system enclosure or emissions capture, (f) emissions control or conversion, and (g) operational standards and practices modifications (e.g. increased stack height or source relocation).~~
- ~~**2-5-223 Risk Reduction Plan:** A written summary of risk reduction measures that are reasonably available to reduce project or facility risk. A risk reduction plan must include the information specified in Section 2-5-405.~~
- 2-5-2214 Source Risk:** The health risk resulting from: (a) the emissions of all toxic air contaminants from a new source of toxic air contaminants, or (b) the increase in emissions of all toxic air contaminants from a modified source of toxic air contaminants, as indicated by an HRSA for the MEI.
- ~~**2-5-225 Specific Findings Report:** A written summary of information regarding a project with emissions of toxic air contaminants that is used by the APCO in determining whether to issue or deny a permit for projects that do not meet the project risk limits of Section 2-5-302. A specific findings report must include the information specified in Section 2-5-406.~~
- 2-5-2226 Toxic Air Contaminant, or TAC:** An air pollutant, which that may cause or contribute to an increase in mortality or in serious illness, or which that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in Table 2-5-1.
- ~~**2-5-2237 Trigger Level:** The emission threshold level for each TAC listed in Table 2-5-1 below which the resulting health risks are not expected to cause, or contribute significantly to, adverse health effects. The acute and chronic trigger levels listed in Table 2-5-1 are based on de minimis health risks using conservative assumptions regarding how emissions are released to the atmosphere, how they are transported and dispersed to off-site locations, and the duration of a person's exposure.~~
- 2-5-2248 Worker Receptor:** Any receptor location that is an occupational setting or place where an individual (excluding employees of the facility being evaluated) may work and that is located outside of the property boundary of the facility being evaluated.

2-5-300 STANDARDS

- 2-5-301 Best Available Control Technology for Toxics (TBACT) Requirement:** The applicant shall apply TBACT to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million (10^{-6}), and/or a chronic hazard index greater than 0.20.
- 2-5-302 Project Risk Requirement:** Except as provided in Section 2-5-412, the APCO shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the project risk exceeds any of the following project risk limits:
- 302.1 A cancer risk of 10.0 in one million (10^{-5}).
 - 302.2 A chronic hazard index of 1.0.
 - 302.3 An acute hazard index of 1.0.
- ~~**2-5-303 Risk Reduction Measures Requirement:** For any project where the project risk exceeds any project risk limit specified in Section 2-5-302, the applicant shall, in addition to meeting the TBACT requirement of Section 2-5-301, implement all risk reduction measures determined by the APCO to be reasonable. Risk reduction measures shall be implemented for the new and modified sources of TACs in the project and, unless a net project health risk demonstration is~~

~~made, shall also be implemented for all other existing permitted sources of TACs at the facility.~~

~~2-5-304 Facility Risk Requirement: For any project where the project risk exceeds any project risk limit specified in Section 2-5-302, the APCO shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the facility risk exceeds any of the following facility risk limits:~~

~~304.1 A cancer risk of 100 in one million (10-4).~~

~~304.2 A cancer burden of 1.0.~~

~~304.3 A chronic hazard index of 10.0.~~

~~304.4 An acute hazard index of 10.0.~~

2-5-400 ADMINISTRATIVE REQUIREMENTS

2-5-401 Health Risk Screening Analysis Requirement: An application for an Authority to Construct or Permit to Operate for any project subject to this rule shall contain an HRSA conducted in accordance with Section 2-5-603, or the information necessary for the APCO to conduct an HRSA. The APCO shall prepare an HRSA where the applicant submits none. The APCO shall notify the applicant where the results of an HRSA completed by the APCO indicate that the project, as proposed, would not meet the requirements of this rule. The applicant shall be given the opportunity to perform a more refined HRSA, modify the project, and/or submit any required plans or information, as necessary to comply with the requirements of this rule.

2-5-402 Health Risk Screening Analysis Guidelines: The APCO shall publish and periodically update Health Risk Screening Analysis Guidelines that specify the procedures to be followed for ~~determining~~ estimating health risks including acute hazard index, chronic hazard index, and cancer risk, ~~and cancer burden~~. ~~Whenever possible, t~~These guidelines will generally conform to the Health Risk Assessment Guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) for use in the Air Toxics Hot Spots Program. The Health Risk Screening Analysis Guidelines and Table 2-5-1 will be periodically updated, typically within one year of any significant revision to OEHHA's Health Risk Assessment Guidelines, including any new or revised health effects value.

2-5-403 BACT/TBACT Workbook: The APCO shall publish and periodically update a BACT/TBACT Workbook specifying the requirements for commonly permitted sources. TBACT will be determined for a source by using the workbook as a guidance document or, on a case-by-case basis, using the most stringent definition of Section 2-5-205.

~~2-5-404 Specific Findings Petition: Any applicant seeking a limited exemption pursuant to Section 2-5-112 shall comply with all of the following requirements:~~

~~404.1 The applicant shall submit a written petition to the APCO requesting that the project be subject to the Section 2-5-112 specific findings limited exemption and that the APCO prepare a specific findings report pursuant to Section 2-5-406.~~

~~404.2 The applicant shall submit a risk reduction plan in accordance with Section 2-5-405.~~

~~404.3 The applicant shall, within the time period specified by the APCO, submit any additional information that is necessary for the APCO to prepare the specific findings report required by Section 2-5-406.~~

~~2-5-405 Risk Reduction Plan: For any project where the project risk exceeds any project risk limit specified in Section 2-5-302, the application for an Authority to Construct or Permit to Operate shall contain a risk reduction plan. The risk reduction plan shall address the new and modified sources of TACs in the project and, unless a net-project health risk demonstration is made, shall also address all other existing permitted sources of TACs at the facility. The risk reduction plan shall be prepared in accordance with Section 2-5-604 and shall contain all of the following:~~

~~405.1 A list of all risk reduction measures considered by the applicant.~~

~~405.2 A list of all risk reduction measures that the applicant proposes to implement and a schedule for the expeditious implementation of each measure.~~

~~405.3 For each risk reduction measure that the applicant does not propose to implement, the applicant shall provide the rationale for not implementing the measure. This rationale shall include all supporting documentation necessary to justify the~~

~~applicant's conclusion that a measure was infeasible, too costly, or otherwise not reasonable.~~

~~2-5-406 Specific Findings Report: The APCO shall prepare a specific findings report for a project if the applicant has requested that the project be subject to the Section 2-5-112 specific findings limited exemption and has satisfied all requirements of the Section 2-5-404 specific findings petition. A specific findings report shall be prepared in accordance with Section 2-5-605 and shall include all of the following information:~~

~~406.1 The results of the HRSA completed for the project under this rule.~~

~~406.2 A discussion of the uncertainty in the HRSA completed for the project under this rule.~~

~~406.3 The period of time over which the emissions from the project are expected to occur.~~

~~406.4 For acute non-cancer health risks, the frequency at which an acute hazard index greater than 1.0 is expected to occur and a summary of the severity of these potential adverse health effects, if this information is available.~~

~~406.5 The existing air quality of the project area, based on available information.~~

~~406.6 The location of the project relative to any hospital, day-care center, or school.~~

~~406.7 A summary of the risk reduction measures required by the APCO to meet the requirement of Section 2-5-303.~~

~~406.8 The results of a net-project health risk demonstration, if applicable.~~

~~406.9 The results of the HRSA completed for the facility, if applicable.~~

~~406.10 Any federal, state, or local mandates that require the permit applicant to install the proposed new and modified source(s).~~

~~406.11 Any benefits that the project would have on the local community.~~

~~406.12 The findings of the Lead Agency for the proposed project under the California Environmental Quality Act (CEQA).~~

~~406.13 Any other information that the APCO determines to be relevant in making a risk management decision for the proposed project.~~

~~2-5-407 Preliminary Decision: For any project subject to Section 2-5-406, the APCO shall, based on consideration of the specific findings report, make a preliminary decision as to whether an Authority to Construct and/or Permit to Operate shall be approved or denied, within 90 days following the acceptance of an application as complete or, with the consent of the applicant, such longer period as may be agreed upon. Final action on the application will be taken in accordance with the requirements of Section 2-5-409.~~

~~2-5-408 Publication and Public Comment: For any project subject to Section 2-5-407, the APCO shall, within 10 days of notice to the applicant, cause to have published in at least one newspaper of general circulation within the District, and post on the District website, notice inviting written comment for a 30-day period following the date of publication that a preliminary decision to issue or deny an Authority to Construct and/or Permit to Operate has been made. During this period, which may be extended by the APCO, the APCO may elect to hold a public meeting to receive verbal comment from the public. A written notice of the preliminary decision shall also be prepared and distributed to each address located within the area for which the project risk exceeds any of the project risk limits specified in Section 2-5-302, and any other person who requests such specific notification in writing. Failure of any person to receive the notice shall not affect the validity of the authority to construct and/or permit to operate issued by the APCO, if the APCO has made a good faith effort to follow prescribed procedures for distributing the notices.~~

~~2-5-409 Final Decision: For any project subject to Section 2-5-407, the APCO shall take final action on the application after considering all public comments, within 180 days following the acceptance of an application as complete, or with the consent of the applicant, such longer period as may be agreed upon. Written notice of the final decision shall be provided to the applicant and to any person who requests such specific notification in writing. The final action shall be published in at least one newspaper of general circulation within the District and shall be posted on the District website.~~

2-5-500 MONITORING AND RECORDS

2-5-501 Monitoring Requirements: The APCO may impose any monitoring or record keeping requirements deemed necessary to ensure compliance with this rule.

2-5-600 MANUAL OF PROCEDURES

2-5-601 Emission Calculation Procedures: ~~Emission calculations shall include emissions resulting from routine operation of a source or emissions that are predictable, including, but not limited to continuous and intermittent releases and predictable process upsets or leaks, subject to enforceable limiting conditions. The APCO shall determine annual TAC emissions (expressed as pounds per year), to be used for comparison with chronic trigger levels and in estimating cancer risk and chronic hazard index, and one-hour TAC emissions (expressed as pounds per hour), to be used for comparison with acute trigger levels and in estimating acute hazard index, from as follows:~~

~~601.1 Emission calculations shall include emissions resulting from routine operation of a source or emissions that are predictable, including, but not limited to continuous and intermittent releases and predictable process upsets or leaks, subject to enforceable limiting conditions.~~

~~601.42 Emission calculations for a A-new source shall be based on the maximum emitting potential of the new source or the maximum permitted emission level of the new source, approved by the APCO, subject to enforceable limiting conditions.~~

~~601.23 Emission calculations for a A-modified source shall be based on:~~

~~2.1 For one-hour emissions, the maximum emitting potential of the modified source or the maximum permitted emission level of the modified source, approved by the APCO, subject to enforceable limiting conditions.~~

~~2.2 For annual emissions, by subtracting the adjusted baseline emission rate, as calculated using the methodology in Section 2-5-602, from the new maximum permitted emission level of the modified source, approved by the APCO, subject to enforceable limiting conditions.~~

~~601.34 Emissions calculations for a A-project shall be performed by summing the emission increases from all new and modified sources of TACs that are considered part of the project pursuant to Section 2-5-2167. For a modified source within the project, the APCO may consider contemporaneous reductions of other emissions from the modified source when estimating the project risk (e.g., a modified source may have a decrease in benzene emissions that would mitigate an increase in toluene emissions).~~

~~601.4 A facility based on the maximum emitting potential of all permitted sources at the facility, approved by the APCO, subject to enforceable limiting conditions and after implementation of the proposed project, any required risk reduction measures, and any source shut-downs or curtailments.~~

2-5-602 Baseline Emission Calculation Procedures: The following methodology shall be used to calculate baseline emissions for modified sources of TACs ~~and, in making a net-project health risk demonstration for existing sources where emissions and/or health risks will be reduced.~~

~~602.1 For a source which that has, contained in a permit condition, an emission cap or emission rate limit, the baseline throughput and baseline emission rate (expressed in the units of mass of emissions per unit of throughput) shall be based on the levels allowed by the permit condition.~~

~~602.2 For sources with no existing permit conditions that limit emissions without an emission cap or emission rate limit, baseline throughput and emission rate shall be determined as follows:~~

~~2.1 The baseline period consists of the 3-year period immediately preceding the date that the application is complete (or shorter period if the source is less than 3 years old or longer period if the applicant demonstrates to the District's satisfaction that a longer period is appropriate when considering such factors as operational problems and economic conditions). The applicant must have sufficient verifiable records of the source's operation or credible engineering~~

~~analyses that substantiate to the District's satisfaction to substantiate the emission rate and throughput during the entire baseline period.~~

- 2.2 Baseline throughput is ~~either the lesser of:~~
 - 2.2.1 ~~Actual average throughput during the baseline period, if throughput is not limited by permit condition; or~~
 - 2.2.2 ~~Maximum throughput as allowed by permit conditions on the date the application is complete. Average permitted throughput during the baseline period, if limited by permit condition.~~
- 2.3 Baseline emission rate (expressed in the units of mass of emissions per unit of throughput) is the average actual emission rate during the baseline period. Periods where the actual emission rate exceeded regulatory or permitted limits shall be excluded from the average.

602.3 The adjusted baseline emission rate shall be determined by adjusting the baseline emission rate downward, if necessary, to comply with the most stringent emission rate or emission limit from a MACT, ATCM, or District rule or regulation that is applicable to the type of source being evaluated and that is in effect, has been adopted by U.S. EPA, CARB, or the District, or is contained in the most recently adopted Clean Air Plan for the District.

602.4 The adjusted baseline emissions shall be the adjusted baseline emission rate ~~times~~ multiplied by the baseline throughput.

2-5-603 Health Risk Screening Analysis Procedures: ~~Any~~ Each HRSA shall be prepared following the District's Health Risk Screening Analysis Guidelines.

~~2-5-604 Risk Reduction Plan Procedures: Any risk reduction plans shall be prepared following the procedures set forth in the Manual of Procedures, Volume II, Part 4.~~

~~2-5-605 Specific Findings Report Procedures: Any specific findings report shall be prepared in accordance with the procedures set forth in the Manual of Procedures, Volume II, Part 4.~~

Table 2-5-1 Toxic Air Contaminant Trigger Levels

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)⁻¹	Oral Cancer Potency Factor (mg/kg-day)⁻¹	Acute (1-hr. max.) Trigger Level ² (lb/hour)	Chronic Trigger Level ² (lb/year)
Acetaldehyde	75-07-0		9.0E+00		1.0E-02			6.4E+01
Acetamide	60-35-5				7.0E-02			9.1E+00
Acrolein	107-02-8	1.9E-01	6.0E-02				4.2E-04	2.3E+00
Acrylamide	79-06-1		7.0E-01		4.5E+00			1.4E-01
Acrylic acid	79-10-7	6.0E+03	1.0E+00				1.3E+01	3.9E+01
Acrylonitrile	107-13-1		5.0E+00		1.0E+00			6.4E-01
Allyl chloride	107-05-1		1.0E+00		2.1E-02			3.0E+01
Aminoanthraquinone, 2-	117-79-3				3.3E-02			1.9E+01
Ammonia	7664-41-7	3.2E+03	2.0E+02				7.1E+00	7.7E+03
Aniline	62-53-3		1.0E+00		5.7E-03			3.9E+01
Antimony compounds	7440-36-0		2.0E-01					7.7E+00
antimony trioxide	1309-64-4		2.0E-01					7.7E+00
Arsenic and compounds (inorganic) ^{3,4}	7440-38-2	1.9E-01	3.0E-02	3.0E-04	1.2E+01	1.5E+00	4.2E-04	1.2E-02
Arsine	7784-42-1	1.6E+02	5.0E-02				3.5E-01	1.9E+00
Asbestos ⁵	1332-21-4				2.2E+02			2.9E-03
Benzene ³	71-43-2	1.3E+03	6.0E+01		1.0E-01		2.9E+00	6.4E+00
Benzidine (and its salts)	92-87-5		1.0E+01		5.0E+02			1.3E-03
<i>benzidine based dyes</i>			1.0E+01		5.0E+02			1.3E-03
direct black 38	1937-37-7		1.0E+01		5.0E+02			1.3E-03
direct blue 6	2602-46-2		1.0E+01		5.0E+02			1.3E-03
direct brown 95 (technical grade)	16071-86-6		1.0E+01		5.0E+02			1.3E-03
Benzyl chloride	100-44-7	2.4E+02	1.2E+01		1.7E-01		5.3E-01	3.8E+00
Beryllium and compounds ⁴	7440-41-7		7.0E-03	2.0E-03	8.4E+00			8.0E-02
Bis (2-chloroethyl) ether (Dichloroethyl ether)	111-44-4				2.5E+00			2.6E-01
Bis (chloromethyl) ether	542-88-1				4.6E+01			1.4E-02

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute (1-hr. max.) Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
<u>Bromine and compounds</u>	<u>7726-95-6</u>		<u>1.7E+00</u>					<u>6.6E+01</u>
<u>Bromine pentafluoride</u>	<u>7789-30-2</u>		<u>1.7E+00</u>					<u>6.6E+01</u>
<u>hydrogen bromide</u>	<u>10035-10-6</u>		<u>2.4E+01</u>					<u>9.3E+02</u>
<u>potassium bromate</u>	<u>7758-01-2</u>		<u>1.7E+00</u>		<u>4.9E-01</u>			<u>1.3E+00</u>
<u>Butadiene, 1,3-</u>	<u>106-99-0</u>		<u>2.0E+01</u>		<u>6.0E-01</u>			<u>1.1E+00</u>
<u>Cadmium and compounds</u> ⁴	<u>7440-43-9</u>		<u>2.0E-02</u>	<u>5.0E-04</u>	<u>1.5E+01</u>			<u>4.5E-02</u>
<u>Carbon disulfide</u> ³	<u>75-15-0</u>	<u>6.2E+03</u>	<u>8.0E+02</u>				<u>1.4E+01</u>	<u>3.1E+04</u>
<u>Carbon tetrachloride</u> ³ (Tetrachloromethane)	<u>56-23-5</u>	<u>1.9E+03</u>	<u>4.0E+01</u>		<u>1.5E-01</u>		<u>4.2E+00</u>	<u>4.3E+00</u>
<u>Chlorinated paraffins</u>	<u>108171-26-2</u>				<u>8.9E-02</u>			<u>7.2E+00</u>
<u>Chlorine</u>	<u>7782-50-5</u>	<u>2.1E+02</u>	<u>2.0E-01</u>				<u>4.6E-01</u>	<u>7.7E+00</u>
<u>Chlorine dioxide</u>	<u>10049-04-4</u>		<u>6.0E-01</u>					<u>2.3E+01</u>
<u>Chloro-o-phenylenediamine, 4-</u>	<u>95-83-0</u>				<u>1.6E-02</u>			<u>4.0E+01</u>
<u>Chloroacetophenone, 2-</u>	<u>532-27-4</u>		<u>3.0E-02</u>					<u>1.2E+00</u>
<u>Chlorobenzene</u>	<u>108-90-7</u>		<u>1.0E+03</u>					<u>3.9E+04</u>
<u>Chlorodifluoromethane (Freon 22) [see Fluorocarbons]</u>								
<u>Chlorofluorocarbons [see Fluorocarbons]</u>								
<u>Chloroform</u> ³	<u>67-66-3</u>	<u>1.5E+02</u>	<u>3.0E+02</u>		<u>1.9E-02</u>		<u>3.3E-01</u>	<u>3.4E+01</u>
<u>Chlorophenol, 2-</u>	<u>95-57-8</u>		<u>1.8E+01</u>					<u>7.0E+02</u>
<u>Chloropicrin</u>	<u>76-06-2</u>	<u>2.9E+01</u>	<u>4.0E-01</u>				<u>6.4E-02</u>	<u>1.5E+01</u>
<u>Chloroprene</u>	<u>126-99-8</u>		<u>1.0E+00</u>					<u>3.9E+01</u>
<u>Chloro-o-toluidine, p-</u>	<u>95-69-2</u>				<u>2.7E-01</u>			<u>2.4E+00</u>
<u>Chromium, (hexavalent, 6+)</u> ⁴	<u>18540-29-9</u>		<u>2.0E-01</u>	<u>2.0E-02</u>	<u>5.1E+02</u>			<u>1.3E-03</u>
<u>barium chromate</u> ⁴	<u>10294-40-3</u>		<u>2.0E-01</u>	<u>2.0E-02</u>	<u>5.1E+02</u>			<u>1.3E-03</u>
<u>calcium chromate</u> ⁴	<u>13765-19-0</u>		<u>2.0E-01</u>	<u>2.0E-02</u>	<u>5.1E+02</u>			<u>1.3E-03</u>
<u>lead chromate</u> ⁴	<u>7758-97-6</u>		<u>2.0E-01</u>	<u>2.0E-02</u>	<u>5.1E+02</u>			<u>1.3E-03</u>
<u>sodium dichromate</u> ⁴	<u>10588-01-9</u>		<u>2.0E-01</u>	<u>2.0E-02</u>	<u>5.1E+02</u>			<u>1.3E-03</u>

Chemical	CAS Number ¹	Acute Inhalation REL ($\mu\text{g}/\text{m}^3$)	Chronic Inhalation REL ($\mu\text{g}/\text{m}^3$)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)⁻¹	Oral Cancer Potency Factor (mg/kg-day)⁻¹	Acute (1-hr. max.) Trigger Level ² (lb/hour)	Chronic Trigger Level ² (lb/year)
strontium chromate ⁴	7789-06-2		2.0E-01	2.0E-02	5.1E+02			1.3E-03
Chromium trioxide (as chromic acid mist) ⁴	1333-82-0		2.0E-03	2.0E-02	5.1E+02			1.3E-03
Copper and compounds	7440-50-8	1.0E+02	2.4E+00				2.2E-01	9.3E+01
Cresidine, p-	120-71-8				1.5E-01			4.3E+00
Cresols (m-, o-, p-)	1319-77-3		6.0E+02					2.3E+04
Cupferron	135-20-6				2.2E-01			2.9E+00
Cyanide and compounds (inorganic)	57-12-5	3.4E+02	9.0E+00				7.5E-01	3.5E+02
hydrogen cyanide (hydrocyanic acid)	74-90-8	3.4E+02	9.0E+00				7.5E-01	3.5E+02
Diaminoanisole, 2,4-	615-05-4				2.3E-02			2.8E+01
Diaminotoluene, 2,4-	95-80-7				4.0E+00			1.6E-01
Dibromo-3-chloropropane, 1,2- (DBCP)	96-12-8		2.0E-01		7.0E+00			9.1E-02
Dichlorobenzene, 1,4-	106-46-7		8.0E+02		4.0E-02			1.6E+01
Dichlorobenzidine, 3,3-	91-94-1				1.2E+00			5.3E-01
Dichloroethane, 1,1- (Ethylidene dichloride)	75-34-3				5.7E-03			1.1E+02
Dichloroethylene, 1,1- [see vinylidene chloride]								
Diesel exhaust particulate matter ⁶			5.0E+00		1.1E+00			5.8E-01
Diethanolamine	111-42-2		3.0E+00					1.2E+02
Di(2-ethylhexyl)phthalate (DEHP) ⁴	117-81-7		7.0E+01		8.4E-03	8.4E-03		6.9E+01
Dimethylaminoazobenzene, p-	60-11-7				4.6E+00			1.4E-01
Dimethyl formamide, N,N-	68-12-2		8.0E+01					3.1E+03
Dinitrotoluene, 2,4-	121-14-2				3.1E-01			2.1E+00
Dioxane, 1,4- (1,4-diethylene dioxide)	123-91-1	3.0E+03	3.0E+03		2.7E-02		6.6E+00	2.4E+01
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106-89-8	1.3E+03	3.0E+00		8.0E-02		2.9E+00	8.0E+00
Epoxybutane, 1,2-	106-88-7		2.0E+01					7.7E+02
Ethyl acrylate	140-88-5		4.8E+01					1.9E+03
Ethyl benzene	100-41-4		2.0E+03					7.7E+04
Ethyl chloride (chloroethane)	75-00-3		3.0E+04					1.2E+06
Ethylene dibromide (1,2-dibromoethane)	106-93-4		8.0E-01		2.5E-01			2.6E+00

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
Ethylene dichloride (1,2-dichloroethane)	<u>107-06-2</u>		<u>4.0E+02</u>		<u>7.2E-02</u>			<u>8.9E+00</u>
Ethylene glycol	<u>107-21-1</u>		<u>4.0E+02</u>					<u>1.5E+04</u>
Ethylene glycol butyl ether – EGBE [see Glycol ethers]								
Ethylene oxide (1,2-epoxyethane)	<u>75-21-8</u>		<u>3.0E+01</u>		<u>3.1E-01</u>			<u>2.1E+00</u>
Ethylene thiourea	<u>96-45-7</u>				<u>4.5E-02</u>			<u>1.4E+01</u>
Fluorides and compounds		<u>2.4E+02</u>	<u>1.3E+01</u>	<u>4.0E-02</u>			<u>5.3E-01</u>	<u>5.0E+02</u>
hydrogen fluoride (hydrofluoric acid)	<u>7664-39-3</u>	<u>2.4E+02</u>	<u>1.4E+01</u>	<u>4.0E-02</u>			<u>5.3E-01</u>	<u>5.4E+02</u>
Fluorocarbons (chlorinated)			<u>7.0E+02</u>					<u>2.7E+04</u>
chlorinated fluorocarbon (CFC-113)	<u>76-13-1</u>		<u>7.0E+02</u>					<u>2.7E+04</u>
chlorodifluoromethane (Freon 22)	<u>75-45-6</u>		<u>5.0E+04</u>					<u>1.9E+06</u>
dichlorofluoromethane (Freon 21)	<u>75-43-4</u>		<u>7.0E+02</u>					<u>2.7E+04</u>
trichlorofluoromethane (Freon 11)	<u>75-69-4</u>		<u>7.0E+02</u>					<u>2.7E+04</u>
fluorocarbons (brominated)			<u>7.0E+02</u>					<u>2.7E+04</u>
Formaldehyde	<u>50-00-0</u>	<u>9.4E+01</u>	<u>3.0E+00</u>		<u>2.1E-02</u>		<u>2.1E-01</u>	<u>3.0E+01</u>
Freons [see Fluorocarbons]								
Glutaraldehyde	<u>111-30-8</u>		<u>8.0E-02</u>					<u>3.1E+00</u>
Glycol ethers								
ethylene glycol butyl ether – EGBE (2-butoxy ethanol; butyl cellosolve)	<u>111-76-2</u>	<u>1.4E+04</u>	<u>2.0E+01</u>				<u>3.1E+01</u>	<u>7.7E+02</u>
ethylene glycol ethyl ether – EGEE (2-ethoxy ethanol; cellosolve) ³	<u>110-80-5</u>	<u>3.7E+02</u>	<u>7.0E+01</u>				<u>8.2E-01</u>	<u>2.7E+03</u>
ethylene glycol ethyl ether acetate – EGEEA (2-ethoxyethyl acetate; cellosolve acetate) ³	<u>111-15-9</u>	<u>1.4E+02</u>	<u>3.0E+02</u>				<u>3.1E-01</u>	<u>1.2E+04</u>
ethylene glycol methyl ether – EGME (2-methoxy ethanol; methyl cellosolve) ³	<u>109-86-4</u>	<u>9.3E+01</u>	<u>6.0E+01</u>				<u>2.1E-01</u>	<u>2.3E+03</u>
ethylene glycol methyl ether acetate – EGMEA (2-methoxyethyl acetate; methyl cellosolve acetate)	<u>110-49-6</u>		<u>9.0E+01</u>					<u>3.5E+03</u>
Hexachlorobenzene	<u>118-74-1</u>		<u>2.8E+00</u>		<u>1.8E+00</u>			<u>3.6E-01</u>

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute (1-hr. max.) Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
<u>Hexachlorocyclohexanes (mixed or technical grade)</u> ⁴	<u>608-73-1</u>		<u>1.0E+00</u>	<u>3.0E-04</u>	<u>4.0E+00</u>	<u>4.0E+00</u>		<u>1.2E-01</u>
<u>Hexachlorocyclohexane, alpha-</u> ⁴	<u>319-84-6</u>		<u>1.0E+00</u>	<u>3.0E-04</u>	<u>4.0E+00</u>	<u>4.0E+00</u>		<u>1.2E-01</u>
<u>Hexachlorocyclohexane, beta-</u> ⁴	<u>319-85-7</u>		<u>1.0E+00</u>	<u>3.0E-04</u>	<u>4.0E+00</u>	<u>4.0E+00</u>		<u>1.2E-01</u>
<u>Hexachlorocyclohexane, gamma- (lindane)</u> ⁴	<u>58-89-9</u>		<u>1.0E+00</u>	<u>3.0E-04</u>	<u>1.1E+00</u>	<u>1.1E+00</u>		<u>4.2E-01</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>		<u>2.4E-01</u>					<u>9.3E+00</u>
<u>Hexane, n-</u>	<u>110-54-3</u>		<u>7.0E+03</u>					<u>2.7E+05</u>
<u>Hydrazine</u>	<u>302-01-2</u>		<u>2.0E-01</u>		<u>1.7E+01</u>			<u>3.8E-02</u>
<u>Hydrochloric acid (hydrogen chloride)</u>	<u>7647-01-0</u>	<u>2.1E+03</u>	<u>9.0E+00</u>				<u>4.6E+00</u>	<u>3.5E+02</u>
<u>Hydrogen bromide [see bromine & compounds]</u>								
<u>Hydrogen cyanide (hydrocyanic acid) [see cyanide & compounds]</u>								
<u>Hydrogen fluoride (hydrofluoric acid) [see fluorides & compounds]</u>								
<u>Hydrogen selenide [see selenium compounds]</u>								
<u>Hydrogen sulfide</u>	<u>7783-06-4</u>	<u>4.2E+01</u>	<u>1.0E+01</u>				<u>9.3E-02</u>	<u>3.9E+02</u>
<u>Isophorone</u>	<u>78-59-1</u>		<u>2.0E+03</u>					<u>7.7E+04</u>
<u>Isopropyl alcohol (isopropanol)</u>	<u>67-63-0</u>	<u>3.2E+03</u>	<u>7.0E+03</u>				<u>7.1E+00</u>	<u>2.7E+05</u>
<u>Lead and compounds (inorganic)</u> ⁴	<u>7439-92-1</u>				<u>4.2E-02</u>	<u>8.5E-03</u>		<u>5.4E+00</u>
<u>lead acetate</u> ⁴	<u>301-04-2</u>				<u>4.2E-02</u>	<u>8.5E-03</u>		<u>5.4E+00</u>
<u>lead phosphate</u> ⁴	<u>7446-27-7</u>				<u>4.2E-02</u>	<u>8.5E-03</u>		<u>5.4E+00</u>
<u>lead subacetate</u> ⁴	<u>1335-32-6</u>				<u>4.2E-02</u>	<u>8.5E-03</u>		<u>5.4E+00</u>
<u>Lindane [see hexachlorocyclohexane, gamma]</u>								
<u>Maleic anhydride</u>	<u>108-31-6</u>		<u>7.0E-01</u>					<u>2.7E+01</u>
<u>Manganese and compounds</u>	<u>7439-96-5</u>		<u>2.0E-01</u>					<u>7.7E+00</u>
<u>Mercury and compounds (inorganic)</u> ⁴	<u>7439-97-6</u>	<u>1.8E+00</u>	<u>9.0E-02</u>	<u>3.0E-04</u>			<u>4.0E-03</u>	<u>5.6E-01</u>
<u>mercuric chloride</u> ⁴	<u>7487-94-7</u>	<u>1.8E+00</u>	<u>9.0E-02</u>	<u>3.0E-04</u>			<u>4.0E-03</u>	<u>5.6E-01</u>
<u>Mercury and compounds (organic)</u>								

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute (1-hr. max.) Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
<u>methyl mercury</u>	<u>593-74-8</u>		<u>1.0E+00</u>					<u>3.9E+01</u>
<u>Methanol (methyl alcohol)</u>	<u>67-56-1</u>	<u>2.8E+04</u>	<u>4.0E+03</u>				<u>6.2E+01</u>	<u>1.5E+05</u>
<u>Methyl bromide (bromomethane)</u>	<u>74-83-9</u>	<u>3.9E+03</u>	<u>5.0E+00</u>				<u>8.6E+00</u>	<u>1.9E+02</u>
<u>Methyl chloroform (1,1,1-trichloroethane)</u>	<u>71-55-6</u>	<u>6.8E+04</u>	<u>1.0E+03</u>				<u>1.5E+02</u>	<u>3.9E+04</u>
<u>Methyl ethyl ketone (MEK) (2-butanone)</u>	<u>78-93-3</u>	<u>1.3E+04</u>	<u>1.0E+03</u>				<u>2.9E+01</u>	<u>3.9E+04</u>
<u>Methyl isocyanate</u>	<u>624-83-9</u>		<u>1.0E+00</u>					<u>3.9E+01</u>
<u>Methyl mercury [see mercury & compounds]</u>								
<u>Methyl methacrylate</u>	<u>80-62-6</u>		<u>9.8E+02</u>					<u>3.8E+04</u>
<u>Methyl tertiary-butyl ether (MTBE)</u>	<u>1634-04-4</u>		<u>8.0E+03</u>		<u>1.8E-03</u>			<u>3.6E+02</u>
<u>Methylene bis (2-chloroaniline), 4,4'- (MOCA)</u>	<u>101-14-4</u>				<u>1.5E+00</u>			<u>4.3E-01</u>
<u>Methylene chloride (dichloromethane)</u>	<u>75-09-2</u>	<u>1.4E+04</u>	<u>4.0E+02</u>		<u>3.5E-03</u>		<u>3.1E+01</u>	<u>1.8E+02</u>
<u>Methylene dianiline, 4,4'- (and its dichloride)</u> ⁴	<u>101-77-9</u>		<u>2.0E+01</u>		<u>1.6E+00</u>	<u>1.6E+00</u>		<u>4.1E-01</u>
<u>Methylene diphenyl isocyanate</u>	<u>101-68-8</u>		<u>7.0E-01</u>					<u>2.7E+01</u>
<u>Michler's ketone (4,4'-bis(dimethylamino)benzophenone)</u>	<u>90-94-8</u>				<u>8.6E-01</u>			<u>7.4E-01</u>
<u>Mineral fibers (<1% FREE SILICA)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>ceramic fibers (man-made)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>glasswool (man-made fibers)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>mineral fibers (fine: man-made)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>rockwool (man-made fibers)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>slagwool (man-made fibers)</u>			<u>2.4E+01</u>					<u>9.3E+02</u>
<u>Naphthalene [see polycyclic aromatic hydrocarbons]</u>								
<u>Nickel and compounds</u> ⁴ (<i>values also apply to:</i>)	<u>7440-02-0</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel acetate</u> ⁴	<u>373-02-4</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel carbonate</u> ⁴	<u>3333-39-3</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel carbonyl</u> ⁴	<u>13463-39-3</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel hydroxide</u> ⁴	<u>12054-48-7</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute (1-hr. max.) Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
<u>Nickelocene</u> ⁴	<u>1271-28-9</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel oxide</u> ⁴	<u>1313-99-1</u>	<u>6.0E+00</u>	<u>1.0E-01</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel refinery dust from the pyrometallurgical process</u> ⁴		<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>nickel subsulfide</u> ⁴	<u>12035-72-2</u>	<u>6.0E+00</u>	<u>5.0E-02</u>	<u>5.0E-02</u>	<u>9.1E-01</u>		<u>1.3E-02</u>	<u>7.3E-01</u>
<u>Nitric acid</u>	<u>7697-37-2</u>	<u>8.6E+01</u>					<u>1.9E-01</u>	
<u>Nitrobenzene</u>	<u>98-95-3</u>		<u>1.7E+00</u>					<u>6.6E+01</u>
<u>Nitropropane, 2-</u>	<u>79-46-9</u>		<u>2.0E+01</u>					<u>7.7E+02</u>
<u>Nitrosodi-n-butylamine, N-</u>	<u>924-16-3</u>				<u>1.1E+01</u>			<u>5.8E-02</u>
<u>Nitrosodi-n-propylamine, N-</u>	<u>621-64-7</u>				<u>7.0E+00</u>			<u>9.1E-02</u>
<u>Nitrosodiethylamine, N-</u>	<u>55-18-5</u>				<u>3.6E+01</u>			<u>1.8E-02</u>
<u>Nitrosodimethylamine, N-</u>	<u>62-75-9</u>				<u>1.6E+01</u>			<u>4.0E-02</u>
<u>Nitrosodiphenylamine, N-</u>	<u>86-30-6</u>				<u>9.0E-03</u>			<u>7.1E+01</u>
<u>Nitroso-n-methylethylamine, N-</u>	<u>10595-95-6</u>				<u>2.2E+01</u>			<u>2.9E-02</u>
<u>Nitrosomorpholine, N-</u>	<u>59-89-2</u>				<u>6.7E+00</u>			<u>9.6E-02</u>
<u>Nitrosopiperidine, N-</u>	<u>100-75-4</u>				<u>9.4E+00</u>			<u>6.8E-02</u>
<u>Nitrosopyrrolidine, N-</u>	<u>930-55-2</u>				<u>2.1E+00</u>			<u>3.0E-01</u>
<u>Nitrosodiphenylamine, p-</u>	<u>156-10-5</u>				<u>2.2E-02</u>			<u>2.9E+01</u>
<u>Ozone</u>	<u>10028-15-6</u>	<u>1.8E+02</u>	<u>1.8E+02</u>				<u>4.0E-01</u>	<u>7.0E+03</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>		<u>2.0E-01</u>		<u>1.8E-02</u>			<u>7.7E+00</u>
<u>Perchloroethylene (tetrachloroethylene)</u>	<u>127-18-4</u>	<u>2.0E+04</u>	<u>3.5E+01</u>		<u>2.1E-02</u>		<u>4.4E+01</u>	<u>3.0E+01</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>5.8E+03</u>	<u>2.0E+02</u>				<u>1.3E+01</u>	<u>7.7E+03</u>
<u>Phosgene</u>	<u>75-44-5</u>	<u>4.0E+00</u>					<u>8.8E-03</u>	
<u>Phosphine</u>	<u>7803-51-2</u>		<u>8.0E-01</u>					<u>3.1E+01</u>
<u>Phosphoric acid</u>	<u>7664-38-2</u>		<u>7.0E+00</u>					<u>2.7E+02</u>
<u>Phosphorus (white)</u>	<u>7723-14-0</u>		<u>7.0E-02</u>					<u>2.7E+00</u>
<u>Phthalic anhydride</u>	<u>85-44-9</u>		<u>2.0E+01</u>					<u>7.7E+02</u>
<u>PCBs (polychlorinated biphenyls) [low risk]</u> ^{4,7}	<u>1336-36-3</u>		<u>1.2E+00</u>	<u>2.0E-05</u>	<u>7.0E-02</u>	<u>7.0E-02</u>		<u>8.0E-01</u>

<u>Chemical</u>	<u>CAS Number</u> ¹	<u>Acute Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Inhalation REL</u> ($\mu\text{g}/\text{m}^3$)	<u>Chronic Oral REL</u> ($\text{mg}/\text{kg}\text{-day}$)	<u>Inhalation Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Oral Cancer Potency Factor</u> ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	<u>Acute (1-hr. max.) Trigger Level</u> ² (lb/hour)	<u>Chronic Trigger Level</u> ² (lb/year)
PCBs (polychlorinated biphenyls) [high risk] ^{4,7}	1336-36-3		1.2E+00	2.0E-05	2.0E+00	2.0E+00		2.8E-02
Polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and dioxin-like polychlorinated biphenyls (PCBs) (as 2,3,7,8-PCDD equivalent) ^{4,8}	See Footnote 8		4.0E-05	1.0E-08	1.3E+05	1.3E+05		5.7E-07
Polycyclic aromatic hydrocarbon (PAH) (as B(a)P-equivalent) ^{4,9}	See Footnote 9				3.9E+00	1.2E+01		1.1E-02
naphthalene	91-20-3		9.0E+00		1.2E-01			5.3E+00
Potassium bromate [see bromine & compounds]								
Propane sultone, 1,3-	1120-71-4				2.4E+00			2.7E-01
Propylene (propene)	115-07-1		3.0E+03					1.2E+05
Propylene glycol monomethyl ether	107-98-2		7.0E+03					2.7E+05
Propylene oxide	75-56-9	3.1E+03	3.0E+01		1.3E-02		6.8E+00	4.9E+01
Selenium and compounds	7782-49-2		2.0E+01					7.7E+02
hydrogen selenide	7783-07-5	5.0E+00					1.1E-02	
selenium sulfide	7446-34-6		2.0E+01					7.7E+02
Sodium hydroxide	1310-73-2	8.0E+00	4.8E+00				1.8E-02	1.9E+02
Styrene	100-42-5	2.1E+04	9.0E+02				4.6E+01	3.5E+04
Sulfates		1.2E+02	2.5E+01				2.6E-01	9.7E+02
Sulfuric acid and oleum	7664-93-9	1.2E+02	1.0E+00				2.6E-01	3.9E+01
sulfuric acid	7664-93-9	1.2E+02	1.0E+00				2.6E-01	3.9E+01
sulfur trioxide	7446-71-9	1.2E+02					2.6E-01	
oleum	8014-95-7	1.2E+02	1.0E+00				2.6E-01	3.9E+01
Tetrachloroethane, 1,1,2,2-	79-34-5				2.0E-01			3.2E+00
Tetrachlorophenols	25167-83-3		8.8E+01					3.4E+03
Thioacetamide	62-55-5				6.1E+00			1.0E-01
Toluene	108-88-3	3.7E+04	3.0E+02				8.2E+01	1.2E+04
Toluene diisocyanates	26471-62-5		7.0E-02		3.9E-02			2.7E+00
toluene-2,4-diisocyanate	584-84-9		7.0E-02		3.9E-02			2.7E+00

Chemical	CAS Number ¹	Acute Inhalation REL ($\mu\text{g}/\text{m}^3$)	Chronic Inhalation REL ($\mu\text{g}/\text{m}^3$)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)⁻¹	Oral Cancer Potency Factor (mg/kg-day)⁻¹	Acute (1-hr. max.) Trigger Level ² (lb/hour)	Chronic Trigger Level ² (lb/year)
<u>toluene-2,6-diisocyanate</u>	<u>91-08-7</u>		<u>7.0E-02</u>		<u>3.9E-02</u>			<u>2.7E+00</u>
<u>Trichloroethane, 1,1,1 (see methyl chloroform)</u>								
<u>Trichloroethane, 1,1,2- (vinyl trichloride)</u>	<u>79-00-5</u>				<u>5.7E-02</u>			<u>1.1E+01</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>		<u>6.0E+02</u>		<u>7.0E-03</u>			<u>9.1E+01</u>
<u>Trichlorophenol, 2,4,6-</u>	<u>88-06-2</u>				<u>7.0E-02</u>			<u>9.1E+00</u>
<u>Triethylamine</u>	<u>121-44-8</u>	<u>2.8E+03</u>	<u>2.0E+02</u>				<u>6.2E+00</u>	<u>7.7E+03</u>
<u>Urethane (ethyl carbamate)</u>	<u>51-79-6</u>				<u>1.0E+00</u>			<u>6.4E-01</u>
<u>Vanadium Compounds</u>								
<u>vanadium (fume or dust)</u>	<u>7440-62-2</u>	<u>3.0E+01</u>					<u>6.6E-02</u>	
<u>vanadium pentoxide</u>	<u>1314-62-1</u>	<u>3.0E+01</u>					<u>6.6E-02</u>	
<u>Vinyl acetate</u>	<u>108-05-4</u>		<u>2.0E+02</u>					<u>7.7E+03</u>
<u>Vinyl bromide</u>	<u>593-60-2</u>		<u>7.0E+00</u>					<u>2.7E+02</u>
<u>Vinyl chloride (chloroethylene)</u>	<u>75-01-4</u>	<u>1.8E+05</u>	<u>2.6E+01</u>		<u>2.7E-01</u>		<u>4.0E+02</u>	<u>2.4E+00</u>
<u>Vinylidene chloride (1,1-dichloroethylene)</u>	<u>75-35-4</u>		<u>7.0E+01</u>					<u>2.7E+03</u>
<u>Xylenes (mixed isomers)</u>	<u>1330-20-7</u>	<u>2.2E+04</u>	<u>7.0E+02</u>				<u>4.9E+01</u>	<u>2.7E+04</u>
<u>m-xylene</u>	<u>108-38-3</u>	<u>2.2E+04</u>	<u>7.0E+02</u>				<u>4.9E+01</u>	<u>2.7E+04</u>
<u>o-xylene</u>	<u>95-47-6</u>	<u>2.2E+04</u>	<u>7.0E+02</u>				<u>4.9E+01</u>	<u>2.7E+04</u>
<u>p-xylene</u>	<u>106-42-3</u>	<u>2.2E+04</u>	<u>7.0E+02</u>				<u>4.9E+01</u>	<u>2.7E+04</u>
<u>Zinc and compounds</u>	<u>7440-66-6</u>		<u>3.5E+01</u>					<u>1.4E+03</u>
<u>zinc oxide</u>	<u>1314-13-2</u>		<u>3.5E+01</u>					<u>1.4E+03</u>

¹ **Chemical Abstract Number (CAS):**
CAS numbers are not available for many chemical groupings and mixtures.

² **Trigger Levels:**

All trigger levels are presented in scientific notation (i.e., exponential form based on powers of the based number 10.) For example: 4.9E+01 is equivalent to 4.9×10^1 , or 49; 6.6E-02 is equivalent to 6.6×10^{-2} , or 0.066; and 5.8E+00 is equivalent to 5.8×10^0 , or 5.8.

3 Averaging Period for Non-Cancer Acute Trigger Levels:

The averaging period for non-cancer acute trigger levels is generally a one-hour exposure. However, some are based on several hours of exposure. The screening levels for the following substances should be compared to estimated emissions occurring over a time period other than maximum one-hour emissions (e.g., a 4-hour trigger level should be compared to the maximum 4-hour average concentration estimated from the maximum emissions occurring in a 4-hour period). However, for conservative screening purposes, a maximum one-hour emission level can be compare to all acute trigger levels.

4-hour: arsenic and inorganic arsenic compounds

6-hour: benzene, carbon disulfide, ethylene glycol ethyl ether, ethylene glycol ethyl ether acetate, ethylene glycol methyl ether

7-hour: carbon tetrachloride, chloroform

4 Chemicals for Which Multi-Pathway Risks are Assessed:

Trigger levels are adjusted to include the impact from default non-inhalation pathways.

5 Asbestos:

The units for the inhalation cancer potency factor for asbestos are $(100 \text{ PCM fibers/m}^3)^{-1}$. A conversion factor of 100 fibers/0.003 μg can be multiplied by a receptor concentration of asbestos expressed in $\mu\text{g/m}^3$. Unless other information necessary to estimate the concentration (fibers/m^3) of asbestos at receptors of interest is available, an inhalation cancer potency factor of 220 $(\text{mg/kg-day})^{-1}$ is available.

6 Diesel Exhaust Particulate Matter:

Diesel exhaust particulate matter should be used as a surrogate for all TAC emissions from diesel-fueled compression-ignition internal combustion engines. However, diesel exhaust particulate matter should not be used for other types of diesel-fueled combustion equipment, such as boilers or turbines. For equipment other than diesel-fueled compression-ignition internal combustion engines, emissions should be determined for individual TACs and compared to the appropriate trigger level for each TAC.

7 Polychlorinated Biphenyls:

Low Risk: Use in cases where congeners with more than four chlorines comprise less than one-half percent of total polychlorinated biphenyls.

High Risk: Use in cases where congeners with more than four chlorines do not comprise less than one-half percent of total polychlorinated biphenyls.

8 Polychlorinated Dibenzo-p-Dioxins (PCDDs), Polychlorinated Dibenzofurans (PCDFs), and Dioxin-like Polychlorinated Biphenyls (PCBs):

These substances are PCDDs, PCDFs, and dioxin-like PCBs for which OEHHA has adopted the World Health Organization (WHO₉₇) Toxicity Equivalency Factor (TEF) scheme for evaluating cancer risk due to exposure to samples containing mixtures of PCDDs, PCDFs, and dioxin-like PCBs. PCDDs, PCDFs,

and dioxin-like PCBs should be evaluated as PCDD-equivalent. This evaluation process consists of multiplying individual PCDD-, PCDF-, and dioxin-like PCB-specific emission levels with their corresponding TEFs listed below. The sum of these products is the PCDD-equivalent and should be compared to the PCDD-equivalent trigger level.

<u>PCDD</u>	<u>CAS Number</u>	<u>TEF</u>
2,3,7,8-tetrachlorodibenzo-p-dioxin	1746-01-6	1.0
1,2,3,7,8-pentachlorodibenzo-p-dioxin	40321-76-4	1.0
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	39227-28-6	0.1
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	57653-85-7	0.1
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	19408-74-3	0.1
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	35822-46-9	0.01
1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	3268-87-9	0.0001
<u>PCDF</u>	<u>CAS Number</u>	<u>TEF</u>
2,3,7,8-tetrachlorodibenzofuran	5120-73-19	0.1
1,2,3,7,8-pentachlorodibenzofuran	57117-41-6	0.05
2,3,4,7,8-pentachlorodibenzofuran	57117-31-4	0.5
1,2,3,4,7,8-hexachlorodibenzofuran	70648-26-9	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	57117-44-9	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	72918-21-9	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	60851-34-5	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	67562-39-4	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	55673-89-7	0.01
1,2,3,4,6,7,8,9-octachlorodibenzofuran	39001-02-0	0.0001
<u>Dioxin-like PCBs (coplanar PCBs)</u>	<u>CAS Number</u>	<u>TEF</u>
PCB 77 (3,3',4,4'-tetrachlorobiphenyl)	32598-13-3	0.0001
PCB 81 (3,4,4',5-tetrachlorobiphenyl)	70362-50-4	0.0001
PCB 105 (2,3,3',4,4'-pentachlorobiphenyl)	32598-14-4	0.0001
PCB 114 (2,3,4,4',5-pentachlorobiphenyl)	74472-37-0	0.0005
PCB 118 (2,3',4,4',5-pentachlorobiphenyl)	31508-00-6	0.0001
PCB 123 (2',3,4,4',5-pentachlorobiphenyl)	65510-44-3	0.0001
PCB 126 (3,3',4,4',5-pentachlorobiphenyl)	57465-28-8	0.1
PCB 156 (2,3,3',4,4',5-hexachlorobiphenyl)	38380-08-4	0.0005
PCB 157 (2,3,3',4,4',5'-hexachlorobiphenyl)	69782-90-7	0.0005
PCB 167 (2,3',4,4',5,5'-hexachlorobiphenyl)	52663-72-6	0.00001
PCB 169 (3,3',4,4',5,5'-hexachlorobiphenyl)	32774-16-6	0.01
PCB 170 (2,2',3,3',4,4',5-heptachlorobiphenyl)	35065-30-6	0
PCB 180 (2,2',3,4,4',5,5'-heptachlorobiphenyl)	35065-29-3	0
PCB 189 (2,3,3',4,4',5,5'-heptachlorobiphenyl)	39635-31-9	0.0001

⁹ **Polycyclic Aromatic Hydrocarbons (PAHs):** These substances are PAH-derivatives that have OEHHA-developed Potency Equivalency Factors (PEFs). PAHs should be evaluated as benzo(a)pyrene-equivalents. This evaluation process consists of multiplying individual PAH-specific emission levels with their corresponding PEFs listed below. The sum of these products is the benzo(a)pyrene-equivalent level and should be compared to the benzo(a)pyrene equivalent trigger level.

<u>PAH or derivative</u>	<u>CAS Number</u>	<u>PEF</u>
benz(a)anthracene	56-55-3	0.1
benzo(b)fluoranthene	205-99-2	0.1
benzo(j)fluoranthene	205-82-3	0.1
benzo(k)fluoranthene	207-08-9	0.1
benzo(a)pyrene	50-32-8	1.0
chrysene	218-01-9	0.01
dibenz(a,j)acridine	224-42-0	0.1
dibenz(a,h)acridine	226-36-8	0.1
dibenz(a,h)anthracene	53-70-3	1.05
7H-dibenzo(c,g)carbazole	194-59-2	1.0
dibenzo(a,e)pyrene	192-65-4	1.0
dibenzo(a,h)pyrene	189-64-0	10
dibenzo(a,i)pyrene	189-55-9	10
dibenzo(a,l)pyrene	191-30-0	10
7,12-dimethylbenz(a)anthracene	57-97-6	64
indeno(1,2,3-cd)pyrene	193-39-5	0.1
5-methylchrysene	3697-24-3	1.0
3-methylcholanthrene	56-49-5	5.7
5-nitroacenaphthene	602-87-9	0.03
1-nitropyrene	5522-43-0	0.1
4-nitropyrene	57835-92-4	0.1
1,6-dinitropyrene	42397-64-8	10
1,8-dinitropyrene	42397-65-9	1.0
6-nitrocrysene	7496-02-8	10
2-nitrofluorene	607-57-8	0.01