

Bay Area Air Quality Management District

May 12, 2005

Proposed Regulatory Language

Adoption of:

**BAAQMD Regulation 2: Permits,
Rule 5: New Source Review of Toxic Air Contaminants**

**BAAQMD Manual of Procedures
Volume II: Engineering Permitting Procedures,
Part 4: New and Modified Sources of Toxic Air Contaminants**

Amendments to:

**BAAQMD Regulation 2: Permits,
Rule 1: General Requirements
Rule 2: New Source Review
Rule 9: Interchangeable Emission Reduction Credits**

**BAAQMD Regulation 8, Organic Compounds,
Rule 34: Solid Waste Disposal Sites
Rule 40: Aeration of Contaminated Soils and Removal of Underground
Storage Tanks**

Rule 47: Air Stripping and Soil Vapor Extraction Operations

**BAAQMD Regulation 11, Hazardous Pollutants,
Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning
Operations**

**REGULATION 2
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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 applies to a new or modified source of toxic air contaminants that is required to have an authority to construct or permit to operate pursuant to Regulation 2, Rule 1. 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 increase in emissions from the project 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 Applicability and Circumvention: This rule applies to the following:

112.1 A new or modified source of toxic air contaminants for which an application is submitted on or after July 1, 2005;

112.2 A source of toxic air contaminants constructed or modified after January 1, 1987 for which no authority to construct or permit to operate has been issued by the District and for which the District Rules and Regulations and Risk Management Policy in effect at the time of construction or modification required an authority to construct or permit to operate.

2-5-200 DEFINITIONS

2-5-201 Acute Hazard Index, or Acute HI: Acute hazard index is the sum of the individual acute hazard 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).

2-5-203 Airborne Toxic Control Measure, or ATCM: A recommended method 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.

2-5-204 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.

2-5-205 Best Available Control Technology for Toxics, or TBACT: For any new or modified source of toxic air contaminants, except cargo carriers, the 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:

- 205.1 The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or
 - 205.2 The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or
 - 205.3 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
 - 205.4 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.
- 2-5-206 Cancer Risk:** An estimate of the probability that an individual will develop cancer as a result of lifetime exposure to emitted carcinogens at a given receptor location.
- 2-5-207 Carcinogen:** 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:** Chronic hazard index is the sum of the individual chronic hazard quotients for 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).
- 2-5-210 Health Risk:** The potential for adverse human health effects resulting from exposure to emissions of toxic air contaminants 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 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.
- 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:** An existing source that undergoes a physical change, change in method of operation, or increase in throughput or production that results or may result in any of the following:
- 214.1 An increase in the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate toxic air contaminant emission levels, above emission or production levels approved by the District in any authority to construct.
 - 214.2 An increase in the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate 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 a source that has never been issued a District authority to construct and that does not have conditions limiting daily or annual toxic air contaminant emissions, an increase 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 lower of the authorized capacity as established pursuant to Section 2-5-214.3.1 or the functional capacity as established pursuant to 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.
- 3.2 The functional capacity is the 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}) 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 New Source of Toxic Air Contaminants: A source of toxic air contaminant emissions, except a source that loses a permit exemption or exclusion in accordance with Regulations 2-1-424 or 2-1-425, that is one or more of the following:

- 215.1 A source constructed or proposed to be constructed that never had a valid District authority to construct or permit to operate.
- 215.2 A source that has not been in operation for a period of one year or more and that has not held a valid District permit to operate during this period of non-operation.
- 215.3 A relocation of an existing source, except for a portable source, to a non-contiguous property.
- 215.4 A replacement of a source, including an identical replacement of a source, regardless when the original source was constructed.
- 215.5 A replacement of an identifiable source within a group of sources permitted together under a single source number for the purpose of District permitting convenience.
- 215.6 A "rebricking" of a glass furnace where changes to the furnace design result in a change in heat generation or absorption.

2-5-216 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 or 302, and (c) emits one or more toxic air contaminants. All new or modified sources of TACs included in a single permit application will be considered as a project. In addition, in order to discourage circumvention 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 those new or modified sources of 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 demonstrates to the satisfaction of the APCO that 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.

2-5-217 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.

2-5-218 Receptor Location: A location 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 or acute exposures being evaluated in an HRSA. 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.

- 2-5-219 Reference Exposure Level, or REL:** The air concentration or exposure level (for a specified exposure duration) at or below which adverse non-cancer health effects are not anticipated to occur in the general human population.
- 2-5-220 Residential Receptor:** Any receptor location where an individual may reside for a period of six months or more out of a year.
- 2-5-221 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.
- 2-5-222 Toxic Air Contaminant, or TAC:** An air pollutant that may cause or contribute to an increase in mortality or in serious illness or 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.
- 2-5-223 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.
- 2-5-224 Worker Receptor:** Any receptor location that is an occupational setting or place where an individual may work and that is located outside of the 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:** 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.
- 2-5-400 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 if 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, 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 Health Risk Screening Analysis Guidelines that specify the procedures to be followed for estimating health risks including acute hazard index, chronic hazard index, and cancer risk. 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.
- 2-5-500 MONITORING AND RECORDS**

2-5-501 Monitoring Requirements: The APCO may impose any reasonable 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: 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 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.
- 601.2 Emission calculations for 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.
- 601.3 Emission calculations for a modified source shall be based on:
 - 3.1 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.
 - 3.2 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.
- 601.4 Emission calculations for 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 2-5-216. 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).

2-5-602 Baseline Emission Calculation Procedures: The following methodology shall be used to calculate baseline emissions for modified sources of TACs.

- 602.1 For a source 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 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 the emission rate and throughput during the entire baseline period.
 - 2.2 Baseline throughput is either the:
 - 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.
 - 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 multiplied by the baseline throughput.

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

Table 2-5-1 Toxic Air Contaminant Trigger Levels

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
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
Bromine and compounds	7726-95-6		1.7E+00					6.6E+01
Bromine pentafluoride	7789-30-2		1.7E+00					6.6E+01
hydrogen bromide	10035-10-6		2.4E+01					9.3E+02

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
potassium bromate	7758-01-2		1.7E+00		4.9E-01			1.3E+00
Butadiene, 1,3-	106-99-0		2.0E+01		6.0E-01			1.1E+00
Cadmium and compounds ⁴	7440-43-9		2.0E-02	5.0E-04	1.5E+01			4.5E-02
Carbon disulfide ³	75-15-0	6.2E+03	8.0E+02				1.4E+01	3.1E+04
Carbon tetrachloride ³ (Tetrachloromethane)	56-23-5	1.9E+03	4.0E+01		1.5E-01		4.2E+00	4.3E+00
Chlorinated paraffins	108171-26-2				8.9E-02			7.2E+00
Chlorine	7782-50-5	2.1E+02	2.0E-01				4.6E-01	7.7E+00
Chlorine dioxide	10049-04-4		6.0E-01					2.3E+01
Chloro-o-phenylenediamine, 4-	95-83-0				1.6E-02			4.0E+01
Chloroacetophenone, 2-	532-27-4		3.0E-02					1.2E+00
Chlorobenzene	108-90-7		1.0E+03					3.9E+04
Chlorodifluoromethane (Freon 22) [see Fluorocarbons]								
Chlorofluorocarbons [see Fluorocarbons]								
Chloroform ³	67-66-3	1.5E+02	3.0E+02		1.9E-02		3.3E-01	3.4E+01
Chlorophenol, 2-	95-57-8		1.8E+01					7.0E+02
Chloropicrin	76-06-2	2.9E+01	4.0E-01				6.4E-02	1.5E+01
Chloroprene	126-99-8		1.0E+00					3.9E+01
Chloro-o-toluidine, p-	95-69-2				2.7E-01			2.4E+00
Chromium, (hexavalent, 6+) ⁴	18540-29-9		2.0E-01	2.0E-02	5.1E+02			1.3E-03
barium chromate ⁴	10294-40-3		2.0E-01	2.0E-02	5.1E+02			1.3E-03
calcium chromate ⁴	13765-19-0		2.0E-01	2.0E-02	5.1E+02			1.3E-03
lead chromate ⁴	7758-97-6		2.0E-01	2.0E-02	5.1E+02			1.3E-03
sodium dichromate ⁴	10588-01-9		2.0E-01	2.0E-02	5.1E+02			1.3E-03
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

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
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
Ethylene dichloride (1,2-dichloroethane)	107-06-2		4.0E+02		7.2E-02			8.9E+00
Ethylene glycol	107-21-1		4.0E+02					1.5E+04
Ethylene glycol butyl ether – EGBE [see Glycol ethers]								
Ethylene oxide (1,2-epoxyethane)	75-21-8		3.0E+01		3.1E-01			2.1E+00
Ethylene thiourea	96-45-7				4.5E-02			1.4E+01
Fluorides and compounds		2.4E+02	1.3E+01	4.0E-02			5.3E-01	5.0E+02
hydrogen fluoride (hydrofluoric acid)	7664-39-3	2.4E+02	1.4E+01	4.0E-02			5.3E-01	5.4E+02
Fluorocarbons (chlorinated)			7.0E+02					2.7E+04

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
chlorinated fluorocarbon (CFC-113)	76-13-1		7.0E+02					2.7E+04
chlorodifluoromethane (Freon 22)	75-45-6		5.0E+04					1.9E+06
dichlorofluoromethane (Freon 21)	75-43-4		7.0E+02					2.7E+04
trichlorofluoromethane (Freon 11)	75-69-4		7.0E+02					2.7E+04
fluorocarbons (brominated)			7.0E+02					2.7E+04
Formaldehyde	50-00-0	9.4E+01	3.0E+00		2.1E-02		2.1E-01	3.0E+01
Freons [see Fluorocarbons]								
Glutaraldehyde	111-30-8		8.0E-02					3.1E+00
Glycol ethers								
ethylene glycol butyl ether – EGBE (2-butoxy ethanol; butyl cellosolve)	111-76-2	1.4E+04	2.0E+01				3.1E+01	7.7E+02
ethylene glycol ethyl ether – EGEE (2-ethoxy ethanol; cellosolve) ³	110-80-5	3.7E+02	7.0E+01				8.2E-01	2.7E+03
ethylene glycol ethyl ether acetate – EGEEA (2-ethoxyethyl acetate; cellosolve acetate) ³	111-15-9	1.4E+02	3.0E+02				3.1E-01	1.2E+04
ethylene glycol methyl ether – EGME (2-methoxy ethanol; methyl cellosolve) ³	109-86-4	9.3E+01	6.0E+01				2.1E-01	2.3E+03
ethylene glycol methyl ether acetate – EGMEA (2-methoxyethyl acetate; methyl cellosolve acetate)	110-49-6		9.0E+01					3.5E+03
Hexachlorobenzene	118-74-1		2.8E+00		1.8E+00			3.6E-01
Hexachlorocyclohexanes (mixed or technical grade) ⁴	608-73-1		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, alpha- ⁴	319-84-6		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, beta- ⁴	319-85-7		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, gamma- (lindane) ⁴	58-89-9		1.0E+00	3.0E-04	1.1E+00	1.1E+00		4.2E-01
Hexachlorocyclopentadiene	77-47-4		2.4E-01					9.3E+00
Hexane, n-	110-54-3		7.0E+03					2.7E+05
Hydrazine	302-01-2		2.0E-01		1.7E+01			3.8E-02
Hydrochloric acid (hydrogen chloride)	7647-01-0	2.1E+03	9.0E+00				4.6E+00	3.5E+02
Hydrogen bromide [see bromine & compounds]								
Hydrogen cyanide (hydrocyanic acid) [see cyanide & compounds]								

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
Hydrogen fluoride (hydrofluoric acid) [see fluorides & compounds]								
Hydrogen selenide [see selenium compounds]								
Hydrogen sulfide	7783-06-4	4.2E+01	1.0E+01				9.3E-02	3.9E+02
Isophorone	78-59-1		2.0E+03					7.7E+04
Isopropyl alcohol (isopropanol)	67-63-0	3.2E+03	7.0E+03				7.1E+00	2.7E+05
Lead and compounds (inorganic) ⁴	7439-92-1				4.2E-02	8.5E-03		5.4E+00
lead acetate ⁴	301-04-2				4.2E-02	8.5E-03		5.4E+00
lead phosphate ⁴	7446-27-7				4.2E-02	8.5E-03		5.4E+00
lead subacetate ⁴	1335-32-6				4.2E-02	8.5E-03		5.4E+00
Lindane [see hexachlorocyclohexane, gamma]								
Maleic anhydride	108-31-6		7.0E-01					2.7E+01
Manganese and compounds	7439-96-5		2.0E-01					7.7E+00
Mercury and compounds (inorganic) ⁴	7439-97-6	1.8E+00	9.0E-02	3.0E-04			4.0E-03	5.6E-01
mercuric chloride ⁴	7487-94-7	1.8E+00	9.0E-02	3.0E-04			4.0E-03	5.6E-01
Mercury and compounds (organic)								
methyl mercury	593-74-8		1.0E+00					3.9E+01
Methanol (methyl alcohol)	67-56-1	2.8E+04	4.0E+03				6.2E+01	1.5E+05
Methyl bromide (bromomethane)	74-83-9	3.9E+03	5.0E+00				8.6E+00	1.9E+02
Methyl chloroform (1,1,1-trichloroethane)	71-55-6	6.8E+04	1.0E+03				1.5E+02	3.9E+04
Methyl ethyl ketone (MEK) (2-butanone)	78-93-3	1.3E+04	1.0E+03				2.9E+01	3.9E+04
Methyl isocyanate	624-83-9		1.0E+00					3.9E+01
Methyl mercury [see mercury & compounds]								
Methyl methacrylate	80-62-6		9.8E+02					3.8E+04
Methyl tertiary-butyl ether (MTBE)	1634-04-4		8.0E+03		1.8E-03			3.6E+02
Methylene bis (2-chloroaniline), 4,4'- (MOCA)	101-14-4				1.5E+00			4.3E-01
Methylene chloride (dichloromethane)	75-09-2	1.4E+04	4.0E+02		3.5E-03		3.1E+01	1.8E+02
Methylene dianiline, 4,4'- (and its dichloride) ⁴	101-77-9		2.0E+01		1.6E+00	1.6E+00		4.1E-01
Methylene diphenyl isocyanate	101-68-8		7.0E-01					2.7E+01
Michler's ketone (4,4'-bis(dimethylamino)benzophenone)	90-94-8				8.6E-01			7.4E-01

Chemical	CAS Number ¹	Acute Inhalation REL (µg/m ³)	Chronic Inhalation REL (µg/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)
Mineral fibers (<1% FREE SILICA)			2.4E+01					9.3E+02
ceramic fibers (man-made)			2.4E+01					9.3E+02
glasswool (man-made fibers)			2.4E+01					9.3E+02
mineral fibers (fine: man-made)			2.4E+01					9.3E+02
rockwool (man-made fibers)			2.4E+01					9.3E+02
slagwool (man-made fibers)			2.4E+01					9.3E+02
Naphthalene [see polycyclic aromatic hydrocarbons]								
Nickel and compounds ⁴ (<i>values also apply to:</i>)	7440-02-0	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel acetate ⁴	373-02-4	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel carbonate ⁴	3333-39-3	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel carbonyl ⁴	13463-39-3	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel hydroxide ⁴	12054-48-7	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
Nickelocene ⁴	1271-28-9	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel oxide ⁴	1313-99-1	6.0E+00	1.0E-01	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel refinery dust from the pyrometallurgical process ⁴		6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel subsulfide ⁴	12035-72-2	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
Nitric acid	7697-37-2	8.6E+01					1.9E-01	
Nitrobenzene	98-95-3		1.7E+00					6.6E+01
Nitropropane, 2-	79-46-9		2.0E+01					7.7E+02
Nitrosodi-n-butylamine, N-	924-16-3				1.1E+01			5.8E-02
Nitrosodi-n-propylamine, N-	621-64-7				7.0E+00			9.1E-02
Nitrosodiethylamine, N-	55-18-5				3.6E+01			1.8E-02
Nitrosodimethylamine, N-	62-75-9				1.6E+01			4.0E-02
Nitrosodiphenylamine, N-	86-30-6				9.0E-03			7.1E+01
Nitroso-n-methylethylamine, N-	10595-95-6				2.2E+01			2.9E-02
Nitrosomorpholine, N-	59-89-2				6.7E+00			9.6E-02
Nitrosopiperidine, N-	100-75-4				9.4E+00			6.8E-02
Nitrosopyrrolidine, N-	930-55-2				2.1E+00			3.0E-01

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Nitrosodiphenylamine, p-	156-10-5				2.2E-02			2.9E+01
Ozone	10028-15-6	1.8E+02	1.8E+02				4.0E-01	7.0E+03
Pentachlorophenol	87-86-5		2.0E-01		1.8E-02			7.7E+00
Perchloroethylene (tetrachloroethylene)	127-18-4	2.0E+04	3.5E+01		2.1E-02		4.4E+01	3.0E+01
Phenol	108-95-2	5.8E+03	2.0E+02				1.3E+01	7.7E+03
Phosgene	75-44-5	4.0E+00					8.8E-03	
Phosphine	7803-51-2		8.0E-01					3.1E+01
Phosphoric acid	7664-38-2		7.0E+00					2.7E+02
Phosphorus (white)	7723-14-0		7.0E-02					2.7E+00
Phthalic anhydride	85-44-9		2.0E+01					7.7E+02
PCBs (polychlorinated biphenyls) [low risk] ^{4,7}	1336-36-3		1.2E+00	2.0E-05	7.0E-02	7.0E-02		8.0E-01
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

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<i>sulfuric acid</i>	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
toluene-2,6-diisocyanate	91-08-7		7.0E-02		3.9E-02			2.7E+00
Trichloroethane, 1,1,1 (see methyl chloroform)								
Trichloroethane, 1,1,2- (vinyl trichloride)	79-00-5				5.7E-02			1.1E+01
Trichloroethylene	79-01-6		6.0E+02		7.0E-03			9.1E+01
Trichlorophenol, 2,4,6-	88-06-2				7.0E-02			9.1E+00
Triethylamine	121-44-8	2.8E+03	2.0E+02				6.2E+00	7.7E+03
Urethane (ethyl carbamate)	51-79-6				1.0E+00			6.4E-01
Vanadium Compounds								
vanadium (fume or dust)	7440-62-2	3.0E+01					6.6E-02	
vanadium pentoxide	1314-62-1	3.0E+01					6.6E-02	
Vinyl acetate	108-05-4		2.0E+02					7.7E+03
Vinyl bromide	593-60-2		7.0E+00					2.7E+02
Vinyl chloride (chloroethylene)	75-01-4	1.8E+05	2.6E+01		2.7E-01		4.0E+02	2.4E+00
Vinylidene chloride (1,1-dichloroethylene)	75-35-4		7.0E+01					2.7E+03
Xylenes (mixed isomers)	1330-20-7	2.2E+04	7.0E+02				4.9E+01	2.7E+04
m-xylene	108-38-3	2.2E+04	7.0E+02				4.9E+01	2.7E+04
o-xylene	95-47-6	2.2E+04	7.0E+02				4.9E+01	2.7E+04
p-xylene	106-42-3	2.2E+04	7.0E+02				4.9E+01	2.7E+04
Zinc and compounds	7440-66-6		3.5E+01					1.4E+03
<i>zinc oxide</i>	1314-13-2		3.5E+01					1.4E+03

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- 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
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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

**REGULATION 2
PERMITS
RULE 1
GENERAL REQUIREMENTS**

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**REGULATION 2
PERMITS
RULE 1
GENERAL REQUIREMENTS**

2-1-100 GENERAL

2-1-106 Limited Exemption, Accelerated Permitting Program: Unless subject to any of the provisions of Sections 2-1-316 through 319, any new or modified source is exempt from the Authority to Construct requirements of Section 2-1-301, provided that the owner or operator submits a complete application under the Accelerated Permitting Program. A complete permit application under this program consists of: a completed permit application form and source data form(s); payment of applicable fees (the minimum permit fee required to install and operate each source); and certification that the source meets all of the criteria set forth in Sections 2-1-106.1 through 106.3. Such a source is still subject to the Permit to Operate requirements of Section 2-1-302, but will be evaluated under the Accelerated Permitting Program, as described in Section 2-1-302.2.

106.1 Uncontrolled emissions of POC, NPOC, NO_x, SO₂, PM₁₀, and CO are each less than 10 pounds per highest day; or the source is pre-certified per Section 2-1-415; and

106.2 Emissions of toxic compounds do not exceed the trigger levels identified in Table 2-1-3462-5-1 of Regulation 2, Rule 5; and

106.3 The source is not subject to the public notice requirements of Section 2-1-412.

In addition to the above, the replacement of any abatement device is exempt from the Authority to Construct requirements of Section 2-1-301 and will be evaluated under the Accelerated Permitting Program in Section 2-1-302.2, provided that the owner or operator certifies for all pollutants that the abatement device is as efficient as, or more efficient than, the abatement device being replaced. In addition to the above, any alteration of a source is exempt from the Authority to Construct requirements of Section 2-1-301 and will be evaluated under the Accelerated Permitting Program in Section 2-1-302.2, provided that the owner or operator certifies for all pollutants that the alteration does not result in an increase in emissions.

(Adopted 6/7/95; Amended 10/7/98; 5/17/00)

2-1-200 DEFINITIONS

2-1-220 Portable Equipment: This definition is provided exclusively for determining applicability of Section 2-1-413: Portable Equipment Operated Within the District. "Portable equipment" means any emission unit that, by itself or, in or on a piece of equipment, is portable, meaning designed to be and capable of being carried or moved from one location to another. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly trailer, platform or mounting. A piece of equipment is portable, for purposes of obtaining a portable permit under Section 2-1-413, if all of the following are met:

220.1 The equipment will not remain at any single location for a period in excess of twelve consecutive months, following the date of initial operation. Any emission unit, such as back up or standby unit, which replaces an emission

- unit at that location and is intended to perform the same function as the unit being replaced, will be counted toward the time limitation.
- 220.2 The source (emission unit) remains or will remain at a location for no more than twelve months, following the date of initial operation, where such a period does not represent the full length of normal annual source operations, such as operations which are seasonal.
- 220.3 The equipment is not removed from, or stored at, one location for a period and then returned to the same location in an attempt to circumvent the portable equipment residence time requirement.
- 220.4 The equipment is not operated within 1000 feet of the outer boundary of any K-12 school site, unless the applicable notice requirements of Health and Safety Code Section 42301.6 have been met.
- 220.5 The operation complies with ~~the Toxic Risk Management Policy~~ Regulation 2, Rule 5.
- 220.6 No air contaminant is released into the atmosphere in sufficient quantities as to cause a public nuisance per Regulation 1-301.
- 220.7 The operation of the portable equipment in the Air District shall emit no more than 10 tons per year of each pollutant, including POC, CO, NO_x, PM₁₀, NPOC or SO₂. For PM₁₀, fugitive particulate emissions from haul road traffic shall not be counted toward the annual limit.
- 220.8 The operation must be exempt from CEQA, or must be covered by a chapter in the District's Permit Handbook.
- 220.9 The equipment will not cause a Synthetic Minor Facility to exceed a federally enforceable emission limit.
- 220.10 If this equipment remains at any fixed location for more than twelve months, the portable permit will automatically revert to a conventional permanent location permit and will lose its portability. To obtain another portable permit for the equipment, the owner must re-permit the equipment for the next location of intended operations. Upon written request, the APCO may exclude reasonable storage periods before the date of initial operation and/or following the date of final operation from the twelve month time limitation.

(Adopted 6/7/95; Amended 10/7/98)

2-1-222 Toxic Air Contaminant (TAC): An air pollutant, ~~which that~~ that may cause or contribute to an increase in mortality or in serious illness, or ~~which that~~ that may pose a present or potential hazard to human health. ~~For the purposes of this rule, TACs Toxic air contaminants consist of those substances identified by the Air Resources Board under Section 39662 of the State Health and Safety Code, and those substances listed as hazardous air pollutants under subsection (b) of Section 112 of the federal Clean Air Act~~ the substances listed in Table 2-5-1 of Regulation 2, Rule 5.

(Adopted 6/7/95; Amended 5/17/00)

2-1-225 Health Risk Screening Analysis (HRS): ~~An assessment of the measure of health risk for individuals in the affected population that may be exposed to emissions of toxic air contaminants from a given source. For the purposes of this Rule, a risk screening analysis may be a simplified analysis or, where available, a more refined health risk assessment utilizing appropriate site-specific information. An analysis that estimates the increased likelihood 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 Regulation 2-5-603.~~ An analysis that estimates the increased likelihood 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 Regulation 2-5-603.

(Adopted June 7, 1995)

2-1-234 Modified Source: Any existing source ~~which that~~ that undergoes a physical change, change in ~~the~~ method of operation ~~of~~, increase in throughput or production, or addition ~~which and that~~ and that results or may result in any of the following:

- 234.1 An increase ~~of in~~ either the daily or annual emission level of any regulated air pollutant, or an increase in the production rate or capacity that is used to

estimate the emission level, that exceeds emission or production levels approved by the District in any authority to construct.

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

234.3 For sources ~~which~~that have never been issued a District authority to construct, and ~~which~~that do not have conditions limiting daily or annual emissions, an increase ~~of~~in either daily or annual emission level of any regulated air pollutant, or the production rate or capacity that is used to estimate the emission level, above the ~~lowest~~lower of the following:

3.1 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 March 1, 2000.

3.2 The 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 234.3, only increases in annual emission levels shall be considered for storage vessels.

234.4 The emission of any regulated air pollutant or toxic air contaminant not previously emitted in a quantity which that would cause the source to fail an air toxic screening analysis performed in accordance with the current Air Toxic Risk Screening Procedure result in a cancer risk (as defined in Regulation 2-5-206) greater than 1.0 in a million (10^{-6}) or a chronic hazard index (as defined in Regulation 2-5-208) greater than 0.20.

For the purposes of applying this definition, an hourly limit or capacity may be converted to a daily limit or capacity by multiplication by 24 hours/day; a daily capacity may be converted to an annual capacity or limit by multiplication by 365 days/year.

(Adopted 5/17/00; Amended 11/15/00)

2-1-237 BACT/TBACT Workbook: The District guidelines, which set forth emission limitations and/or control technologies constituting BACT and TBACT for a number of source types or categories.

2-1-238 Clean Air Act: The federal Clean Air Act, as amended in 1990, including the implementing regulations.

2-1-300 STANDARDS

2-1-309 Canceled Application: The APCO may cancel an application for an authority to construct and a permit to operate if, within 90 days after the application was deemed incomplete, the applicant fails to furnish the requested information or pay all appropriate fees. The 90 day period may be extended for an additional 90 days upon receipt of a written request from the applicant and written approval thereof by the APCO. The APCO shall notify the applicant in writing of a cancellation, and the reasons therefore. A cancellation shall become effective 10 days after the applicant has been notified. The cancellation shall be without prejudice to any future applications.
(Adopted April 6, 1988)

- 2-1-312 Other Categories of Exempt Projects:** In addition to ministerial projects, the following categories of projects subject to permit review by the District will be exempt from the CEQA review, either because the category is exempted by the express terms of CEQA (subsections 2-1-312.1 through 312.9) or because the project has no potential for causing a significant adverse environmental impact (subsections 2-1-312.10 and 312.11). Any permit applicant wishing to qualify under any of the specific exemptions set forth in this Section 2-1-312 must include in its permit application CEQA-related information in accordance with subsection 2-1-426.1. In addition, the CEQA-related information submitted by any permit applicant wishing to qualify under subsection 2-1-312.11 must demonstrate to the satisfaction of the APCO that the proposed project has no potential for resulting in a significant environmental effect in connection with any of the environmental media or resources listed in Section II of Appendix I of the State CEQA Guidelines.
- 312.1 Applications to modify permit conditions for existing or permitted sources or facilities that do not involve any increases in emissions or physical modifications.
 - 312.2 Permit applications to install air pollution control or abatement equipment.
 - 312.3 Permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District or of any other local, state or federal agency.
 - 312.4 Permit applications submitted by existing sources or facilities pursuant to a loss of a previously valid exemption from the District's permitting requirements.
 - 312.5 Permit applications submitted pursuant to the requirements of an order for abatement issued by the District's Hearing Board or of a judicial enforcement order.
 - 312.6 Permit applications relating exclusively to the repair, maintenance or minor alteration of existing facilities, equipment or sources involving negligible or no expansion of use beyond that previously existing.
 - 312.7 Permit applications for the replacement or reconstruction of existing sources or facilities where the new source or facility will be located on the same site as the source or facility replaced and will have substantially the same purpose and capacity as the source or facility replaced.
 - 312.8 Permit applications for cogeneration facilities which meet the criteria of Section 15329 of the State CEQA Guidelines.
 - 312.9 Any other project which is exempt from CEQA review pursuant to the State CEQA Guidelines.
 - 312.10 Applications to deposit emission reductions in the emissions bank pursuant to Regulation 2, Rule 4 or Regulation 2, Rule 9.
 - 312.11 Permit applications for a proposed new or modified source or sources or for process changes which will satisfy the "No Net Emission Increase" provisions of District Regulation 2, Rule 2, and for which there is no possibility that the project may have any significant environmental effect in connection with any environmental media or resources other than air quality. Examples of such projects include, but are not necessarily limited to, the following:
 - 11.1 Projects at an existing stationary source for which there will be no net increase in the emissions of air contaminants from the stationary source and for which there will be no other significant environmental effect;
 - 11.2 A proposed new source or stationary source for which full offsets are provided in accordance with Regulation 2, Rule 2, and for which there will be no other significant environmental effect;
 - 11.3 A proposed new source or stationary source at a small facility for which full offsets are provided from a small facility bank established by

the APCO pursuant to Regulation 2-4-414, and for which there will be no other significant environmental effect;

- 11.4 Projects satisfying the "no net emission increase" provisions of District Regulation 2, Rule 2 for which there will be some increase in the emissions of any toxic air contaminant, but for which the District staff's preliminary health risk screening analysis shows that a formal health risk assessment is not required the project will not result in a cancer risk (as defined in Regulation 2-5-206) greater than 1.0 in a million (10^6) and will not result in a chronic hazard index (as defined in Regulation 2-5-208) greater than 0.20, and for which there will be no other significant environmental effect.

(Adopted 7/17/91; Amended 5/17/00; 12/21/04)

- 2-1-313 Projects Not Exempt From CEQA Review:** Notwithstanding the exemptions from CEQA review set forth in Section 2-1-312, such exemptions shall not apply: ~~(i) to any project for which the District staff's preliminary health risk screening analysis shows that a formal health risk assessment must be submitted by the applicant, or (ii) to any project covered by the categories set forth in subsections 2-1-312.1 through 312.9 where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances, or due to cumulative impacts of successive projects of the same type in the same place over time. Such projects shall be reviewed in accordance with the requirements of CEQA.~~

(Adopted July 17, 1991)

- 2-1-316 New or Modified Sources of Toxic Air Contaminants or Hazardous Air Pollutants:** Notwithstanding any exemption contained in Section 2-1-103 or Section 114 through 128, any new or modified source meeting any of the following criteria shall be subject to the requirements of Regulation 2, Rule 1, Section 301 and/or 302.

- 316.1 If a new or modified source emits one or more toxic air contaminants in quantities that exceed the ~~limits-trigger levels~~ listed in ~~Table 2-1-3162-5-1 of Regulation 2, Rule 5 and the source did not have a valid exemption from Regulation 2-1-302 when the source was constructed or modified,~~ then the source shall be subject to the requirements of Sections 2-1-301 and 302, unless the owner or operator of the source can demonstrate to the satisfaction of the APCO, ~~within 90 day of request per Regulation 1, Section 441, that the source would pass a risk screening analysis, as defined in Section 2-1-225, performed according to the current Air Toxic Risk Screening Procedure.~~

1.1 Will comply with the TBACT requirement of Regulation 2-5-301 (if applicable); and

1.2 Will comply with the project risk limits of Regulation 2-5-302 (if applicable).

- 316.2 If a new or modified source, or group of related sources, ~~as defined in the District's current Risk Management Policy,~~ in a proposed construction or modification will emit 2.5 or more tons per year of any single hazardous air pollutant or 6.25 or more tons per year of any combination of hazardous air pollutants, then the source or group of sources shall be subject to the requirements of Sections 2-1-301 and 302.

(Adopted 4/16/86; Amended 7/17/91; Renumbered and Amended 6/7/95; Amended 5/17/00)

2-1-400 ADMINISTRATIVE REQUIREMENTS

- 2-1-409 Regulations in Force Govern:** The decision as to whether an authority to construct shall be granted or denied shall be based on federal, state and District BACT₁ ~~and~~

offset, TBACT and project risk regulations or standards in force on the date the application is declared by the APCO to be complete.

2-1-428 Criteria for Approval of Ministerial Permit Applications: If the District classifies a permit application as ministerial pursuant to Section 2-1-427, and as a result of its evaluation of that permit application, the District determines that all of the following criteria are met, the issuance by the District of an Authority to Construct for the proposed new or modified source will be a mandatory ministerial duty.

428.1 The proposed new or modified source will comply with all applicable provisions of the District's Rules and Regulations and with all applicable provisions of state and federal law and regulations which the District has the duty to enforce;

428.2 The emissions from the proposed project can be calculated using standardized emission factors from published governmental sources, District source test results, established formulas from published engineering and scientific handbooks, material safety data sheets or other similar published literature, manufacturer's warranties or other fixed standards as set forth in the District's Permit Handbook and BACT/TBACT Workbook;

428.3 Where Best Available Control Technology is required, BACT for the proposed new or modified source can be determined based on the latest edition of the ARB's BACT/LAER Clearinghouse, on the District's own compilations of BACT levels for specific types of sources as set forth in the District's Permit Handbook and BACT/TBACT Workbook or on a more stringent BACT level proposed by the project proponent; and

428.4 If the proposed new or modified source involves the shutdown of an existing source, the Reasonably Available Control Technology applicable to the source to be shut down can be determined from existing provisions of the District's Rules and Regulations or from the District's own compilations of BACT levels for specific types of sources as set forth in District's Permit Handbook and BACT/TBACT Workbook.

428.5 For proposed new or modified sources that are subject to Regulation 2, Rule 5, the project meets the project risk requirement of Regulation 2-5-302.

428.6 Where Best Available Control Technology for Toxics (TBACT) is required pursuant to Regulation 2-5-301, TBACT for the proposed new or modified source can be determined based on TBACT determinations in the District's BACT/TBACT Workbook, an EPA MACT standard, a CARB ATCM, or a more stringent TBACT level proposed by the applicant that is applicable to the specific source type or source category being evaluated.

In addition, when the District has issued an authority to construct for a proposed new or modified source as a ministerial project, the issuance of the permit to operate for that source will also be a mandatory ministerial duty if the source will meet all the conditions imposed in connection with the issuance of the authority to construct and all applicable laws, rules and regulations enforced by the District.

(Adopted 11/20/91; Amended 10/7/98)

Table 2-1-316
Toxic Air Contaminant Trigger Levels

This table has been superceded by Table 2-5-1 in Regulation 2, Rule 5.

Compound	CAS Number	Trigger Level (lb/year)
Acetaldehyde	75070	7.2E+01
Acetamide	603505	9.7E+00
Acrolein	107028	3.9E+00
Acrylamide	79061	1.5E-01
Acrylonitrile	107131	6.7E-01
Allyl chloride	107051	3.3E+01
Aminoanthraquinone, 2	117793	2.1E+01
Ammonia	7664417	1.9E+04
Aniline	62533	1.2E+02
Arsenic and arsenic compounds (inorganic)	7440382*	2.5E-02
Asbestos	1332214	3.0E-03
Benzene	71432	6.7E+00
Benzidine (and its salts)	92875*	1.4E-03
Benzyl chloride (see chlorotoluenes)	100447	3.9E+00
Beryllium and beryllium compounds	7440417*	1.4E-02
Bis(2-chloro-ethyl)ether	111444	2.7E-01
Bis(chloro-methyl)ether	542881	1.5E-02
Bromine and bromine compounds (inorganic)	7726956*	3.3E+02
Butadiene, 1,3-	106990	1.1E+00
Butyl alcohol, tert-	75650	1.4E+05
Cadmium and cadmium compounds	7440439*	4.6E-02
Carbon disulfide	75150	1.4E+04
Carbon tetrachloride	56235	4.6E+00
Chlorinated dibenzodioxins and dibenzofurans (TCDD equivalent)	1746016*	1.2E-06
Chlorinated paraffins	*	7.7E+00
Chlorine	7782505	1.4E+03
Chlorobenzene	108907	1.4E+04
Chlorofluorocarbons	*	1.4E+05
Chloroform	67663	3.6E+01
Chloro-o-phenylenediamine, 4-	95830	4.2E+01
Chloro-o-toluidine, p-	95692	2.5E+00
Chlorophenol, 2-	108430	3.5E+03
Chloropicrin	76062	3.3E+02
Chloroprene	126998	1.9E+03
Chlorotoluenes	100447*	2.3E+03
Chromium (hexavalent) and chromium (hexavalent) compounds	18540299*	1.3E-03
Copper and copper compounds	7440508*	4.6E+02
Cresidine, p-	120718	4.4E+00
Cresol	1319773	3.5E+04
Cupferron	135206	3.1E+00
Diaminoanisole, 2,4-	96128	2.9E+01
Dibromo-3-chloropropane, 1,2- (DBCP)	96128	9.7E-02
Dichlorobenzene, 1,4-	106467	1.8E+01
Dichlorobenzidene, 3,3'-	91941	5.6E-01
Dichloroethane, 1,1-	75343	1.2E+02

Compound	CAS Number	Trigger Level (lb/year)
Dichloroethylene, 1,1- (see vinylidene chloride)		
Diesel exhaust-particulate matter	n/a	6.4E-01
Diethylaminoethanol	100378	2.1E+04
Diethylhexylphthalate (DEHP)	117817	8.1E+01
Dimethylaminoazobenzene, p-	60117	1.5E-01
Dimethyl phthalate	131113	2.3E+03
Dimethylamine	124403	3.8+02
Dinitrotoluene, 2,4-	121142	2.1E+00
Dioctyl phthalate	117840	2.3E+03
Dioxane, 1,4-	123911	2.5E+01
Epichlorohydrin	106898	8.3E+00
Ethyl acetate	141786	6.6E+05
Ethyl acrylate	140885	9.3E+03
Ethyl chloride	75003	1.9E+06
Ethylene dibromide (1,2-dibromoethane)	106934	2.7E+00
Ethylene dichloride (1,2-dichloroethane)	107062	8.7E+00
Ethylene oxide	75218	2.1E+00
Ethylene thiourea	96457	1.5E+01
Formaldehyde	50000	3.3E+01
Freons (see Chlorofluorocarbons)		
Glutaraldehyde	111308	3.3E+02
Glycol ethers:		
2-Ethoxy ethanol (cellosolve; ethylene glycol monoethyl ether)	110805	3.9E+04
2-Ethoxyethyl acetate (cellosolve acetate; ethylene glycol monoethyl ether acetate)	111159	1.3E+04
2-Methoxy ethanol (methyl cellosolve; ethylene glycol monomethyl ether)	109864	3.9E+03
2-Methoxyethyl acetate (methyl cellosolve acetate; ethylene glycol monomethyl ether acetate)	110496	1.1E+04
2-Butoxy ethanol (Butyl cellosolve; ethylene glycol monobutyl ether)	111762	3.9E+03
Hexachlorobenzene	118741	3.9E-01
Hexachlorocyclohexanes	58899*	1.8E-01
Hexachlorocyclopentadiene	77474	4.6E+01
Hexane, n-	110543	8.3E+04
Hydrazine	302012	3.9E-02
Hydrogen bromide (hydrobromic acid)	10035106	4.6E+03
Hydrogen chloride	7647010	1.4E+03
Hydrogen cyanide	74908	1.4E+04
Hydrogen fluoride	7664393	1.1E+03
Hydrogen sulfide	7783064	8.1E+03
Isocyanates:		
Methylene-bis-phenyl isocyanate	101688	1.8E+01
Methyl isocyanate	624839	7.0E+01
Toluene diisocyanates	26471625*	1.8E+01
Isophorone	78591	6.6E+04
Isopropyl alcohol	67630	4.4E+05
Lead, inorganic, and lead compounds	7439921*	1.60E+01

Compound	CAS Number	Trigger Level (lb/year)
Maleic anhydride	108316	4.6E+02
Manganese and manganese compounds	7439965*	7.7E+01
Mercury and mercury compounds (inorganic)	7439976*	5.8E+01
Methyl alcohol (methanol)	67561	1.2E+05
Methyl bromide	74839	1.2E+03
Methyl chloroform (1,1,1-TCA)	71556	6.2E+04
Methyl mercury	593748	1.9E+02
Methyl methacrylate	80626	1.9E+05
Methylene bis(2-chloroaniline), 4,4'-	401144	4.4E-01
Methylene chloride	75092	1.9E+02
Methylene dianiline, 4,4'-	101779*	4.2E-01
Methylethylketone (MEK)	78933	1.5E+05
Methylpyrrolidone, N-	872504	1.8E+05
Michler's ketone	90948	7.7E-01
Naphthalene	91203	2.7E+02
Nickel and nickel compounds	7440020*	7.3E-01
Nitric acid	7697372	2.3E+03
Nitrobenzene	98953	3.3E+02
Nitropropane, 2-	79469	3.9E+03
Nitrosodiethylamine, N-	55185	1.9E-02
Nitrosodimethylamine, N-	62759	4.2E-02
Nitroso-n-dibutylamine, N-	924163	1.6E-03
Nitrosodiphenylamine, N-	86306	7.3E+01
Nitrosodiphenylamine, p-	156105	3.1E+01
Nitroso-N-methylethylamine, N-	10595956	3.1E-02
Nitroso-morpholine, N-	59892	1.0E-01
Nitroso-piperidine, N-	100754	7.1E-02
Nitrosodi-n-propylamine, N-	621647	9.7E-02
Nitrosopyrrolidine, N-	930552	3.3E-01
PAHs (including but not limited to):	*	
Benz[a]anthracene	56553	4.4E-02
Benzo[b]fluoroanthene	205992	4.4E-02
Benzo[k]fluoroanthene	205823	4.4E-02
Benzo[a]pyrene	50328	4.4E-02
Dibenz[a,h]anthracene	53703	4.4E-02
Indeno[1,2,3-cd]pyrene	193395	4.4E-02
PCBs (polychlorinated biphenyls)	1336363*	6.8E-03
Pentachlorophenol	87865	3.8E+01
Perchloroethylene (tetrachloroethylene)	127184	3.3E+01
Phenol	108952	8.7E+03
Phosgene	75445	1.8E+02
Phosphine	7803512	1.9E+03
Phosphoric acid	7664382	4.6E+02
Phosphorus (white)	7723140	1.4E+01
Phthalic anhydride	85449	1.4E+06
Potassium bromate	7758012	1.4E+00
Propane sulfone, 1,3-	1120714	2.7E-01
Propylene oxide	75569	5.2E+01
Selenium and selenium compounds	7782492*	9.7E+01
Sodium hydroxide	1310732	9.3E+02

Compound	CAS Number	Trigger Level (lb/year)
Styrene monomer	100425	1.4E+05
Tetrachloroethane, 1,1,2,2-	79345	3.3E+00
Tetrachlorophenols	25167833*	1.7E+04
Tetrahydrofuran	109999	2.7E+05
Thioacetamide	62555	1.1E-01
Toluene	108883	3.9E+04
Toluene diisocyanate, 2,4-	584849	1.8E+01
Toluene diisocyanate, 2,6-	91087	1.8E+01
Trichlorobenzene, 1,2,4-	120821	1.8E+04
Trichloroethane, 1,1,1- (see Methyl chloroform)		
Trichloroethane, 1,1,2- (vinyl trichloride)	79005	1.2E+01
Trichloroethylene	79016	9.7E+01
Trichlorophenol, 2,4,6-	88062	9.7E+00
Urethane (ethyl carbamate)	51796	6.6E-01
Vapam (sodium methyldithiocarbamate)	137428	2.2E+04
Vinyl chloride	75014	2.5E+00
Vinylidene chloride	75354	6.2E+03
Xylenes	1330207*	5.8E+04
Zinc and zinc compounds	7440666*	6.8E+03

* -- This is a chemical compound group. If a CAS number is listed, it represents only a single chemical within the chemical class (for metallic compounds, the CAS number of the elemental form is listed; for other compounds, the CAS number of a predominant compound in the group is given).

n/a -- No CAS number is available for this compound or compound group.

(Amended 5/17/00; 11/15/00)

REGULATION 2 PERMITS

RULE 2 NEW SOURCE REVIEW

2-2-244 Best Available Control Technology for Toxics (TBACT): For any new or modified source, 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:

- 244.1 The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or
- 244.2 The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or
- 244.3 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
- 244.4 The most stringent emission control for a source type or category for which a Maximum Achievable Control Technology (MACT) standard has been proposed, or for which the CARB has developed an Airborne Toxic Control Measure (ATCM). ~~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.~~

~~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 this Section 2-2-244.~~

(Adopted May 17, 2000)

REGULATION 2
PERMITS
RULE 9
INTERCHANGEABLE EMISSION REDUCTION CREDITS

- 2-9-301 Bankable Interchangeable Emission Reduction Credits – General Provisions:**
- 301.1 An emission reduction of a bankable pollutant may be banked as an Interchangeable Emission Reduction Credit, if it meets the following criteria:
- 1.1 The emission reduction is generated by a stationary source that the District includes in its Emission Inventory. A source is included in the Emission Inventory if it has a District Permit to Operate (if one is required) or is a member of a source category included in the Emission Inventory (if no permit is required).
 - 1.2 The emission reduction is real, permanent, quantifiable, enforceable and surplus.
 - 1.3 The emission reduction did not result from the shutdown or curtailment of a source.
 - 1.4 Any secondary emissions resulting from the emission reduction comply with ~~the District's Toxic Risk Management Policy for new sources~~ Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants.
- 2-9-304 Restrictions on the Use of IERC's:** An IERC may not be used to fully or partially comply with:
- 304.1 Any emission standard at any facility other than the facility at which the IERC is generated.
 - 304.2 Best Available Control Technology requirements in Regulation 2-2-301.
 - 304.3 New Source Performance Standards in Regulation 10.
 - 304.4 National Emission Standards for Hazardous Air Pollutants (NESHAP).
 - 304.5 Federal Maximum Achievable Control Technology (MACT) standards.
 - 304.6 Emission limitations or control requirements on toxic emissions imposed by ~~the District's Risk Management Policy~~ Regulation 2, Rule 5.
 - 304.7 Any requirement in Regulation 9 with an implementation date before April 7, 1999.
 - 304.8 Any requirement in Regulation 9 that has been approved by EPA for inclusion in the California SIP, unless this Regulation has been approved by EPA for inclusion in the SIP.

REGULATION 3

FEES

Regulation 3 Fees is being revised in a separate concurrent rule revision package. Please refer to the 2005 general fee amendments proposals for the specific proposed revisions to Regulation 3.

**REGULATION 8
ORGANIC COMPOUNDS
RULE 34
SOLID WASTE DISPOSAL SITES**

- 8-34-122 Limited Exemption, Permanent Collection and Control System Shutdown:** The requirements of Sections 8-34-301, 303, 304, and 305 shall not apply to closed landfills which meet all of the following requirements:
- 122.1 The landfill last accepted waste at least 30 years ago,
 - 122.2 The gas collection system and emission control system have been in operation for a minimum of fifteen years,
 - 122.3 The landfill has an NMOC emission rate of less than 50 megagrams per year (55 tons per year) as determined using the procedures in 40 CFR 60.752(b)(2)(v)(C) and 60.754(b),
 - 122.4 The operator can demonstrate to the satisfaction of the APCO, by conducting a health risk screening analysis performed according to the District's Health Risk Screening Analysis Guidelines, that the landfill, without a gas collection system, would ~~pass a risk screening analysis, as defined in Regulation 2-1-225, performed according to the current Air Toxic Risk Screening Procedure not require TBACT pursuant to Regulation 2-5-301,~~ and
 - 122.5 The APCO has approved the Equipment Removal Report required pursuant to Section 8-34-410.

(Adopted October 6, 1999)

**REGULATION 8
ORGANIC COMPOUNDS**

**RULE 40
AERATION OF CONTAMINATED SOIL AND
REMOVAL OF UNDERGROUND STORAGE TANKS**

8-40-118 Exemption, Aeration Projects of Limited Impact: The requirements of Sections 8-40-403 and 8-40-405 shall not apply to any aeration project in which total project emissions of volatile organic compounds are less than 150 ~~lb~~-pounds, and total project emissions of toxic air contaminants are less than the ~~limits~~-trigger levels listed in Table ~~2-4-316~~ 2-5-1 in District Regulation 2, Rule ~~45~~.

(Adopted December 15, 1999)

**REGULATION 8
ORGANIC COMPOUNDS**

RULE 47

AIR STRIPPING AND SOIL VAPOR EXTRACTION OPERATIONS

- 8-47-401 Reporting, Superfund Amendments and Reauthorization Act (SARA) Sites:** Any person responsible for air stripping or soil vapor extraction operations which have not applied for a District permit shall provide written notification to the APCO of intention to operate. This notice shall include:
- 401.1 Address of the remediation site.
 - 401.2 Schedule of starting date 30 days prior to start-up.
 - 401.3 Written certification that the proposed operation will be in compliance with the requirements of this Rule.
 - 401.4 Any person seeking to satisfy the conditions of Section 8-47-113 shall submit the health risk screening analysis for APCO approval as required in Section 8-47-402.
- 8-47-402 Less Than 1 Pound Per Day Petition:** Any person seeking to satisfy the conditions of Section 8-47-113 shall:
- 402.1 Submit a petition to the APCO in writing requesting review and written approval of a health risk screening analysis for the benzene, vinyl chloride, perchloroethylene, methylene chloride and/or trichloroethylene organic compound emissions that are less than 1 pound per day.

REGULATION 11
HAZARDOUS POLLUTANTS
RULE 16
PERCHLOROETHYLENE AND SYNTHETIC SOLVENT DRY CLEANING
OPERATIONS

11-16-102 Applicability: Any person who performs dry cleaning or other related operations (water repellent treatment and dip tank operations) that use perchloroethylene or any other synthetic solvent shall comply with this rule. Operation of any equipment associated with dry cleaning that uses or contains synthetic solvent is subject to this rule. The requirements of this rule may be in addition to those found in other District rules and regulations. New, modified, relocated, or replacement equipment shall be given pre-construction review and granted authority to construct in accordance with Regulation 2, Rule 1-301. ~~Dry cleaning installations or modifications may be considered ministerial in accordance with Regulation 2, Rule 1, sections 311, 427, and 428 if reviewed, constructed, and operated in accordance with the District's Permit Handbook for Synthetic Solvent Dry Cleaners (Manual of Procedures, Volume II, Chapter 6) and Risk Management Policy for Dry Cleaners (MOP, Vol. II, Ch. 6, Appendix A).~~

11-16-301 Final Equipment Requirements, Existing Non-residential Facilities: Except as prohibited in Section 304, any person using synthetic solvent to dry clean materials in an existing non-residential facility shall use only the following equipment:

- 301.1 For an existing machine (operated prior to October 1, 1994):
1. A converted machine, or
 2. A closed-loop machine, or
 3. A secondary control machine, or
 4. Until prohibited on October 1, 1998:
 - a. A vented machine, or
 - b. A transfer machine;
- 301.2 For a machine that replaces an existing machine:
1. A closed-loop machine, or
 2. A secondary control machine;
- 301.3 For an additional machine (new installation; not replacing an existing machine):
1. A secondary control machine;
- 301.4 For any existing facility that requests an increase in permitted solvent usage for an existing machine or replacement machine:
1. A secondary control machine or
 2. A closed-loop machine with a fugitive control system that meets the provisions of subsection 305.4;
- 301.5 Except as provided in subsections 301.5.1 and 301.5.2 below, in addition to the dry cleaning equipment above, a ventilation system that meets the requirements of subsection 307.2 and Regulation 2, Rule 1, Section 301 shall be installed and operated.
1. Subsection 301.5 shall be waived by APCO, for a facility subject to subsection 301.3 or 301.4, if the off-site cancer risk caused by the facility is less than 100 in a million and the increase in off-site cancer risk caused by an additional machine or an increase in permitted solvent usage is less than 10 in a million.
 2. For a facility that is only subject to subsections 301.1 or 301.2: subsection 301.5 becomes effective on October 1, 1998 but shall be

waived by APCO if the off-site cancer risk caused by the facility is less than 100 in a million.

3. A fugitive control system that meets the requirements of subsection 305.4 may be installed and operated as a component of the ventilation system to reduce risk, particularly for co-commercial facilities.

Risk shall be determined by procedures outlined in ~~the District's Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Section 11-16-605.

11-16-302 Equipment Requirements, New Non-residential Facilities: Any person using synthetic solvent to dry clean materials in a new non-residential facility shall use only the following equipment:

302.1 A secondary control machine;

302.2 Except as provided in subsections 302.2.1, in addition to the dry cleaning equipment above, a ventilation system that meets the requirements of subsection 307.2 and Regulation 2, Rule 1, Section 301 shall be installed and operated.

1. Section 302.2 shall be waived by APCO if the off-site cancer risk caused by the facility is less than 10 in a million. Risk shall be determined by procedures outlined in ~~the District's Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Section 11-16-605.

11-16-605 Determination of Cancer Risk: Determination of cancer risk for subsections 301.5 and 302.2.1 shall be conducted using the District's ~~Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Health Risk Screening Analysis Guidelines.

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ENGINEERING PERMITTING PROCEDURES

PART I

INTRODUCTION

This document provides the information that an applicant may need to prepare and file an application with the BAAQMD. It describes the information required for a complete application. Please be aware that the Permit Regulations may be revised; any inconsistencies between this document and the Regulations shall be resolved in favor of the Regulations.

ENGINEERING PERMITTING PROCEDURES

PART II

PERMITS, GENERAL

1. TYPES OF PERMITS

The District issues different permits for different purposes. An operator who plans to install a new non-exempt source, or modify an existing one in a way that will increase emissions, must first obtain an Authority to Construct (A/C). Each operating non-exempt source of air pollution at a facility (each individual piece of equipment), requires a Permit to Operate (P/O). Certain kinds of portable equipment require registration before they can operate within the District. Major facilities are subject to the Title V Federal Permitting Program.

1.5 Title V Permitting Program (Synthetic Minor Permit)

Facilities with a potential to emit more than 100 tons per year may accept ~~enforceable~~ enforceable limits on their emissions to stay below the 100 ton per year threshold for a MFR permit. The resulting permit is a Synthetic Minor permit, so-called because the limitation on emissions is administrative and not inherent in the equipment.

2. PROCEDURES

District staff review the application to determine whether it meets the District's emission criteria. Call our Public Information Office at (415) 749-4900 for copies of the District's regulations. District Regulations are also available on the District's Website at <http://www.baaqmd.gov>.

For most applications, the evaluation will be completed within 49 calendar days of receipt and the applicant will be notified of the District's decision. The decision can be any one of the following:

- Issue an Authority to Construct with Conditions.
- Waive the Authority to Construct and issue a Permit to Operate with Conditions.
- Find part or all of the application Exempt from permit requirements.
- Deny the application.

Applications for large projects requiring offsets or other specialized treatment or approvals, may require more than 60 days for District review; and 30 additional days will be required for public comment and for review by EPA and the California Air Resources Board. Either of these agencies may ask for extensions.

If the equipment is in compliance, the District will issue the Permit to Operate within a few days after the compliance determination. It is valid for one year from the date of startup and is renewable on the facility's anniversary date.

If the source is at a facility with a synthetic minor or MFR permit, the process of amending that permit will be conducted concurrently.

4. INFORMATION REQUIRED FOR A PERMIT APPLICATION

In order to carry out its statutory responsibilities, the District must obtain sufficient information from each applicant to enable it to determine what the emissions would be and whether the emissions will comply with District regulations. The nature of the information required varies considerably between various types of equipment and processes and between small projects and large projects.

6. CRITERIA TO DETERMINE COMPLETENESS

A complete application provides sufficient information to enable the District to estimate what the emissions from the new or modified source will be. The following completeness list is provided for your assistance; not all of the items refer to every application. If you have fully answered all of the questions referring to your proposed installation, your application will be complete.

8. DEFINITIONS

Source: The equipment used to perform the operations preceding the emission of an air contaminant, which ~~operations~~ result in the creation or separation of the air contaminants or determine or substantially affect the quantity of air contaminant emitted, but not including air pollution control operations.

Facility: A unit or an aggregation of units of non-vehicular air contaminant emitting equipment located on one property or on contiguous properties under the same

ownership or entitlement to use and operate; and, in the case of an aggregation of units, those units which are related to one another. Units shall be deemed related to one another if the operation of one is dependent upon, or affects the process of, the other; if the operation involves a common or similar raw material product, or function; or if they have the same first two digits in their Standard Industrial Classification Codes as determined from the Standard Industrial Classification Manual published in 1972 by the Executive Office of the President, Office of Management and Budget. In addition, in cases where all or part of a stationary source is a facility used to load cargo onto or unload cargo from cargo carriers, other than motor vehicles, the APCO shall consider such carriers to be parts of the stationary source. Accordingly, all emissions from such carriers (excluding motor vehicles) while operating within the District and within California Coastal waters adjacent to the Air Basin shall be considered to be emissions from such stationary source. Emissions from such carriers shall include those that result from the purging or other method of venting vapors; and from the loading, unloading, storage, processing and transfer of cargo. However, emissions from the operation of the carriers' engines shall be considered only while such carriers are operating within the District.

9. GOOD ENGINEERING PRACTICE STACK HEIGHT

Good Engineering Practice (GEP) Stack Height: The greater of the following:

- (2) For stacks in existence on January 12, 1979 and for which the owner or operator had obtained an Authority to Construct under Section 2-1-301 for the source venting to the stack. Two and one-half times the height of the highest nearby structure measured from the ~~ground level~~ground level elevation at the base of the stack; or

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ENGINEERING PERMITTING PROCEDURES

**PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR
CONTAMINANTS**

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PART 4

NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

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PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

REF: BAAQMD Regulation 2, Rule 1
BAAQMD Regulation 2, Rule 5

1. INTRODUCTION

In 1986, the Bay Area Air Quality Management District Board of Directors adopted a plan to reduce public exposure to toxic air contaminants (TACs) in the San Francisco Bay Area. One of the plan elements was for District staff to begin reviewing permit applications for new and modified sources for potential health risks associated with any emitted TACs. The goals of this review were to: (1) prevent significant increases in health risks from newly constructed or modified stationary sources, and (2) reduce health risks by requiring improved air pollution controls when older, more highly emitting, sources were modified or replaced. After holding a public workshop on the matter, the District adopted a Risk Evaluation Procedure (REP) and Risk Management Policy (RMP) in 1987.

The REP established a methodology for completing health risk screening analyses (HRSA) for new and modified sources that was based on guidelines developed by a statewide working group (Air Toxics Assessment Manual, CAPCOA, 1987). The RMP established specific criteria for permit issuance under which it was determined that the TAC emissions from a proposed project would not cause, or contribute significantly to, an unacceptable adverse health risk for a member of the public. The RMP also specified that the District's Air Pollution Control Officer was ultimately responsible for risk management, and could consider a variety of factors when determining the acceptability of a proposed project and whether to issue or deny a permit.

The District's REP and RMP were updated several times since their original adoption, primarily in response to revisions in statewide health risk assessment and risk management guidelines. These revisions included risk assessment guidelines adopted for use in the Air Toxics Hot Spots (ATHS) Program, and risk management guidelines for new and modified sources adopted by CARB. The District established a specific RMP for dry cleaners that allowed permits to be issued for health risks within the action range identified in the CARB risk management guidelines, provided that the Best Available Control Technology and all reasonable risk reduction measures were employed. The District also established a specific risk management

policy for diesel-fueled engines so that limitations would not need to be placed on standby engines during emergency use.

In 2005, the District's REP and RMP were codified into Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. A number of program enhancements were also made, primarily to conform with risk assessment guideline revisions made by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA), and risk management guidelines adopted by CARB. This Part of the Manual of Procedures (MOP) provides guidance on the District's Air Toxics NSR Program, and on permit application requirements for sources that emit TACs. The guidance provided in this Part is intended to be a companion to Regulation 2, Rules 1 and 5, and to clarify the requirements contained therein. None of the procedures described in this Part may be construed to relieve any person of the obligation to comply with any applicable requirement of Regulation 2, Rule 1, or Regulation 2, Rule 5.

2. REVIEW PROCEDURES FOR SOURCES WITH TAC EMISSIONS

The District requires that the health impacts from all new and modified sources that emit TACs be evaluated before an Authority to Construct or Permit to Operate is issued, in order to ensure that a proposed project will not cause, or contribute significantly to, an unacceptable adverse health risk for an individual. This evaluation program is referred to as new source review of toxic air contaminants. The health impact review requirements and the criteria for an acceptable project are implemented through the District's Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.

This section describes the District's review process for sources with TAC emissions. Permit application requirements for sources with TAC emissions are discussed in Section 3. The applicability of Regulation 2, Rule 5 and its requirements are clarified in Section 4.

2.1 Review Process

The following list of steps provides an overview of the District's review process for new and modified sources with TAC emissions. Steps or review procedures that are unique to sources with TAC emissions are discussed in more detail in the following sections.

- Identify all sources and/or abatement devices that will emit TACs.
- Use the Regulation 2, Rule 1 Permit / Exemption Flow Chart to determine if any of the proposed equipment is excluded from permit requirements pursuant to Regulation 1-110 or exempt

from permit requirements pursuant to Regulations 2-1-105 or 2-1-113.

- Calculate the maximum hourly and maximum annual TAC emissions from each source and/or abatement device.
- Compare the TAC emissions from each source or abatement device to the TAC trigger levels in Table 2-5-1.
- Determine if a permit application is required for any of the proposed equipment pursuant to Regulations 2-1-316 through 319.
- Submit permit application, if required.
- Determine if any sources are new or modified sources of toxic air contaminants as defined in Regulations 2-5-214 and 2-5-215.
- Identify any related permit applications and all new or modified sources of toxic air contaminants that constitute the project as defined in Regulation 2-5-216.
- Determine the TAC emission increases for the project in accordance with Regulation 2-5-601.
- Compare the TAC emission increases for the project to the TAC trigger levels in Table 2-5-1.
- If a TAC emission increase for a source or the project exceeds a Table 2-5-1 TAC trigger level, conduct a Health Risk Screening Analysis for the project.
- Evaluate project for compliance with Regulation 2, Rule 5.

2.2 Permit Requirements

General permit requirements for equipment and operations are discussed in MOP, Volume II, Part 2. The procedures for identifying sources and abatement devices and determining when permit applications are required for sources with TAC emissions are much the same as the procedures for other types of sources. Unusual cases, where the permit requirements for TAC sources may differ from the requirements for sources without TAC emissions, are discussed below in Section 3.

2.3 TAC Emissions

The applicability of many permitting and new source review requirements depends of the level of TAC emissions from the source or project. Sections 3.3.1 and 3.3.2 describe the information that the District needs in order to calculate the TAC emissions from sources and projects.

2.4 TAC Trigger Levels

Due to the large number of new and modified sources that emit TACs and the finite resources available for evaluating the health impacts from these sources, the District has developed several tools to streamline the health impact evaluation process. One of these tools is the District's table of toxic air contaminant trigger levels (Regulation 2, Rule 5, Table 2-5-1).

The TAC trigger levels are emission rate thresholds below which it would be very unlikely that a source or project would cause, or contribute significantly to, an adverse health risk to the surrounding community. The TAC trigger levels were developed 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. Sources emitting TACs at emission rates below these trigger levels are not expected to cause, or contribute significantly to, an unacceptable adverse health risk for any individual.

In June 1995, the District adopted a set of TAC Trigger Levels in Regulation 2, Rule 1 (Table 2-1-316: Toxic Air Contaminant Trigger Levels). These trigger levels have been revised several times since 1995, as new information about health impacts and other data became available. Upon adoption of Regulation 2, Rule 5, Table 2-1-316 was replaced by Table 2-5-1. Table 2-5-1 includes both acute trigger levels (in units of pounds per hour) and chronic trigger levels (in units of pounds per year).¹ These acute and chronic trigger levels are used to determine if permit requirements apply to certain new and modified sources that otherwise would be exempt from the need to obtain District permits. Permit application requirements are discussed below in Section 3. The trigger levels are also used to determine whether new and modified sources that are subject to District permit requirements must comply with Regulation 2, Rule 5. The applicability of Regulation 2, Rule 5 is discussed below in Section 4.

2.5 Health Risk Screening Analysis Requirements and Procedures

In general, a health risk screening analysis (HRSA) is required for any permit applications involving new or modified sources, where the TAC emissions from a source or project exceed one or more TAC trigger levels. An HRSA may also be required for other reasons such as determining permit requirements for sources subject to Regulation 2-1-316, or for CEQA purposes.

¹ Table 2-1-316 contained only chronic trigger levels.

If an HRSA is required by Regulation 2, Rules 1 or 5, the analysis will be conducted in accordance with the District's Health Risk Screening Analysis Guidelines. These guidelines will be maintained on the District's web site [\[link to web site address for these guidelines will be inserted when available\]](#) and will specify, or contain references to, the procedures to be followed for determining acute hazard index, chronic hazard index, and cancer risk. In general, these guidelines will conform to the Health Risk Assessment Guidelines established by OEHHA for use in the Air Toxics Hot Spots Program.

The information the District requires in order to conduct an HRSA is listed in Section 3.3.3 below.

3. PERMIT APPLICATIONS

Permit applications are required for all new and modified sources emitting TACs that are subject to the District's permit requirements (Regulations 2-1-301 and 2-1-302). A permit application is not required for a new or modified source if the source is determined to be exempt from permitting requirements because:

- (a) the source qualifies for an exemption from permit requirements pursuant to Regulation 2, Rule 1, Sections 103 or Sections 114-128, and
- (b) the source has no TAC emissions exceeding an acute or chronic trigger level listed in Table 2-5-1, and
- (c) the source does not otherwise require a permit under the requirements of Regulation 2-1-316.2, 317, 318, or 319.

In accordance with Regulation 2-1-316.1, permits may be required for new and modified sources that would otherwise qualify for an exemption from permit requirements pursuant to Regulations 2-1-103 or 2-1-114 through 1-1-128, if the source emits a TAC at an emission rate that exceeds an acute or chronic trigger level listed in Table 2-5-1. For such sources, an evaluation of the health risks resulting from TAC emissions needs to be completed to determine if permits are required. The District may request that the owner or operator of a new or modified source that is potentially subject to Regulation 2-1-316 demonstrate that the source complies with the requirements of Regulations 2-1-316.1 and 316.2. The owner/operator of such a source may also submit a permit application and the District will evaluate the health impacts from the source, and any control measures used by the source, to determine if the source satisfies the requirements of Regulations 2-1-316.1 and 316.2 and is thereby allowed to retain an exemption from permit requirements.

Any new or modified sources that are constructed without an Authority to Construct or operated without a Permit to Operate may be subject to enforcement action and additional permit application fees. Existing unpermitted sources that do not have a current exemption from District permit requirements are also subject to enforcement action and additional application fees, unless the source was covered by a valid exemption and the source lost its exempt status due to changes in District, California, or federal regulations.

Permit applications for sources with TAC emissions are subject to the general requirements and procedures discussed in MOP Volume II, Part 2 "Permits, General". The specific permit application requirements and procedures that apply only to sources that emit TACs are discussed in more detail below.

3.1 Procedures

Most applications for sources with TAC emissions can be handled within the typical permitting time frames discussed in MOP, Volume II, Part 2, Section 2. The District will generally make a completeness determination within 15 working days of receiving the application, and make a final decision within 35 working days of the date that the application is declared complete (the "completeness" date). However, applications involving sources with TAC emissions over a trigger level require additional information (i.e., risk screening analysis form, including a plot plan or map showing source locations, property boundaries and nearby receptor locations) before the application will be declared complete. Applicants should ensure that all of the forms, maps, data, and other information requested in Sections 3.3 and 3.4 are included in the application package in order to avoid delays due to submission of an incomplete application.

3.2 Fees

Permit application fees are established in Regulation 3. In accordance with Regulation 3, Schedules B - K, sources that emit a TAC at a rate in excess of a trigger level listed in Table 2-5-1 are subject to risk screening fees and toxic surcharges. The risk screening fee is a one-time fee that shall be paid for each permit application (similar to filing and initial fees), while the toxic surcharge is an annual fee for each permitted source (similar to the permit to operate fee). These fees are discussed in more detail in Sections 3.2.1 and 3.2.2 below.

3.2.1 Risk Screening Fee (RSF)

The risk screening fee applies to any permit applications for new or modified sources, where the emissions from the project require a health risk screening analysis pursuant to Regulation 2-5-401. This fee consists of a flat charge per application plus a charge per source that is generally equal to the initial fee for that source. For gasoline dispensing facilities, the RSF is a flat charge per application. Consult the appropriate fee schedule for each type of source in the application to determine the applicable risk screening fee. The appropriate risk screening fee for a source should be based on the maximum permitted usage levels or maximum potential to emit for that source and should also include any secondary TAC emissions from abatement equipment that control emissions from that source.

As discussed in Section 3.3.1, a project, as defined in Regulation 2-5-216, includes any new or modified sources of TACs in the current application and may also include new or modified sources of TACs that were permitted in previous permit applications. For the purposes of calculating the risk screening fee for the current application, any sources that are considered part of the project but that were permitted under previous applications are not subject to the risk screening fee, unless the source is being modified under the current application.

The risk screening fee shall be included when calculating any applicable late fees (Regulation 3-310) or the small business discount (Regulation 3-302.1).

3.2.2 Toxic Surcharge

The toxic surcharge applies to any source that emits a TAC at a rate above a chronic trigger level listed in Table 2-5-1. Consult the appropriate fee schedule for the source to determine the applicable toxic surcharge. This fee must be paid, in addition to the permit to operate fee, for each year of source operation. For new and modified sources, the toxic surcharge should be based on the maximum permitted usage levels or maximum potential to emit for that source and should also include any secondary TAC emissions from abatement equipment that control emissions from that source. For permit renewals, the toxic surcharge should be based on actual usage or emission levels that have been reported to the District.

The toxic surcharge shall be included when calculating any applicable back fees (Regulation 3-303).

As with permit to operate fees, the toxic surcharge shall be refunded if an applicant cancels or withdraws a permit application or the Authority to Construct expires and the source was never operated.

3.3 Application Information

Permit applications must contain all the information necessary to determine the scope of the project, characterize the emissions from the project, and determine compliance with all applicable requirements. For projects emitting TACs, sufficient information must be submitted in order to: identify the project, calculate emissions increases for compounds listed in Table 2-5-1, conduct a health risk screening analysis (if project emission increases exceed a trigger level), and determine compliance with TBACT requirements (if applicable).

The application requirements for projects involving TAC emissions are discussed in more detail below. In addition, the District has published several documents that may be useful for preparing permit application packages. The District's Permit Handbook contains guidance regarding application forms, fees, emission calculations, applicable regulations, and permit conditions for various different source types. The Permit Handbook is available on line at: <http://www.baaqmd.gov/pmt/handbook/default.htm>. The District maintains a BACT/TBACT Workbook that specifies TBACT requirements for commonly permitted sources. The BACT/TBACT Workbook also describes the procedures for calculating the cost effectiveness of a control measure and making a BACT/TBACT determination for a specific source or project. This document is intended to be used as a guide by BAAQMD staff engineers, the regulated community, and interested members of the public in determining the specific emission limits and emission control devices or techniques needed to meet BACT and TBACT requirements. The BACT/TBACT Workbook is available online at: <http://www.baaqmd.gov/pmt/bactworkbook/default.htm>. The District's Health Risk Screening Analysis Guidelines describe the procedures to be followed when conducting a health risk screening analysis. Generally, these guidelines are based on the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines. These guidelines discuss the types of air dispersion models that may be used, the selection of meteorological data and other input parameters for the models, the types of receptors that may be involved, the criteria for establishing receptor locations, approved health effects values for the compounds listed in Table 2-5-1, and the procedures for calculating acute hazard index, chronic hazard index, and cancer risk. The

Health Risk Screening Analysis Guidelines are available on line at: [\[insert web site link, when it is available\]](#). All documents are/will be available from the District's Public Information Department (415-749-4900). Consult the District's website (<http://www.baaqmd.gov>) for additional information about rules, regulations, permitting requirements, and other programs.

3.3.1 Project Identification

As with any permit application, the applicant must identify the sources, abatement devices, operational changes, and/or permit condition changes, which are the subject of the permit application. For large or complicated projects, the applicant should include plot plans showing the locations of equipment and emission points and process, material, and pollutant flow diagrams. For all projects, the applicant should provide completed data forms for each source, abatement device, and emission point (<http://www.baaqmd.gov/pmt/forms/index.asp>) and equipment specifications, vendor literature, process descriptions, or other written material, as necessary, to explain or establish maximum possible or maximum permitted capacities (storage volumes, operating rates, throughput rates, fuel usage rates, etc.).

For applications involving new or modified sources of TACs that are subject to Regulation 2, Rule 5 (see Section 2 above), the applicant should also identify any equipment or modifications that are considered to be part of the project, as defined in Regulation 2-5-216. In addition to all new or modified sources in the current application, the project shall include new or modified sources of TACs that were permitted within two years prior to the completeness date for the current application, unless the applicant demonstrates to the satisfaction of the APCO that the construction or modification covered by the current application was neither (1) a reasonable foreseeable consequence of the previous project(s), nor (2) a critical element or integral part of the previous project(s). For modified sources, any successive modifications of a source occurring after January 1, 1987 - including increases in permitted throughput levels, changes in raw materials, products, fuels, or the formulations of these materials, and debottlenecking actions - are considered to be part of the project. Sources that are determined to be exempt from permitting requirements are not part of the project, even if the exempt source will emit a TAC.

Regulation 2-5-215 defines a new source of TAC. This definition is essentially the same as the definition of new source in Regulation 2-1-232, except that the applicability date for a new source of TAC is January 1, 1987 instead of March 7, 1979.²

Regulation 2-5-214 describes how to determine whether or not a physical or operational change constitutes a modified source of TAC.

3.3.2 Emissions Characterization

The applicant must supply sufficient information for the District to determine maximum hourly and/or maximum annual emissions for any TAC listed in Table 2-5-1 that is emitted from the source or abatement device. Although many TACs have both acute and chronic trigger levels, some TACs have only a chronic trigger level or, in a few cases, only an acute trigger level. Maximum hourly emissions need to be determined only for a TAC that has an acute trigger level. Likewise, maximum annual emissions need to be determined only for a TAC that has chronic trigger level.

As stated in Regulation 2-5-601.1, the TAC emissions that are subject to Regulation 2, Rule 5 requirements include any emissions that result from routine operation of a source or emissions that are predictable. These routine or predictable emissions may include continuous and intermittent releases or may result from predictable process upsets or leaks and may be subject to enforceable limiting conditions. Emissions resulting from accidental releases and unpredictable circumstances (such as earthquakes, fires, or floods) are not subject to Regulation 2, Rule 5 requirements. Emissions that may occur due to accidental releases are subject to other regulatory requirements such as federal and state emergency planning and pollution prevention laws. For example, a broken pipe could result in an accidental release that would not be subject to Regulation 2, Rule 5. However, emissions from relief valves could be intermittent but reasonably predictable and would be subject to Regulation 2, Rule 5. Emissions that may occur during a fire are unpredictable and are not subject to Regulation 2, Rule 5. Furthermore, Regulation 2-5-111 specifically exempts TAC emissions resulting from emergency

² January 1, 1987 is the initial effective date of the District's Toxic NSR program, which was first adopted as a policy and procedure document in 1987 and later codified as Regulation 2, Rule 5 in 2005.

use of emergency standby engines from the requirements of Regulation 2, Rule 5.

The District typically uses maximum hourly and maximum annual capacities and TAC emission factors in order to determine the maximum hourly and maximum annual emission rates. The emission factors may be derived from source test data, certified emission rates, vendor guarantees, AP-42³, the California Air Toxic Emission Factors (CATEF) database⁴, or other literature.

If desired, the applicant may propose maximum hourly and maximum annual emission rates for a source or abatement device. The applicant should provide emission calculations to support the proposed emission rates and supply copies of any source test data, vendor guarantees, or literature citations that were used in the emission calculations.

3.3.3 Health Risk Screening Analysis Information

For any source or project that emits a TAC in excess of a Table 2-5-1 TAC trigger level, the applicant must submit a complete risk screening analysis (RSA) form (http://www.baaqmd.gov/pmt/forms/rsa_request.pdf), or the equivalent information. One RSA form should be completed for each source with TAC emissions. If a source has multiple emission points or if multiple sources vent to a single emission point, an RSA form should be completed for each stack or emission point. If the emissions are fugitive in nature with no specific emission point, the RSA form should also be completed, with the source considered to be an area or volume source.

The RSA form specifies that a plot plan or map be included showing the location of the sources in the project, the facility boundaries, the nearest businesses, and the nearest residences. Aerial photographs may also be acceptable for this purpose. The maps should be drawn to scale with compass directions correctly indicated. The maps should identify the location of each stack (or area of release for an area or volume source) that emits a TAC, the property lines for the facility,

³ AP-42 is an EPA publication of emission factors for many different source types. The report is entitled Compilation of Air Pollution Emission Factors, fifth edition, and is available on line at: www.epa.gov/ttn/chief/ap42/index.html.

⁴ The California Air Resources Board (CARB) maintains a database of emission factors for many different source types. It is organized similar to AP-42 and is also available on line at: www.arb.ca.gov/emisinv/catef/catef.htm.

areas zoned for commercial/industrial use, the locations of the nearest worker receptors, areas zoned for residential use, and the locations of the nearest residential receptors. For stack sources, the location and dimensions (including heights) of the stacks and any nearby buildings (generally within 250 feet of the stack) should be provided so that the effects of aerodynamic downwash can be evaluated. The application should also contain information regarding the expected operating schedule of each source, so that temporal variations of TAC emission rates can be evaluated (e.g., based on time of day, season, etc.).

An applicant may elect to submit a completed health risk screening analysis that follows the specified guideline procedures. Submittal of such an analysis does not, however, eliminate the need to provide the basic health risk screening analysis information previously described. Applicants are encouraged to submit copies of all model input files used in a risk screening analysis in electronic format. For larger projects, it is recommended that a protocol describing the details of the proposed health risk assessment methodology be submitted for District review prior to the completion of the analysis.

For a modified source, the APCO may take into consideration reductions in health risks that have occurred since January 1, 1987 (at that modified source only) due to reformulations, material substitutions, process changes, equipment upgrades, or other emission reduction measures or due to changes in health effects values. These health risk reductions shall only be used to correctly identify the overall change in health risks for the modified source (health risks for the proposed configuration of the modified source compared to the baseline health risks from the source as it existed on January 1, 1987). These health risk reductions cannot be used to net out of any Regulation 2, Rule 5 requirements.

3.3.4 TBACT Determinations

New and modified sources with health risks exceeding a threshold in Regulation 2-5-301 are required to have Best Available Control Technology for Toxics (TBACT). TBACT can include emissions control equipment, process modifications, material substitutions, control procedures, work practice standards, or a combination of these methods of reducing TAC emissions. For guidance on TBACT requirements for commonly permitted sources, consult the District's

BACT/TBACT Workbook, which is available online at: <http://www.baaqmd.gov/pmt/bactworkbook/default.htm>.

Applications for sources that are subject to the TBACT requirement must include adequate information for the District to determine whether this requirement is met. Applicants are encouraged to provide documentation that can be used to support TBACT determinations for affected sources. Appropriate documentation may include: descriptions of the control methods, alternative materials, or abatement devices that will be used and source test data, vendor guaranteed emission rates, destruction efficiencies, or other data for the chosen control method. For diesel-fired IC engines, EPA or CARB certified emission factors should be submitted for the proposed engine model and model year. If the applicant is claiming that a control method is infeasible or too costly, the applicant should provide capital and operating costs for each rejected control method and/or any documentation necessary to justify that a control method is infeasible.

3.4 Additional Completeness Criteria

As discussed in MOP, Volume II, Part 2, Section 6, a permit application will be declared complete when the applicant has provided sufficient information for the District to fully characterize the emissions from all new or modified sources and to determine whether or not these devices will comply with all applicable requirements. The completeness criteria checklist for general permit applications (see MOP, Volume II, Part 2, Section 6) should be used as a starting place for applications involving new and modified sources of TACs. The checklist below should be used for applications with new or modified sources of TAC in addition to the general permit application completeness criteria checklist. The following checklist expands on a few items listed in the general checklist and identifies additional criteria that are necessary before an application involving new/modified sources of TACs will be declared complete.

Additional Completeness Criteria for Projects with TAC Emissions

- Identify all sources, abatement devices, and emission points in the current application that emit TACs. Provide the application numbers for any potentially related projects (new or modified sources permitted within the last two years and, for a modified source, any previous applications for that modified source submitted since January 1, 1987).

- Provide maximum hourly and maximum annual TAC emission rates or sufficient information for the District to calculate these TAC emission rates. These maximum TAC emission rates include routine or predictable TAC emissions but exclude emissions occurring due to accidental releases or other unpredictable circumstances such as emergency use of emergency standby engines. Supply all necessary supporting documentation: data forms; maximum operating times; maximum storage capacities, fuel usage rates, or other operating rates; equipment specifications; vendor guarantees; emission calculations; source test data; and emission factor citations.
- For any proposed modification of a source that was permitted prior January 1, 1987 or for any proposed modification of a source that was permitted after January 1, 1987 pursuant to a loss of exemption, provide sufficient information for the District to calculate the baseline TAC emission rates for that modified source.
- For any source or project with a TAC emission rate that exceeds a Table 2-5-1 TAC trigger level, complete a Risk Screening Analysis (RSA) form (http://www.baaqmd.gov/pmt/forms/rsa_request.pdf). One RSA form is required for each source of TAC emissions in the project. If a source has multiple emission points or if multiple sources vent to a single emission point, one RSA form is required for each stack or emission point. RSA forms are also required for any fugitive emission sources or area or volume sources. The information requested on the RSA form may be alternatively provided in tabular form.
- Provide maps and/or aerial photographs of the facility and surrounding community. The maps should be drawn to scale, specify compass directions, and identify the location of each stack (or area for an area source) that emits a TAC, the property lines for the facility, and the nearest residential and worker receptors. For any stacks or emission points that are located near buildings or structures, the map should also indicate the location, dimensions, and height of each of the nearby structures.
- Provide information necessary to demonstrate compliance with TBACT requirements, such as: descriptions of control methods or abatement devices, vendor guarantees, certified emission

factors, emission calculations, destruction efficiencies, source test results, or other data.

4. REGULATION 2, RULE 5: NEW SOURCE REVIEW OF TACs

District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants (TACs) implements the District's Air Toxics New Source Review Program for new and modified sources of TAC emissions. This rule includes health impact review requirements and sets criteria for acceptable projects. The applicability of this rule and the standards are discussed in more detail below.

4.1 Applicability

As described in Regulation 2-5-101, Regulation 2, Rule 5 applies to a new or modified source that: (a) is required to obtain a District authority to construct or permit to operate and (b) emits a TAC listed in Table 2-5-1. These applicability criteria are discussed in more detail below.

4.1.1 Sources That Are Subject To Regulation 2, Rule 5

In general, the requirements of Regulation 2, Rule 5 are evaluated and imposed on a source only during the permit application process for that source. In accordance with Regulation 2-5-112.1, any permit applications for new or modified sources of TACs that are submitted after July 1, 2005 will be evaluated for compliance with Regulation 2, Rule 5. However, a source that was permitted within two years of the date that a complete application is received for a new project will be subject to Regulation 2, Rule 5, unless the applicant demonstrates that the previous project and the current project are not related. As identified in Regulation 2-5-216, the applicant must demonstrate that the current project was not a reasonably foreseeable consequence of the previous project and that the current project is not an integral part or critical element of the previous project. Per Regulation 2-5-112.2, the requirements of this rule also apply to a source that was constructed or modified after January 1, 1987, if the operator of the source fails to obtain the required Authority to Construct or Permit to Operate for that source or modification.

Any new or modified source, which has an emission rate of a TAC that is greater than an acute or chronic trigger level listed in Table 2-5-1, is subject to Regulation 2, Rule 5 when the source is required to obtain a District permit. Any new or

modified source that has an emission rate of a TAC exceeding a TAC trigger level may be required to have a permit to operate pursuant to Regulation 2-1-316.1. Therefore most new and modified sources with TAC emissions over a trigger level are subject to Regulation 2, Rule 5, except as described in Section 4.1.2 below.

If a new and modified source has no TAC emissions over the trigger levels, the source may possibly be subject to Regulation 2, Rule 5, if the source is part of a larger related project. Sections 4.1.2 and 4.1.3 below describe the criteria that must be met before a source with emissions less than the TAC trigger levels can be excluded or exempted from the requirements of Regulation 2, Rule 5.

4.1.2 Sources That Are Not Subject To Regulation 2, Rule 5

In accordance with Regulations 2-5-101 and 2-5-112, Regulation 2, Rule 5 only applies to new and modified sources. Any source, which is determined to be not a new source and not a modified source pursuant to the definitions in Regulations 2-5-215 and 2-5-214, respectively, is not subject to Regulation 2, Rule 5. Sources meeting these criteria include grandfathered sources that have not been modified since January 1, 1987 and sources that have lost an exemption from permitting requirements pursuant to Regulation 2-1-424 or 2-1-425.

Existing permitted equipment that has been permitted or modified after January 1, 1987 but that is not part of a current project will not be subject to Regulation 2, Rule 5, provided the owner/operator has obtained all required permits for this equipment. In other words, Regulation 2, Rule 5 will not be retroactively applied to existing permitted equipment unless (a) the permit holder applies for a modification of an existing permitted source, or (b) the permit holder modifies an existing source but fails to apply for a modification that required a permit, or (c) the APCO finds that the source is related to a current project. Regulation 2-5-216 explains that existing permitted sources will be deemed related to a current project if the existing source was permitted within the two years immediately prior to the completeness date of the current application. However, at the applicant's request, the APCO will also consider other factors about the relationship between the existing permitted source and the current project before determining whether or not the existing source will be deemed part of the current project. For such applications, the applicant

must show that the current project is not a reasonably foreseeable consequence of the previous project and is not a critical element or integral part of the previous project.

In accordance with Regulation 2-5-101, sources that are exempt from permitting requirements pursuant to Regulation 2, Rule 1 are not subject to Regulation 2, Rule 5. Sources that are exempt from permit requirements (pursuant to Regulation 2, Rule 1, Sections 103 - 128) and that emit TACs at less than the Table 2-5-1 trigger levels are clearly exempt from permit requirements; and are therefore not subject to Regulation 2, Rule 5.

Most sources with emissions exceeding a TAC trigger level are subject to Regulation 2, Rule 5. However, sources that would normally be exempt from permit requirements (pursuant to Regulation 2, Rule 1, Sections 103 or 114-128), but that have an emission rate over a TAC trigger may potentially retain an exemption from permit requirements as described in Regulation 2-1-316.1. The owner/operator of any such potentially exempt sources should submit a permit application in accordance with MOP, Volume II, Parts 2 and 4. The procedures in Section 2.4 above shall be used to determine the health impacts of the potentially exempt source. If this analysis indicates that the source will comply with the TBACT requirements (if applicable) of Regulation 2-5-301 and that the project will comply with the project risk limits of Regulation 2-5-302, then the source will be allowed to retain the exemption from permit requirements. Any source which is found to be exempt from permit requirements using these procedures, is thereafter not subject to Regulation 2, Rule 5, pursuant to Regulation 2-5-101, unless the source is modified and the modification results in new or additional TAC emissions.

4.1.3 Sources That Are Exempt From Regulation 2, Rule 5

Although new and modified sources that have emissions above a TAC trigger level are generally subject to Regulation 2, Rule 5, new or modified sources that have emissions below all the TAC trigger levels are not necessarily exempt from Regulation 2, Rule 5. Sources with emissions less than the TAC trigger levels are only exempt from Regulation 2, Rule 5 (pursuant to Regulation 2-5-110), if TAC emissions from the entire project are less than the Table 2-5-1 TAC trigger levels. A project is defined in Regulation 2-5-216 as all new and modified sources within an application, any modified source in the project with

consecutive modifications occurring after January 1, 1987, and all new or modified sources permitted within two years of the completeness date of the current application (if the current project is related to a previous application). In other words, a source with emissions less than the TAC trigger levels could be subject to Regulation 2, Rule 5, if it is part of a larger project that has total combined emissions over a TAC trigger level. These requirements were put in place to prevent circumvention of Regulation 2, Rule 5.

The requirements of Regulation 2, Rule 5 are intended to apply to routine and predictable emissions from a source or operation. Emissions arising from a non-routine or unpredictable process upset, an unintentional spill, leak, or other emergency situation are generally not subject to Regulation 2, Rule 5. Regulation 2-5-111 clarifies the applicability of the Toxic NSR rule for emergency standby engines. Pursuant to Regulation 2-5-111, emissions arising from emergency use of an emergency standby engine or from emission testing required by the APCO are exempt from the requirements of Regulation 2, Rule 5. Emissions arising from non-emergency use are subject to Regulation 2, Rule 5. Regulation 9, Rule 8, Sections 230 to 233 contain the pertinent definitions for emergency and non-emergency use of engines.

4.2 Best Available Control Technology for Toxics (TBACT)

Any source that is subject to this rule and that results in a cancer risk of more than 1.0 in one million (10^{-6}) or a chronic hazard index of more than 0.20 is required to have Best Available Control Technology for Toxics (TBACT). For cases where multiple sources vent to a single emission point, TBACT is generally required for all sources venting to that emission point.

TBACT can include abatement equipment, process modifications, material substitutions, control procedures, work practice standards, or a combination of these methods. For guidance on TBACT requirements for commonly permitted sources, consult the District's BACT/TBACT Workbook:

<http://www.baaqmd.gov/pmt/bactworkbook/default.htm>

4.3 Project Risk Requirement

The project risk requirement of Regulation 2-5-302 applies to all new and modified permitted sources within a project. A project is defined in Regulation 2-5-216 and includes all new or modified sources in the current application, any prior modifications (occurring after January 1,

1987) of a source that is being modified, and all new or modified sources permitted within two years of the completeness date of the current application (if the current project is related to a previous application). Sources that are exempt from permitting requirements or that were permitted pursuant to a loss of exemption should not be considered part of a project.

All projects subject to this rule must comply with the project risk limits listed in Regulation 2-5-302.1 through 2-5-302.3. Therefore, all projects subject to this rule must have (a) a cancer risk of no more than 10.0 in one million (10^{-5}), (b) a chronic hazard index of no more than 1.0, and (c) an acute hazard index of no more than 1.0. Otherwise, the permit to construct or operate for the proposed new or modified equipment in the current application will be denied.

The project risk is determined based on the emission increases for the project. The project risk limits apply after installation of TBACT or other proposed control requirement. If an initial HRSA indicates that a project risk limit will be exceeded, the applicant will be given an opportunity to refine the project risk determination by accepting permit conditions that will limit operating time or emissions or by using site-specific data.

5. GLOSSARY

AP-42

An EPA document: Compilation of Air Pollution Emission Factors, fifth edition, that describes emission factors for various source types.

APCO

Air Pollution Control Officer

ATCM

Air Toxic Control Measure

BACT

Best Available Control Technology

CAA

The federal Clean Air Act

Cal/EPA

California Environmental Protection Agency

CAPCOA

California Air Pollution Control Officers Association

CARB

California Air Resources Board

CATEF

California Air Toxic Emission Factors is a database of toxic emission factors for various source types that is maintained by CARB.

CFR

The Code of Federal Regulations

EPA

The U.S. Environmental Protection Agency

HAP

Hazardous Air Pollutant

HI

Hazard Index

HQ

Hazard Quotient

HRSA

Health Risk Screening Analysis

MACT

Maximum Available Control Technology

MOP

The District's Manual of Procedures

NESHAPS

National Emission Standards for Hazardous Air Pollutants

NSPS

Standards of Performance for New Stationary Sources

NSR

New Source Review

OEHHA

Cal/EPA Office of Environmental Health Hazard Assessment

REP

Risk Evaluation Procedure

RSF

Risk Screening Fee

RMP

Risk Management Policy

TAC

Toxic Air Contaminant

TBACT

Best Available Control Technology for Toxic Emissions