Bay Area Air Quality Management District

MANUAL OF PROCEDURES

VOLUME II

ENGINEERING PERMITTING PROCEDURES

PART 4

NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

MANUAL OF PROCEDURES

VOLUME II

ENGINEERING PERMITTING PROCEDURES

PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

INDEX

VOLUME II
ENGINEERING PERMITTING PROCEDURES

PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINATS

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

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

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.

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 (http://www.baaqmd.gov/pmt/air_toxics/risk_procedures_policies/hrsa_guidelines.pdf) 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 un-permitted 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: (http://www.baaqmd.gov/pmt/air_toxics/risk_procedures_policies/hrsa_guidelines.pdf) 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.htm) 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.

[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.

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 reasonably 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 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-42 [3], the California Air Toxic Emission Factors (CATEF) database [4], 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] 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: http://www.arb.ca.gov/ei/catef/catef.htm.

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 health risk screening analysis (HRSA) form (http://www.baaqmd.gov/pmt/forms/hrsa.pdf), or the equivalent information. One HRSA 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 HRSA form should be completed for each stack or emission point. If the emissions are fugitive in nature with no specific emission point, the HRSA form should also be completed, with the source considered to be an area or volume source.

The HRSA 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, 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 reasonably 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 Health Risk Screening Analysis (HRSA) form http://www.baaqmd.gov/pmt/forms/hrsa.pdf. One HRSA 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 HRSA form is required for each stack or emission point. HRSA forms are also required for any fugitive emission sources or area or volume sources. The information requested on the HRSA 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