

Bay Area Air Quality Management District Engineering Division

Summary of Authority to Construct & Permit to Operate Permit Program July 16, 2007

What is the BAAQMD?

The Bay Area Air Quality Management District (District) is the government agency that regulates emissions of air pollution within the nine counties surrounding the San Francisco Bay. The District was established in 1955, and began requiring permits in 1972. The existence of the District is authorized by the [California Health & Safety Code, Sections 40200](#) through 40276. The District [boundaries](#) include all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

The District works to protect public health by regulating air pollution from a variety of sources ranging from small auto body shops, printers and dry cleaners to large petroleum refineries and power plants. The District requires permits for many sources of air pollution. The District's permit requirements are codified in Regulation 2 – Permits.

Who needs a Permit?

District Permit Programs: The District issues permits under two different permit programs: (1) the Authority to Construct and Permit to Operate permit program, and (2) the Title V (Major Facility Review) permit program. This program description summarizes the Authority to Construct and Permit to Operate permit program.

Authority to Construct: Any person who puts in place, builds, erects, installs, modifies, modernizes, alters or replaces any article, machine, equipment or other contrivance, the use of which may cause, reduce or control the emission of air contaminants, shall first secure written authorization from the District in the form of an Authority to Construct, unless the source is specifically excluded or exempt from permit requirements. The District's permit process is a **pre-construction review** and approval process. The District's review is conducted after the equipment is designed, but before it is installed. This is because it is less costly and more efficient to fix a non-complying design than to retrofit or replace non-complying equipment that has already been installed. The pre-construction review for new and modified sources applies to both stationary and portable sources of emissions that do not qualify for a permit exemption.

Stationary Source: A stationary source operates at a single facility. For the purposes of permitting, portable equipment that may operate at multiple locations within a single facility is also considered to be a stationary source.

Portable Source: For purposes of District permitting, a portable source is one that moves between two or more locations within the District, is operated at no location for more than 12 consecutive months, and meets all of the remaining criteria in Section 220 of Regulation 2, Rule 1 ([Reg. 2-1-220](#)). The owner/operator of a portable source has the option of obtaining a separate permit for each location, or a single *portable* permit that authorizes operation of the source at all locations within the District. Certain portable equipment may qualify for registration under the

statewide [Portable Equipment Registration Program](#) (PERP). This program is intended to allow portable sources to move from one air district to another, without the need to obtain separate permits in each air district. If registered under PERP, a source does not require a separate District permit.

Excluded & Exempt Sources: District [Regulation 1](#) contains a list of sources that are *excluded* from permitting and other District regulations. Examples of excluded sources include motor vehicles, aircraft, residential heating and cooking, and certain agricultural operations. [Reg. 2-1](#) contains a list of sources that are *exempt* from District permitting requirements. Although exempt from permitting, a source may still be subject to the operating requirements of one or more other District rules or regulations.

Notwithstanding any exemption contained in Section 103 or Sections 114 through 128 of [Reg. 2-1](#), a source is subject to permitting if it meets any of the criteria contained in Section 316 (toxic air contaminants), 317 (public nuisance), 318 (hazardous substances), or 319 (greater than 5 tons per year of emissions).

Loss of Exemption: If an existing source loses its permit exemption or exclusion because of a change in District, state or federal law, the owner/operator of the source must apply for a permit in accordance with [Reg. 2-1-424](#). Usually, the owner/operator must submit a permit application within 90 days of written notification by the District that a permit is required.

For additional assistance in determining whether or not you need a permit, please refer to the [Permit Exemption Guidance](#) in the [Permit Handbook](#).

Why do I need a Permit?

Rules & Regulations: The District regulates air pollution through series of rules and regulations. Compliance with these regulations is essential if the District is to achieve its mission to protect public health. A permit is the mechanism the District uses to track compliance with applicable regulations. The permit for each individual source includes a description of the source, the owner/operator and location, and any operating conditions that were imposed on the source during the permit review process. As part of the permit review, the District verifies that the source will comply with applicable District, state and federal regulations. In addition to the initial review during permitting, the District's Compliance and Enforcement Division periodically inspects sources. A District Inspector uses permits to identify and track ongoing compliance and/or violations for all sources at a given facility.

Emission Inventory: Permits are also used to establish a District-wide emission inventory. During the initial permit review, the District calculates emissions from each permitted source and inputs the emissions into a computerized database. This database is updated each year when permits are renewed. The District uses the emission inventory to conduct air quality modeling analyses, to identify areas for additional rule development to further reduce emissions, and to identify areas to focus additional compliance and enforcement efforts to improve compliance rates.

Fees: Permits are one mechanism that the District uses to collect fees from sources of air pollution. These fees are used to pay for the District's operating costs related to regulatory programs. Fees are charges in accordance with [Regulation 3](#). The District charges fees for each permit application, and for the annual permit renewal

for each source. Approximately one-third of the District's annual operating budget is derived from permit fee revenue.

How do I apply for a permit?

For a comprehensive set of permit application instructions, please refer to the [Permit Handbook](#). The Permit Handbook contains significantly more information, including [general application guidance](#), a [Completeness Determination Checklist](#), [Fee Calculation Guidance](#), and [Data Form Guidance](#) with specific instructions for filling out each type of form.

Applications may be hand delivered or mailed to:

Engineering Division
BAAQMD
939 Ellis Street
San Francisco, CA 94109

Applications may also be sent via fax to 415-749-5030.

The following is a brief discussion on how to apply for a permit:

A complete permit application is defined in [Reg. 2-1-202](#). In summary, an application consists of applicable forms depending on the type of source(s) being permitted, permit application fees, and any supplemental information necessary for the District to calculate emissions and determine compliance with applicable regulations.

Forms: [Application forms](#) are available from the District website. For each application, complete one P-101B. You may include as many sources as you like in a single permit application. For each source, you must complete at least one Data Form. There are a variety of Data Forms available, depending on the type of source. For example, Form *ICE* is for an internal combustion engine, Form *C* is for other combustion devices, and Form *T* is for storage tanks, etc. If you cannot identify a specific form for your source, complete Form *G* (general source). In addition to a separate form for each source, you must also complete a Form *A* for each abatement device, and a Form *P* for each emission point (exhaust stack or vent).

A separate Form *HRSA* is required for each source that emits a toxic air contaminant in excess of the trigger level contained in Table 2-5-1 of [Reg. 2-5](#). An *Appendix H* is required for a permit application that contains a non-ministerial source, but which is categorically exempt from CEQA, per [Reg. 2-1-312](#).

Application Fees: The District charges a filing fee, initial fee, and permit to operate fee for each source in the permit application. Fees are based on [Reg. 3](#), which contains fees schedules for a variety of source categories. A source of toxic air contaminants may also be subject to a risk screening fee (RSF) if emissions exceed any toxic air contaminant trigger level. A source that was installed without obtaining the necessary District permit will also be subject to late fees, and retroactive permit fees. If a source emits a toxic air contaminant and is located within 1000 feet of the outer boundary of a school, the application is also subject to the school public notice fee in Reg. 3-318. You may submit your application without the fees, and the District will send an invoice. Your application will not be complete until all applicable fees have been paid.

Supplemental Data: The District must obtain sufficient information from each applicant to enable it to determine what the emissions will be and whether emissions will comply with District regulations. The nature of this information varies significantly between various types of equipment and processes, and between small and large projects. In general, the applicant should include any manufacturer literature, product brochure and emission testing data that is available for the equipment. Also include product data sheets or MSDS for any material that will be used.

Trade Secret: State law requires the District to treat trade secret information with confidentiality. If you feel that some of the information required by the District is trade secret, you must still submit the information. Please refer to Section 202.7 of [Regulation 2, Rule 1](#) for instructions on how to designate trade secret information.

What happens after I apply?

A [process flow diagram](#) is provided to illustrate the permit process.

Completeness Review: Upon receipt of an application, the forms and information are assembled into a permit application folder, which is then assigned to an Engineering Division staff member (typically a permit engineer) for evaluation. The District mails a letter to the applicant indicating the application was received, and to whom it has been assigned. For most applications, the permit engineer has 15 working days to review the application for completeness, starting the day the application was received by the District.

If the application is complete as received, the permit engineer updates the application status to *complete* as of the date the application was received. The District then sends a letter to the applicant indicating the application is complete and the date by which the District's review should be finished.

If the application is incomplete, the permit engineer sends a fee invoice and/or a letter indicating any additional information that is required. The applicant has 30 days to pay the invoice and up to 90 days to respond to the incomplete letter, after which the application may be cancelled. Once the applicant has submitted all outstanding fees and the requested information, the permit engineer again has 15 working days to review for completeness.

Permit Evaluation: Once the application is complete, the permit engineer typically has 35 working days (from the *complete* date) to evaluate the application and write an *Engineering Evaluation Report* (see next section for details), which includes a recommendation to either issue or deny the permit.

Note: The 15 and 35 working day time periods discussed above apply to the majority of permit applications for new, modified and loss of exemption sources. For some applications, however, the time periods may be longer. For an application that is subject to the publication and public comment provisions in [Reg. 2-2-405](#), the completeness review period is 30 days and the evaluation period is 90 days. This applies to applications for a new major facility, a major modification of an existing major facility, applications subject to Prevention of Significant Deterioration (PSD) review, and applications subject to Maximum Achievable Control Technology (MACT). These types of applications are also subject to a 30-day public comment

period.

How does the District review my application?

Engineering Evaluation: After the application is complete, the permit engineer evaluates the application by calculating emissions, and determining compliance with applicable regulations. The permit engineer writes an Engineering Evaluation Report summarizing the review. The [Permit Handbook](#) contains standardized [Evaluation Report Template Guidance](#) for many common source categories. The report typically includes the following:

Intro/Background: This section is a discussion of sources involved in the application, and any relevant history regarding the sources or the facility.

Emission Calculations: This section summarizes the emissions of criteria pollutants and toxic air contaminants. Whenever possible, the permit engineer uses standard emission calculation procedures and accepted emission factors (such as EPA publication [AP-42](#)). The Permit Handbook [Evaluation Report Template Guidance](#) includes emission calculation procedures and/or emission factors for many common source categories. If standard procedures or emission factors are unavailable, the permit engineer will use manufacturer data, other permit applications, emission testing data, the internet, and any other available information to calculate emissions.

- **Criteria Pollutant:** This section includes annual and worst-case daily emissions of precursor organic compounds (POC), non-precursor organic compounds (NPOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO) and PM₁₀ (particulate matter with aerodynamic diameter of 10 microns or less) for each new or modified source in the application. For each pollutant, emissions from the current application are added to any existing cumulative increase from previous applications, resulting in a new cumulative increase for the facility. If a source has the potential to emit 10.0 pounds or more per highest day for any pollutant, a Best Available Control Technology review is required. If facility-wide annual emissions will exceed certain thresholds (i.e., 10 tons per year for NO_x or POC), offsets are required. See below for more detail on BACT and offsets.
- **Toxic Air Contaminant (TAC):** This section includes annual and maximum hourly emissions of any toxic air contaminant (TAC) listed in Table 2-5-1 of [Reg. 2-5](#). If emissions of any TAC exceed either the acute (lb/hour) or chronic (lb/year) trigger level in Table 2-5-1, a health risk screening analysis (HRSA) is required. See HRSA details below.

Health Risk Screening Analysis (HRSA) and TBACT: This section includes a discussion of the health risk screening analysis (HRSA), if applicable. In accordance with [Reg. 2-5](#), a health risk screening analysis is required for any new or modified source with a TAC emission increase in excess of the acute or chronic trigger level in Table 2-5-1. The HRSA is a computer modeling analysis that estimates the increased likelihood of health risks of individuals in the affected population that may be exposed to one or more TAC from a source or project. Per [Reg. 2-5-301](#), toxic best available control technology (TBACT) is required for any source with a cancer risk greater than 1.0 in a million and/or a chronic hazard index greater than 0.2. The District's [BACT/TBACT Workbook](#) contains TBACT determinations for a variety of common sources. In addition to individual source requirements, [Reg. 2-5-302](#) limits the overall project risks to the following: a cancer risk of 10.0 in a million; an acute

hazard index of 1.0; and a chronic hazard index of 1.0.

For more information on Regulation 2, Rule 5, TACs and HRSA, see the [Air Toxic Programs](#) section of the District website.

Statement of Compliance: This section includes a discussion of applicable regulations. The District's New Source Review rule ([Reg. 2-2](#)) contains the requirements for Best Available Control Technology (BACT), offsets, and Prevention of Significant Deterioration (PSD).

- **Best Available Control Technology (BACT):** BACT is triggered for a new or modified source with the potential to emit 10.0 pounds or more per highest day of precursor organic compounds (POC), non-precursor organic compounds (NPOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO) or PM₁₀ (particulate matter with aerodynamic diameter of 10 microns or less). As defined in [Reg. 2-2-206](#), BACT is determined on a case-by-case basis, at the time of permitting. The District's [BACT/TBACT Workbook](#) contains previous BACT determinations for a variety of common sources. These BACT determinations are updated periodically, as new determinations are made.
- **Offsets:** In accordance with [Reg. 2-2-302](#), offsets are required if a facility has the potential to emit more than 10 tons per year of POC or NO_x. If the facility has potential emissions above 10 but below 35 tons per year of POC or NO_x, then the District shall provide the offsets from the Small Facility Bank, unless the facility owns emission reduction credits held in a Banking Certificate. If the facility has emissions of 35 tons per year or more, the facility provides the offsets. The District permit engineer will indicate in the evaluation report the quantity of offsets required and how offsets are provided. Offsets are also required for PM₁₀ and SO₂ emission increases at a major facility, as defined in Reg. 2-2-220. See [Reg. 2-2-303](#) for details.
- **Prevention of Significant Deterioration (PSD):** The PSD requirements of [Reg. 2-2-304 and 305](#) are triggered for a new major facility, and for a major modification of a major facility where the cumulative increase since the PSD baseline date for NO_x, SO₂, PM₁₀ or CO or lead will increase by 40, 40, 15, 100 or 0.6 tons per year, respectively. For a new or modified facility that emits more than 100 tons per year POC, NO_x, SO₂, CO or PM₁₀, [Reg. 2-2-306](#) requires a PSD analysis for emission increases of certain non-criteria pollutants. A permit application cannot be approved unless the PSD modeling analysis demonstrates that the proposed source of emissions will not interfere with the attainment or maintenance of a National Ambient Air Quality Standard (NAAQS), and, if applicable, will not cause an exceedance of a Prevention of Significant (PSD) increment.

In addition to New Source Review requirements in Reg. 2-2, there are several other regulations that may apply, as discussed below.

- **Operating Rules and Regulations:** The District has many rules and regulations that apply to a wide variety of source categories and/or pollutants. The permit engineer must include a discussion of all applicable rules for all of the sources in the permit application. A list of all [District regulations](#) is

available on the District website. Each [Permit Handbook chapter](#) identifies the District rules that may apply to specific sources within that source category.

- **School Public Notice:** The public notice requirements of [Reg. 2-1-412](#) are triggered for any new or modified source that is located within 1000 feet of the outer boundary of a school and which results in an increase of **hazardous air emissions** (future link to P&P manual) into the ambient air. At least 30 days prior to approving an application, the District is required to provide notice to the parents or guardians of children enrolled in any school located within one-quarter mile of the source and to each address within a 1000-foot radius. The District must also include written responses to comments in the permit application file.

A school is defined as any public or private school of more than 12 children in kindergarten or any grades 1 to 12, excluding private schools in which education is primarily conducted in private homes. For addition information, refer to [Health & Safety Code Sections 42301.6 through 42301.9](#).

- **California Environmental Quality Act (CEQA):** Per [Reg. 2-1-310](#), a permit application for a new or modified source must be reviewed in accordance with the requirements of CEQA, unless the project is ministerial or categorically exempt. A ministerial application is one that is reviewed following the specific procedures, fixed standards and objective measurements set forth in the District's Permit Handbook, and is therefore exempt from CEQA review per [Reg. 2-1-311](#). In addition to ministerial projects, [Reg. 2-1-312](#) lists specific types of projects that are categorically exempt from CEQA. For a categorically exempt project, the permit applicant should include an [Appendix H](#) form with the application.

If the permit application is neither ministerial nor categorically exempt, then CEQA review is triggered. The permit applicant must include the CEQA related information required by [Reg. 2-1-426](#). For such a permit application, the District will not normally be a Lead Agency under CEQA. Rather, pursuant to CEQA, the Lead Agency will normally be an agency with general governmental powers, such as a city or county, rather than a special purpose agency such as the District. However, if no Lead Agency exists, then the District must take on the role as Lead Agency and perform the required CEQA review. [BAAQMD CEQA Guidelines](#) are available, in addition to the [State of California's website](#), to provide details on how to comply with the requirements.

- **New Source Performance Standards (NSPS):** Section 111 of the Clean Air Act, "Standards of Performance of New Stationary Sources," requires EPA to establish federal emission standards for source categories that cause or contribute significantly to air pollution. These standards are intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements. These standards apply to sources that have been constructed or modified since the proposal of the standard. Since December 23, 1971, the Administrator has promulgated nearly 75 standards. These standards can be found in the Code of Federal

Regulations at Title 40 (Protection of Environment), Part 60 ([Standards of Performance for New Stationary Sources](#)). The permit handbook chapters identify any applicable [NSPS](#) that may apply for each specific source type in each source category.

- ***National Emission Standards for Hazardous Air Pollutants (NESHAP):*** The Federal Clean Air Act requires the Environmental Protection Agency (EPA) to regulate emissions of [toxic air pollutants](#) from a published list of industrial sources referred to as *source categories*. As required under the Act, EPA has developed a [list of source categories](#) that must meet control technology requirements for these toxic air pollutants. The EPA is required to develop [NESHAP](#) for all industries that emit one or more of the pollutants in significant quantities in 40 CFR 63. In addition, in 40 CFR 61, they also adopted NESHAPs based on control of certain types of hazardous pollutants. EPA has developed implementation [tools](#) (e.g. checklists, brochures) to help comply with the standards.

The permit handbook chapters identify any applicable [NESHAP](#) that may apply for each specific source type in each source category. These standards are also called Maximum Achievable Control Technology (MACT) standards. Most apply in the event that the facility is a Title V facility. However, there are a few MACT standards that apply to small sources. The source-specific permit handbook chapters will identify these cases.

- ***Airborne Toxic Control Measure (ATCM):*** The State has adopted several [ATCM](#) rules that are aimed at reducing emissions of specific toxic pollutants. Some of the ATCMs have been incorporated into District regulations, while other have not. For those rules that are not incorporated into District regulations, the permit engineer must address compliance with the ATCM directly. Stationary and portable diesel engine ATCMs are examples of ATCMs that have not been incorporated into District rules.

Permit Conditions: For nearly all permit applications, the permit engineer will impose a set of permit conditions on the source(s) in the application. The permit conditions are intended to limit the operation of the source, and its associated emissions, to the level indicated in the application. Permit conditions typically limit material usage or throughput, fuel usage, hours of operation, or some other operating parameter that directly or indirectly limits emissions, and also include associated record keeping. The engineer may also require the owner/operator to test emissions from the source, prior to the District issuing the final permit. The Permit Handbook's [Permit Condition Guidance](#) contains standardized conditions for each source category contained in the handbook. In addition, each of the permit handbook chapters contains applicable permit conditions for its source type.

Recommendation: At the end of the Engineering Evaluation Report, the permit engineer will make a recommendation to either issue or deny the permit application. Although denials are rare, they do occur. If an application is denied, the applicant has 30 days to appeal the denial to the District Hearing Board. See [Reg. 2-1-410](#) for details on appealing a denial. District permits are issued in a two-step process, as discussed below.

Issuing the Permit

Authority to Construct & Permit to Operate: District permits are issued in a two-step process. The first step is the Authority to Construct (A/C). The A/C is the District's written authorization for the permit applicant to install or construction the equipment described in the application. The A/C includes a list of all sources that are authorized to be installed, and any permit conditions imposed by the District. The A/C is valid for two years and may be extended for an additional two years if certain criteria are met (see [Reg. 2-1-407](#)).

Once a source is install, the owner/operator must provide written notification to the District of their intent to start up the source. This begins the start-up phase, which can last up to 90 days. During start-up, the District may inspect the equipment to ensure conformity with the A/C, and verify that the owner/operator is complying with the permit conditions. It is during this start-up phase that the owner/operator conducts any emission testing, if required.

The second step is the Permit to Operate (P/O). Once the District has determined that the owner/operator installed the proper equipment and is meeting all permit conditions, the District will issue the P/O, including the associated permit conditions. The P/O must be renewed annually.

Note that for routine sources that do not require emission testing, the District may waive the A/C and issue the P/O directly.