VOLUME II
ENGINEERING PERMITTING PROCEDURES

PART 2
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.

1.1 Authority to Construct

Prior to operating a new source of air pollution, or modifying an existing source in a way that increases emissions, an operator must first obtain an Authority to Construct. District staff review the proposed operation and determine whether it will comply with applicable regulatory requirements. If the application is approved, the District issues an Authority to Construct. This document describes the approved operation and lists the conditions that must be met in order to demonstrate compliance. Occasionally a source test measuring emissions from a new source will be required as part of the initial compliance demonstration.

1.2 Permit to Operate

Every piece of equipment that may emit air pollutants must have a valid Permit to Operate, unless District regulations explicitly exempt the source from permits. Permit requirements and the exemption list are contained in Regulation 2, Rule 1 of the District's Regulations. Permits are valid for one year. The Permit to Operate is subject to permit conditions. These conditions are imposed to ensure that the operation of equipment continues to comply with all applicable regulations and requirements. The Permit, including conditions, must be posted or kept in a location where the equipment operator and the District Inspector may review it as needed.

In addition to the explicit permit conditions included in the Permit to Operate, a source must also comply with the implicit operating characteristics include in the permit application. The operator should be aware that the District, in issuing a permit to operate, has only reviewed and approved the operation described in the permit application, and that other operations may require a new permit.

1.3 Portable Equipment Registration

Equipment that is moved around the District, and between the District and other parts of the state, may be registered through the State Portable Equipment Registration Program. This program allows an operator to use the results of one District's permit review throughout the state for equipment that does not operate for more than twelve months in any one location.

1.4 Title V Permitting Program (Major Facility Review)

The 1990 Clean Air Act introduced a new Federal permitting program. The District administers this program within the Bay Area. The requirements of this program are set forth in Regulation 2, Rule 6, and in Volume II, Part 3 of this Manual of Procedures.

Facilities with a potential to emit more than 100 tons per year of any pollutant (or 10 tons per year of a Hazardous Air Pollutant) are required to obtain a MFR permit. This permit lists all of the sources at the facility, and lays out, in detail, the air quality-related requirements that are applicable to each source. The resulting document is a publicly available description of the operation and its legal requirements. Compliance with the permit is certified annually, and the permit is renewed every five years. The permit supplements the Permit to Operate.

1.5 Title V Permitting Program (Synthetic Minor Permit)

Facilities with a potential to emit more than 100 tons per year may accept 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

Applications should be mailed to the District (Attention: Permit Services Division). The District will notify the applicant in writing whether the application is complete or incomplete. If it is incomplete, the information or data needed to make it complete will be specified in the letter. If no such notification is made by the District in 15 working days, the application is deemed to be complete.

The District's permit review process is a **pre-construction** review. The reason that the review is conducted before the equipment is installed is that it is much cheaper to fix a non-complying design than it is to retrofit or even replace existing non-complying equipment. Any piece of equipment that is built or installed without an Authority to Construct is subject to penalties. If a source is operated without a valid permit, the District will collect retroactive fees for the period of operation (the fees that would have been paid if the source had been properly permitted), plus penalty fees to provide a disincentive for illegal operations. This policy is designed to be fair to facilities that properly obtain permits.

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.

The Authority to Construct is permission for erection or installation of the equipment specified in the application. Prior to imposing conditions or denying a permit, the District will discuss with the applicant the reasons for the conditions or proposed denial. In the case of denials, the applicant is encouraged to seek an alternate approach or new and improved abatement equipment whose use would enable the project to be approved. We encourage the applicant to reapply.

An applicant who is dissatisfied with the District's decision may appeal to the Hearing Board. See Section 7 of the Manual of Procedures, Appeals.

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. Applications affecting facilities with Synthetic Minor or Major Facility Review permits may also require additional review and/or public comment.

Once the equipment is constructed and ready to operate, the applicant should notify the District in writing of the date of the expected start-up. The District will inspect the equipment to determine whether it was built in accordance with the A/C and to see if there are any previous emission problems. Once the applicant has notified the District of a planned startup, the equipment may be operated under the conditions imposed in the Authority to Construct.

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.

3. FEES

Fee schedules are given in Regulation 3. No permit application will be evaluated until the prescribed fees have been paid.

The fees required for a permit application are:

- Permit application fee (to cover the basic administrative cost of processing the permit)
- Permit initial fee (to cover the cost of the engineering evaluation of the application)
- Permit to operate fee (the fee for the first year of operation). This fee is intended to cover ongoing compliance assistance and verification activities performed by the District.

Additional fees may be required under certain circumstances. These include:

- Retroactive fees and penalties (for sources constructed and operated without first obtaining an Authority to Construct)
- Fees for special handling (toxics risk evaluation, public notice, CEQA, etc.)

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.

Emissions are calculated on the basis of the information submitted in a permit application. Emission factors may be taken from AP-42 ("Compilation of Air Pollution Emission Factors"-EPA), or emissions may be estimated by material balances or by source tests on similar equipment. Acceptable estimates may also be obtained from vendor specifications and guarantees.

The District has published two documents that may be very useful to the permit applicant. These are the Permit Handbook and the BACT/TBACT Workbook. The Permit Handbook contains guidance for the applicant regarding the applicable regulations and the process followed by the District's permit evaluators. In some cases, the handbook contains templates for permit evaluation reports and permit conditions, which will be used during the review process. The BACT/TBACT Workbook contains information about the current state-of-the-art for control of emissions from many types of equipment. Current versions of both of these documents are available online on the District's website at http://www.baaqmd.gov.

Application forms and instructions for completing a permit application may be obtained from the Permit Services Division, BAAQMD, 939 Ellis Street, San Francisco, California 94109. Division staff may be contacted by telephone at (415) 749-5990. Current forms are also available on the District's website at http://www.baaqmd.gov.

5. TRADE SECRETS

State law requires the District to treat trade secret information with confidentiality. If you feel some of the information required by the District's application forms are trade secrets, or that trade secrets are included in the application, you must still submit the requested information. In order to allow the District to handle this material properly, you should submit the following information:

5.1 A claim that the material is trade secret as defined in Section 6254.7 of the Government Code.

5.2 A separate claim identifying each specific type or part of the information which is claimed as trade secret.

5.3 A factual statement indicating the basis for considering the information to be trade secret.

5.4 Two copies of any page containing trade secret information: a copy containing the information (marked “confidential”) and a copy with the trade secret information blocked out (marked “public copy”).

Each page containing trade secret information should be so marked. Items on Data Forms T, S, C and G, which are considered confidential, should be circled.

All information claimed as trade secret will be subjected to special handling by the District. We will discuss these procedures with you on request.

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.

All Applications

- Is the application signed?
- Have you included a check for the fee? (As the evaluation does not start until the fee is received, you can save time by including the fee with the application.)
- Is the quadrant map included, with the facility location identified? (Only required for NEW FACILITIES)
- If you claim any trade secrets, have you justified such a claim in writing and identified the pages having such material? Have you included two copies of each such page, one marked “confidential” and one marked “public copy”?
- Have you included a plot plan of the facility that shows the relation of the source to other existing sources, and shows all emission

points? (If you have previously submitted a plot plan, show changes only.)

- Are there any special factors in this application of which we should be aware? For example, if you intend to limit production rate or operating hours, you should so state.
- Do you have any offsets for which you are claiming credit? If so, documentation on the offsets should accompany this application. This documentation should be quantitative and should include information on the most recent three years of operation.

Each Piece of Equipment

- Have you made a clear statement as to whether or not the equipment in the application represents a new source, a modification to an existing source or a replacement for an existing source?
- Have you included a flow rate diagram showing the flow of process material with flow rates and temperatures at key points?
- Have you given the expected process throughput? Have you given the maximum process throughput (give this some thought. Your permit may contain this as a condition, and another permit application will be required to modify it in the future).
- Have you identified emission points and given stack diameter and height for each? Have you given composition, flow rate and temperature for emitted gases?
- Have you submitted the data forms (C, G, S, T, A and P, as required) and provided all of the data requested?

Gasoline Tanks at Service Stations

- Have you given the expected throughput in gallons per month?
- Have you included the manufacturer's description or part number of the vapor recovery equipment?
- If you claim exemption from vapor recovery, have you stated the basis of such an exemption? (Call the District Permit Services Division at (415) 749-4900, if you are uncertain as to whether you are exempt.)

Process Operations (chemical plants, refineries, can lines, microfilm manufacture, acid plants, metal operations, etc.):

- Have you provided a process flowchart?
- Do you have descriptions of new or modified equipment, which may result in the separation of air contaminants from the process

materials or in the conversion of the process materials into air contaminants (as in the case of the combustion of fuel)?

- Have you shown flow rates, temperature and other relevant parameters on the process flowchart
- Have you provided a plot plan, which shows transfer of raw materials and products and the location of emission points?
- Have you discussed the receipt of raw materials, including emissions from carriers (ships or trains) within the District?
- Have you discussed fugitive emissions?

7. APPEALS

If you are dissatisfied with the District's decision on your permit application, you may appeal to the Hearing Board within the (10) days from the day you are notified of the District's decision. If you appeal, you can ask for an order modifying or reversing the District's decision. The Hearing Board is located at 939 Ellis Street, San Francisco, CA, 94109, telephone number: 749-4965.

8. DEFINITIONS

Development Project (for the purposes of air pollution control): Any project that results in the discharge of any air pollutant into the atmosphere (from Chapter 4.5, Section 65940 of the Government Code).

Trade Secrets: Any formula, plan, pattern, process, tool, mechanism, compound procedure, production data, or compilation of information which is not patented, and which gives its user an opportunity to obtain a business advantage over competitors who do not know it.

Source: The equipment used to perform the operations preceding the emission of an air contaminant, which 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.

Best Available Control Technology (BACT): For any stationary source, except cargo carriers, the more stringent of:

- The most effective emission control device or technique which has been successfully utilized for at least one year for the type of equipment comprising such stationary source; or

- The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such stationary source; or
- Any emission control device or technique determined to be technologically feasible and cost-effective by the APCO; or
- The most effective emission control limitation for the type of equipment comprising such stationary source which the EPA states, prior to or during the public comment period, is contained in an approved implementation plan of any state, unless the applicant demonstrates to the satisfaction of the APCO that such limitations are not achievable. Under no circumstances shall the emission control required be less stringent than the emission control required by an applicable provision of District, state or federal laws or regulations.

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

The following is the procedure used to calculate good engineering practices stack height. The following procedure is not applicable to stacks in existence prior to December 31, 1970.

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

(1) 65 meters (210 ft.); or

(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 elevation at the base of the stack; or

(3) The height of the highest nearby structure measured from the ground level elevation at the base of the stack plus one and one-half times the lesser dimension (height or projected width) of the same nearby structure; or

(4) The height demonstrated by a fluid model or a field study approved by the APCO, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, structures, or terrain obstacles.

Nearby: That distance up to five times the lesser of the height or the width dimension of a structure but not greater than 0.8 km (one-half mile). The height of the structure is measured from the ground-level elevation at the base of the stack.

Excessive Concentrations: For the purpose of determining GEP stack height in a fluid model or field study excessive concentrations means a maximum concentration due to downwash wakes, or eddy effects produced by structures or terrain features which is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

Plume Impaction: Concentrations measured or predicted to occur when the plume interacts with elevated terrain.

Elevated Terrain: Terrain which exceeds the elevation of the GEP stack.

Elevated Terrain Stack Height Procedure: This process consists of three steps:

(1) The GEP stack height is determined based on the previously described methods.

(2) The source is modeled at the GEP stack height. Terrain features that are higher than the GEP stack height are included

in the model at an elevation equal to the GEP stack height. A maximum concentration is determined with this modeling.

(3) The source is then modeled with all terrain features at their actual heights in order to determine a stack height which would result in concentrations equal to those determined in step (2). This new stack height is the maximum for which the source may receive credit. If this stack height is less than the stack height the source proposes to use, the source's emission limitation is based on the concentration determined in step (2). If this height equals or exceeds the proposed stack height, the source's emission limitation is determined using the proposed stack height and actual terrain.

This process allows the use of a stack height sufficient to avoid plume impaction, but requires emission limitations as restrictive as those for comparable sources not located in elevated terrain.

$$\frac{(\Delta)}{Fp}\ \frac{(Fp-\Delta)}{Fp}$$

$$\frac{\text{lb of pollutant emitted by all In–Basin Power Plants during averaging period}}{\text{MWH generated by all In– Basin PowerPlants during averaging period}}$$

$$\frac{\text{MWH generated by all in–basin power plants during averaging period}}{\text{MWH generated by all in– state power plants during averaging period}}\ \frac{T}{T+E}$$

$$\frac{2.02 \times 10^{12}\ \text{btu/yr}}{2.02 \times 10^{12}\ \text{btu/yr} + 9.72 \times 10\ \text{btu/yr}}\ \frac{E + 1/2\ T}{Fp + Fs} \geq$$

$$\frac{9.72 \times 10^{11}\ \text{btu/yr} + 1/2\ (2.02 \times 10^{12}\ \text{btu/yr})}{3.89 \times 10^{12}\ \text{btu/yr} + 3.96 \times 10^{11}\ \text{btu/yr}}\ \frac{(37{,}586\ \text{ton/yr})\ (2000\ \text{lb/ton})}{17{,}837{,}162\ \text{MWH/yr}}$$

$$\frac{17{,}837{,}162\ \text{MWH/year}}{34{,}238{,}520\ \text{MWH/year}}$$

10. EXTERNAL OFFSETS

The following procedure is to ensure that all external offsets are federally enforceable.

An external offset is any actual emission reduction originating from all sources other than the new or modified stationary source.

For all external offsets the APCO shall forward as an amendment to the State Implementation Plan the amended Permit to Operate or contract for the source providing the external offsets.