

Engineering Policy and Procedure Manual

The purpose of the Engineering Division Policy & Procedure Manual is to provide a repository for division policy and procedure documents affecting the evaluation of permit applications and day-to-day division operation. These documents are intended to provide clarification or instruction on a variety of subjects relating to permitting activities. The manual is an evolving document that will be continually updated with new policies and procedures, as they are developed.

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BACT RACT and BARCT

Best Available Control Technology (BACT)

Reasonably Available Control Technology (RACT)

Best Available Retrofit Control Technology (BARCT)

BACT is the level of emission control or reduction for new and modified sources of emissions that have the potential to emit 10 or more pounds of any criteria pollutant (NO_x, CO, POC, NPOC, SO₂ or PM₁₀) on a worst-case day. BACT is intended to reduce emissions to the maximum extent possible considering technological and economic feasibility. For the specific regulatory language, see Section 301 of [Regulation 2, Rule 2](#).

RACT is required under the [Federal Clean Air Act](#) to be implemented for existing sources of criteria pollutant emissions in the development of attainment plans to achieve federal ambient air quality standards. Moreover, the [California Clean Air Act \(CCAA\)](#) requires that local air districts develop attainment plans to achieve the state ambient air quality standards. These plans must include measures that require control technologies for reducing emissions from existing sources (RACT/BARCT). While the CCAA does not define RACT, RACT for existing sources is generally considered to be those emission limits that would result from the application of demonstrated technology to reduce emissions. BARCT is defined in the California Health and Safety Code as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source." Although the terms are often used interchangeably, BARCT requirements are generally more stringent than RACT requirements.

The following policies and procedures have been developed for BACT & RACT.

BACT Policies & Procedures

[Procedure: BACT1 Review for Automatic Blanket Wash Systems](#) - 2/28/2008

[Procedure: Conducting a BACT Determination & Updating the BACT/TBACT Workbook](#) - 2/28/2008

RACT Policies & Procedures

[Policy: NO_x and CO RACT Levels for Thermal Oxidizers](#) - 2/28/2008

Banking and Offsets

Emission Reduction Credits (ERCs) are banked in accordance with [Regulation 2, Rule 4](#). ERCs may be banked for the following pollutants: NO_x, SO₂, CO, POC, NPOC, particulate and PM₁₀. ERCs are generated by reducing emissions beyond what is required by regulation,

or by curtailing or shutting down a source. ERCs may be used to provide offsets for emission increases from a new or modified source, as required by Sections 302 and 303 of [Regulation 2, Rule 2](#). ERC banking certificates may be traded or sold to another facility for use as offsets for that facility.

Interchangeable Emission Reduction Credits (IERCs) are banked in accordance with [Regulation 2, Rule 9](#). IERCs may only be banked for NOx. NOx IERCs are generated by reducing the emission rate (mass emissions per unit of throughput) below what is required by regulation. IERCs cannot be generated by curtailment or shutting down a source. IERCs may only be used at the location at which they were generated. Once banked, IERCs may be used as part of an Alternative Compliance Plan to comply with certain NOx rules. Unlike ERCs, IERCs cannot be used as offsets.

The following policies and procedures apply for banking and offsets.

[Policy: Process for Handling Request to Bank Emissions](#) - 3/15/2013

[Policy: Clarification Regarding Provider of Emission Reductions Credits/Offsets](#) -2/28/2008

California Environmental Quality Act (CEQA)

CEQA requires environmental review for projects developed or approved by California state, regional, or local government. Projects include the issuance of conditional use permits such as Authorities to Construct and Permits to Operate. The primary intent of CEQA is to ensure that the public and the agency making the decision on a proposed activity have full knowledge of the environmental impacts of the activity before proceeding.

The following policies and procedures provide clarification of how CEQA applies.

[Determining CEQA Applicability to Authority to Construct and/or Permit to Operate](#) - 02/28/2008

Data Forms

The following policies and procedures have been developed for filling out certain data forms.

[Procedure: The Permit Renewal Process](#) - 12/13/2007

Definitions

The following are explanations of certain definitions.

Policies Definition: [Non-Precursor Organic Compounds](#)

Emission Factors

As part of the Engineering Evaluation Report that is prepared for each permit application, the permit engineer calculates emissions from the new and/or modified source(s). If available, the engineer may use emission factors for the source being evaluated. Emission factors generally are in the form of mass of pollutant per unit of throughput. One commonly used source of emission factors is the EPA publication, entitled [Compilation of Air Pollutant Emission Factors](#), commonly referred to as AP-42.

The following policies and procedures provide emission factor information for certain sources or operations.

[Policy: CARB Emission Factors for Diesel Engines - Percent HC in Relation to NMHC + NO_x - 2/28/2008](#)

[Policy: Emission Factors for Toxic Air Contaminants from Miscellaneous Natural Gas Combustion Sources - 2/28/2008](#)

Engines

Engines greater than 50 HP require permits. Any new (post-September 1, 2001) engine is a new source. Any engine which was installed and operated prior to September 1, 2001 is a loss of exemption source.

In addition to District regulations, Airborne Toxics Control Measures (ATCMs) have been adopted by the [California Air Resources Board](#) for [stationary](#) and [portable](#) engines.

The Permit Handbook contains chapters for the permitting the following Internal Combustion Engines:

- Stationary Diesel Engines
- Stationary Natural Gas Engines
- Portable Diesel Engines

In addition, there are additional instructions for [Obtaining a Permit to Operate an Internal Combustion Engine](#).

The following policies and procedures provide clarification for the permitting of diesel engines.

[Policy: District Permitting Requirements for CARB PERP Registered Equipment](#) - 3/28/13

[Procedure: Permitting Loss of Exemption Engines](#) - 7/1/2009

[Policy: CARB Emission Factors for Diesel Engines - Percent HC in Relation to NMHC + NO_x](#) - 2/28/2008

[Policy: When to Require Source Testing For Stationary Diesel Engines to Demonstrate Compliance With The Stationary CI Engine ATCM](#) - 2/28/2008

Exemptions

In general, stationary sources of air pollution require a permit from the District. Prior to installing or modifying a source of emissions, the owner/operator is required to submit a permit application and receive District approval. The District approves permits in a two-step process. The first step is the Authority to Construct (A/C), which is the District's permission for the owner/operator to install the equipment approved in the permit application. Prior to starting up a source, the owner/operator notifies the District of impending operation. If the source was installed in accordance with the A/C, the District will issue a Permit to Operate (P/O). For routine sources, the District may condense the process into a single step and issue a P/O directly, without first issuing an A/C.

Certain sources of emissions are exempt from District permit requirements. These sources are listed in Sections 103 through 128 of Regulation 2, Rule 1. Some sources are exempt because the District is prohibited from requiring a permit by the California Health & Safety Code. Other sources are exempt because the District considers them to be insignificant sources of air pollution.

The following policies and procedures provide clarification for permit exemptions of certain sources or operations.

[Policy: Clarification of Permit Exemptions per Reg 2-1-103](#) - 2/28/2008

[Policy: Section 2-1-119.1 Permit Exemptions for Powder and Radiation Cured Coating Operation](#) - 2/28/2008

Fees

Permit Application and permit renewal fees are charged based on [Regulation 3](#). The following policies and procedures provide clarification for certain sources or situations.

[Policy: Fees Associated with Concrete Batch Facilities and Quarrying/Crushing Operations](#) 2/28/2008

Grouping

The District requires permits for stationary sources of air pollution. In some cases, individual pieces of equipment may be grouped and permitted as a single source. Sections 401.3 and 401.4 of Regulation 2, Rule 1 specifically identify sources which may be grouped. Other grouping is allowed per the following policies.

The following policies and procedures provide clarification for the grouping of certain sources.

[Grouping Resin Storage Tanks at Fiberglass Operations](#) - 10/3/2008

[Permitting of Surface Coating Curing Ovens](#) - 10/3/2008

[Grouping of Coating, Adhesive or Printing Operations into a Single Permitted Source](#) - 10/3/2008

Miscellaneous Policies and Procedures

The following policies and procedures have been developed to address the specific questions/issues that have arisen in the past.

[Policy: NSPS and Permitting of New Storage Tanks](#) - 2/28/2008

Permit Conditions

Authorities to Construct or Permits to Operate may be subject to permit conditions. A condition may contain parts that limit material usage rates, set allowable operating parameter ranges, require emissions or parametric monitoring, require compliance demonstration tests, and/or establish record keeping requirements.

The following policies and procedures provide guidance for permit conditions:

[Policy: Records Retention for Permit Conditions](#) - 02/28/2008

[Trial Testing](#) - 10/31/06

Permits and Renewals

The following policies and procedures provide clarification for administration of permits and their renewals.

[Manual of Procedures, Volume II, Engineering Permitting Procedures, Part 2 \(Permits - General\)](#) - 6/15/2005
[Procedure: The Permit Renewal Process](#) - 12/3/2007

Rules and Regulations

The Bay Area Air Quality Management District develops regulations to improve air quality and protect the health and welfare of Bay Area residents and their environment.

The following policies and procedures provide clarification for certain District rules and regulations.

Regulation 2 Rule 1 - (see [Exemptions section](#))
[Regulation 8 - Policy: Regulation 8 Rule Applicability](#) 2/28/2008

Title V and Synthetic Minor Permits

Title V is one of several programs authorized by the U. S. Congress in the 1990 Amendments to the federal Clean Air Act (CAA). The intent of the program is to:

- Enhance nationwide compliance with the Clean Air Act
- Provide the basis for better emission inventories
- Provide a standard means to implement the following other programs in the federal Clean Air Act
- Hazardous Air Pollutants (CAA 112)
- Periodic Monitoring (CAA 114 and 504)
- Acid Rain (CAA Title IV)

The Title V program requires local and state air quality agencies to issue comprehensive operating permits to facilities that emit significant amounts of air pollutants. For all implementing agencies in the country, there are standard requirements for permit programs and permit content.

Title V operating permits differ from other District issued operating permits in that they explicitly include the requirements of all regulations that apply to operations at Title V facilities.

Any facility subject to Title V because its potential emissions exceed the trigger levels in the District's program, but which has actual annual emissions that are always below those levels, may opt out of Title V through one of the following two approaches:

1. A facility may apply for and receive a Synthetic Minor Operating Permit (SMOP). The requirements for a SMOP are laid out in [Regulation 2, Rule 6, Major Facility Review](#); or
2. A facility may show that its Potential to Emit (PTE) is below each Major Facility pollutant threshold by using the procedure set forth in the [Manual of Procedures Volume II, Part 3, Major Facility Review](#)).

The following policies and procedures provide clarification for the processing Title V and Synthetic Minor permits.

[Manual of Procedures, Volume II, Engineering Permitting Procedures, Part 3 \(Major Facility Review Permit Requirements\)](#) - 5/2/2001

Toxics

[Regulation 2, Rule 5](#) replaced the District's Risk Management guidelines on July 1, 2005. This rule provides preconstruction review for potential health impacts from new and modified sources of toxic air contaminants. Toxic emissions are estimated for all sources within a proposed project; if emissions from a proposed project exceed the trigger levels in [Table 2-5-1](#), a Health Risk Screening Analysis (HRSA) is required to determine project risk and risk from each source. Risk standards are:

2-5-301 Best Available Control Technology for Toxics (TBACT) Requirement:

The applicant shall apply TBACT to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million (10 E-6), and/or a chronic hazard index greater than 0.20.

2-5-302 Project Risk Requirement:

The APCO shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the project risk exceeds any of the following project risk limits:

302.1 A cancer risk of 10.0 in one million (10 E-6).

302.2 A chronic hazard index of 1.0.

302.3 An acute hazard index of 1.0.

The following policies and procedures provide clarification for certain toxics screenings and evaluations.

[Manual of Procedures, Vol. II, Engineering Permitting Procedures, Part 4 \(New and Modified Sources of Toxic Air Contaminants\)](#) - 06/06/2005
[Staff Report, Appendix D, Proposed BAAQMD Air Toxics NSR Program Health Risk Screening Analysis Guidelines](#) - 06/06/2005
[Guidance for Calculating Maximum Hourly Toxic Air Contaminant Emission Rates](#) - 06/16/2005
[Unified TAC List for Public Notice, Schools](#) - 06/11/2007