# Bay Area Air Quality Management District

**939 Ellis Street**
**San Francisco, CA 94109**

## Proposed Amendments to BAAQMD Regulation 1 (General Provisions), Regulation 2 (Permits) Rule 1 (General Requirements), and Regulation 3 (Fees)

## Staff Report

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# STAFF REPORT

## Proposed Amendments to Regulation 1 (General Provisions); Regulation 2 (Permits) Rule 1 (General Requirements); and Regulation 3 (Fees)

## Executive Summary

On May 17, 2000, the Board of Directors adopted amendments to Regulation 1; Regulation 2, Rule 1, Rule 2, Rule 4; and the Manual of Procedures, Volume II. These amendments were primarily intended to address deficiencies in the District's implementation of the Federal New Source Review program. As a result of the Board's May 17 action, EPA has stopped the clock on sanctions for these State Implementation Plan deficiencies.

Speakers representing industry (primarily Western State Petroleum Association, (WSPA) at the May 17 hearing commented on the following four issues about which they still had concerns. Italicized language represents District staff response to stated concerns.

1. Whether parametric emission monitors must be calibrated and maintained in accordance with manufacturers' specifications. Operators of such monitors are concerned about the cost of this requirement, and argued that manufacturers may specify excessive maintenance. Operators argued that they should be allowed to use their independent judgment in maintenance and calibration of such monitors. *The proposed amendments allow operators to develop alternative written maintenance procedures. The procedures must explain and justify departures from manufacturers' specifications.*
2. Exactly what types of component replacements trigger the "alteration" definition, and thus require District review. Should replacement of one component part with an "equivalent" component be considered an alteration? If so, can the District approve alterations quickly enough? *The proposed amendments clarify the definition of what it means to "alter" a source. Replacement of one component with a non-identical component is an alteration subject to District review. Alterations require District review to confirm that the change will not increase emissions. In such cases, the operator can proceed before District review is complete, and the change will not trigger BACT and offset requirements.*
3. Under what conditions would changes to process stream composition be considered to be an "alteration?" *The proposed amendments clarify the definition of "alter." Changes in process stream composition are allowed,*

*without District review, only if such changes are within the limits of existing permit conditions.*

4. Whether clarification is needed to ensure that the definition of "modification" does not prohibit use of legitimate existing grandfathered operating or emitting capacity. *The proposed amendments expand the allowable basis for determining baseline capacity to include appropriate relevant documentation, not just prior submittals to the District.*

In response to these concerns, the Board directed staff to hold a workshop to discuss these issues, and to return to the Board as soon as possible with findings and recommendations for amendments. These findings and recommendations are embodied in today's proposed amendments.

In addition to amendments in response to May 17, 2000 public comments, staff proposed the following amendments.

- Amend the initial reporting requirements for continuous emission and area monitor breakdowns.
- Miscellaneous language clarifications.

These proposed amendments meet all procedural and substantive requirements for adoption.

## Purpose of These Amendments

On May 17, 2000, the Board of Directors adopted amendments to Regulation 1; Regulation 2, Rule 1, Rule 2, Rule 4; and the Manual of Procedures, Volume II. These amendments were primarily intended to address deficiencies in the District's implementation of the Federal New Source Review program. These deficiencies were identified by EPA in November, 1998 in its "Approval and Promulgation of Implementation Plans; California State Implementation Plan Revisions, Bay Area Air Quality Management District" (63 FR 59924).

Regulation 2, Rule 1, the District's basic permit regulation, and Regulation 2 Rule 2, New Source Review, are closely related. Changes to one rule often require changes in the other in order to be fully implemented and consistent. As a result, amendments to both rules are proposed together.

During the May 17, 2000 rule adoption hearing, WSPA offered comments that some of the proposed amendments may, under some circumstances, impose unintended burdens on operators of permitted sources. The Board approved the proposed rule, but also directed staff to hold additional workshops with affected parties to discuss these industry concerns.

A workshop was held on June 30 to discuss these industry concerns.

# Proposed Amendments

### *1. Requirements to meet manufacturers' specifications for parametric air emission monitor maintenance*

**1-545 Monitor Maintenance and Calibration**

This requirement was added as part of the May 17 amendments. Staff proposed that monitors be maintained and calibrated in accordance with manufacturers' specifications. During the May 17 hearing, industry representatives suggested that some manufacturers may recommend unnecessarily onerous maintenance schedules in order to avoid liability for equipment failure.

For example, a monitor sensor designed to operate at high temperature in a corrosive environment may not need as much maintenance if installed in a non-corrosive environment. Unnecessary maintenance is an expense that increases the cost of air pollution control without a corresponding air quality benefit.

Staff proposes altering the air emission monitor maintenance requirement to require that operators follow all applicable maintenance and calibration requirements recommended by the monitor manufacturer. In order for an operator to claim that a specified maintenance practice is not applicable, the operator must have, and follow, a written maintenance policy developed by the operator for the control device in question. This written policy must explain and justify the difference between the written procedure and the manufacturers' procedure. This amendment does **not** require the operator to submit the procedure to the District for review prior to implementation. The District does not have the resources to conduct such a review. Instead, part of the investigation of a monitor breakdown will involve review of maintenance, and the adequacy of the facility's maintenance procedure will occur at that time.

Staff also proposes to renumber this section as 1-523.5. The requirements are intended to apply to parametric monitors. Maintenance and calibration requirements for CEMs and area monitors are contained in the Manual of Procedures and remain unchanged.

### *2. Clarification of what constitutes an Alteration*

**2-1-128 Miscellaneous Equipment**

The permit exemption for alteration of fugitive air emission components (valves, flanges, and other fittings) in petroleum refineries has been adjusted to account for the new definition of "alteration." The exemption has been amended to include fugitive air emission component **replacement** as exempt from District permit review. The *de minimis* emission exemption level has been explicitly set at 10 lbs/day, rather than referring to the BACT trigger level (which was changed on May 17 from 10 lb/day to zero). Major changes to the piping at a petroleum

refinery will require District permit review. Minor changes will continue to be exempt from permit review. Such changes are routine and have a negligible effect on facility emissions, and preconstruction review would not result in additional control requirements.

### 2-1-233 Alter

An **alteration** is a physical change to a source, or change in the method of operation, that may affect emissions (increase or decrease) beyond the variability allowed in the permit. A **modification** is an alteration that results in an emission increase. The District reviews alterations in order to ensure that any modifications are detected and properly subjected to the BACT and offset requirements of the District's New Source Review Rule.

Stakeholders requested clarification of the circumstances under which a change in raw materials used would be considered an "alteration" requiring a District permit. The District agrees that ambiguity in stating the degree or type of raw material change that would require District review could result in an unmanageable number of such changes at facilities where process streams are blends of hydrocarbons.

The proposed amendments attempt to reduce the ambiguity. The purpose is to allow the use of different raw materials where a) raw material variability is anticipated, and b) raw material variability does not substantially affect emissions. Use of an unapproved raw material of a substantially different nature, regardless of its actual impact on air emissions, would be considered an alteration. The purpose of this review is to **determine** whether the change will impact air emissions, by either increasing or changing the toxicity emissions. For example, storage of ethanol in a tank explicitly permitted only to store gasoline would be an alteration (because variability is not **anticipated** by the existing permit).

Change in the relative blend of hydrocarbons in a process stream at a refinery would not generally be considered to be an alteration. This is because some variability of refinery stream composition is generally anticipated by the permit, and variability in stream composition is generally already accounted for in emission calculations. Change in crude slate at a refinery would usually not be considered an alteration for the same reasons. If such a change resulted in an increase in emissions above the thresholds listed in Rule 2-1-234 a change in crude slate would be considered to be a modification because it did substantially impact air emissions.

The District's definitions of "alter" and "modified source" include process changes that might not be considered "modifications" under federal New Source Review (see 40 CFR § 51.165). Some of the differences are due to the District's focus on individual sources, whereas the federal New Source Review emphasizes

facilities. The District's approach is intended to support the "no net increase" program under the California Clean Air Act.

### *3. Modifications*

#### 2-1-234 Modified Source

At the May 17 hearing, stakeholders expressed concern that the definition of modified source was too sweeping. They were particularly concerned with imposition of throughput limits on grandfathered sources (sources already in existence in 1979 when the District required them to obtain permits, and which have been physically unmodified since then).

The original definition of "modification" is derived from the New Source Review section of the Federal Clean Air Act (42 U.S.C. § 7410), which allowed a source to increase throughput or hours of operation at a source, without undergoing NSR review, provided it was physically capable of the increased activity at the time the original permit was issued. The purpose of this allowance was to allow a facility to utilize existing unused capacity and expanding its business output, without triggering new source control review air pollution control requirements (i.e., emission offsets and installation of BACT).

The basic idea behind this aspect of the New Source Review Rule was that businesses should be able to use existing equipment to its designed capacity without triggering the controls needed for new equipment, with the expectation that old equipment would ultimately be replaced or modified and equipped with best available control technology. It was not expected that major sources would be "maintained" without modification for more than 25 years.

The May 17 language in Rule 2-1 also makes it clear that sources constructed before the District required permits ("grandfathered" sources, mostly built before 1979) are also subject to throughput and emission limitations. When the District's permit program was set up, these sources were allowed to increase throughput and emissions without limit, *provided they were not physically changed, and that the emitting process remained unchanged*. Most facilities have obtained appropriate permits from the District when they changed their equipment to increase capacity, or when changes to other parts of the facility "debottlenecked" production (a bottleneck is a process component that limits throughput. Debottlenecking means increasing the ability of the entire process unit by increasing the capacity of the limiting component). Because of lack of clarity in the prior definition of "modification," certain companies have, under the guise of "maintenance" and "equivalent" component replacement, successfully avoided NSR requirements. These companies have increased capacity and production beyond the equipment's original design parameters, without triggering NSR. This has resulted in a substantial increase in emissions from these sources.

The May 17 language ended this circumvention of NSR. All sources which do not currently have permit conditions limiting annual or daily emissions or throughputs, were limited to the throughputs or emissions that they have actually achieved and reported to the District, or the reported design capacities of the units, whichever is higher.

During the discussions with industry after the May 17 hearing, it became clear that there were several valid reasons why the capacities historically reported to the District are not necessarily a good characterization of equipment's actual capacity. Staff proposes to further clarify the allowable throughput for grandfathered sources to take these comments into account. The proposed amendments clarify that throughput increases resulting from debottlenecking of upstream or downstream units are NSR modifications. The proposed amendments also allow a source, physically unmodified since 1979, that has not been affected by debottlenecking to increase capacity to **actual design levels**, even if those levels have never before been achieved. The proposed amendments also recognize that many facilities have reported **nominal** design capacities and not **actual** design capacities when first seeking District permits. Nominal and actual capacities can differ for several reasons. For example, nominal capacities are usually sustainable for long periods of time, whereas the unit may be capable of operating at a much higher level for an hour or a day.

Section 2-1-234.3.1.1 allows a facility to offer design documents to support a claim that grandfathered equipment has always had a higher capacity, or potential to emit, than has ever been actually realized. The additional use of vendor specifications (for originally installed components) is intended to account for the fact that as-installed equipment may have an engineered capacity greater than the original design. For example, a mechanical design for a 100 million btu/hour furnace may call for ten 10 million btu/hour burners. The vendor specification for the burners that were originally installed, however, may provide for a capacity of 12 million btu/hr. The furnace, although designed for 100 million btu/hr, was capable of 120. The grandfathered source would be allowed to operate up to 120 million btu/hr without being an NSR modification.

It is important to recognize the difference between the calculation of emission increase that triggers permit review and BACT (the definition of "modified source" in 2-1-234) and the emission increase for purposes of calculating required offsets (the emission calculation procedure contained in 2-2-604). Once a source has been determined to have been modified, using the criteria in 2-1-234, the magnitude of required offsets is determined using the procedure in 2-2-604.

For example, a physical change to a piece of equipment that results in an increase in **daily** capacity is a modification, and is subject to District permit review and BACT. If at the same time **annual** emissions do not increase above baseline levels because of an enforceable reduction in annual throughput or an enforceable reduced emission rate, no offsets will be required.

On the other hand, a source that increases annual throughput above historical actual levels, but does not exceed the annual or daily limits contained in permit conditions, is not subject to offsets because the source has not been "modified" under 2-1-234.

***4. Reporting requirements for monitor breakdowns.***

**1-522 Continuous Emission Monitoring and Recordkeeping Procedures**

Staff proposes to delete the requirement for description of corrective action in initial breakdown reports submitted by operators. The initial breakdown report is a notification to the District of the nature and significance of an incident, and is usually provided before corrective action has been completed. In fact, the District encourage operators to notify the District as soon as possible, considering safety. Current practice is to include a discussion of corrective action in subsequent incident reports.

The California Air Resources Board (ARB) has recommended retention of the requirement to include corrective action in the breakdown report, to allow the District to evaluate the appropriateness of the corrective action taken. As discussed above, information regarding the corrective action taken is generally not available until after the breakdown report is filed; this information is gathered by the District during subsequent investigation.

The existing requirements prohibit extended periods of source operation while compliance monitors are inoperative because of the "breakdown." ARB has recommended adding a provision for alternative means of compliance verification when monitors are inoperative.

District staff's position is that compliance monitors do not, themselves, reduce emissions. The reasonableness of source tests or other temporary compliance assurance monitoring should be evaluated on a case-by-case basis, considering the magnitude and likelihood of non-compliance, as well as the feasibility and cost of alternative compliance assurance methods.

The Air Pollution Control Officer has existing authority to require such measures, under Section 1-521. Additional provisions under Sections 1-522 and 1-523, as recommended by ARB, are therefore unnecessary.

**1-523 Parametric Monitoring and Recordkeeping Procedures**

See discussion for 1-522.

ARB has suggested adding language requiring 5-year record retention at Title V facilities be added to this section. This is already required by Section 2-6-501, and is explicit condition of every Title V permit.

### *5. Miscellaneous Amendments*

**2-1-113 Exemption, Sources and Operations**

Section 2-1-113.2.6 exempts portable air pollution abatement equipment exclusively used to comply with the tank degassing control requirements of Regulation 8, Rule 5. Staff proposes to modify the exemption to equipment used to comply with Regulation 8, Rule 40 as well, because underground storage tanks at gasoline dispensing facilities are exempt from Regulation 8, Rule. Degassing of these tanks, preparatory to pulling the tank, is subject to Regulation 8, Rule 40.

**2-1-302 Permit to Operate**

Staff proposes to amend the offset requirement for temporary permits. The offset ratio has been established at 1.15 to 1.0 in order to be consistent with long term permits. The specific pollutants which must be offset have been identified: NOx, POC, and PM10. These are the criteria pollutants that are of most concern in the Bay Area.

**2-1-405 Posting of Permit to Operate**

The proposed amendment makes the goal of the requirement (to make sure that permit conditions are available to the operator) clear, and allows the permit holder to distribute this information electronically.

**Table 2-1-316 Toxic Air Contaminant Trigger Levels**

The trigger levels for three compounds (chloroprene, 2-4-diaminoanisole, and dimethylamine) have been corrected. Ethyl benzene has been deleted from the list.

**3-304 Replacement**

The fee requirements for different permutations of equipment replacement has been clarified.

## Socioeconomic Impacts of the Proposed Amendments

Section 40728.5 of the California Health and Safety Code (H&SC) requires districts to assess the socioeconomic impacts of amendments to regulations that, "...will significantly affect air quality or emissions limitations." This regulatory proposal does not fall within the scope of an amendment that significantly affects air quality or emissions limitations. Permitting programs generate revenue and allow for analysis and the imposition of applicable controls, administrative and monitoring requirements through permit conditions.

Under H&SC 40920.6, the District is required to perform an incremental cost analysis for a proposed rule. To perform this analysis, the District must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the District must "calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option." This section of the Health and Safety Code is not applicable to these proposed amendments. There are no identifiable costs associated with this project as there is no change in the regulatory standards or emission limitations.

Section 40727.2 to the Health and Safety Code and imposes requirements on the adoption, amendment, or repeal of air district regulations. The law requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements, the district may simply note this fact and avoid the analysis otherwise required by the bill.

## Environmental Impacts of the Proposed Amendments

The District has determined that these proposed amendments to Regulation 1; Regulation 2, Rule 1; and Regulation 3 are exempt from provisions of the California Environmental Quality Act pursuant to State CEQA Guidelines, Section 15061, subd. (b)(3). The proposed amendments are administrative in nature, and District staff, based on the whole administrative record on this issue, has determined with certainty that this rulemaking project will have no environmental impacts and is therefore exempt under Guidelines Section 15061, subd (b)(3). The District intends to file a Notice of Exemption pursuant to State CEQA Guidelines, Section 15062.

## Statutory Findings

Pursuant to Section 40727 of the Health and Safety Code, regulatory amendments must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. The proposed amendments to Regulation 1; Regulation 2, Rule 1; and Regulation 3 are:

- Authorized by H&SC Sections 40000, 40001, 40702, 40709 through 40714.5, 40725 through 40728, 40918, and 42300 et seq., 40 CFR Part 51, 42 USC §7410, 42 USC §7503

- Written or displayed so that its meaning can be easily understood by the persons directly affected by it;
- Consistent with other District rules, and not in conflict with state or federal law;
- Non-duplicative of other statutes, rules, or regulations; and
- Are implementing, interpreting, or making specific the provisions of the federal New Source Review program (42 USC §7410 and 7503; 40 CFR 51).

## Conclusion

The proposed amendments meet all legal noticing requirements and have been discussed with all interested parties. District staff recommends adoption of the amendments and the CEQA Notice of Exemption as proposed.