

AIR CURRENTS

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Air District Adopts New Flare Monitoring Rule

On June 4, the Air District's Board of Directors adopted a new flare monitoring regulation for refineries. This is the most stringent flare monitoring rule in the country.

Regulation 12, Rule 11, Flare Monitoring at Petroleum Refineries requires refineries to monitor the volume and composition of gases burned in refinery flares, to calculate flare emissions based on this data, and to report the information to the Air District. The rule also requires digital video monitoring of flares. The video provisions of the adopted rule have been referred to the Board's Stationary Source Committee for further consideration and possible future amendments. In review-

ing these video provisions, the Committee will consider whether images should be made available on the web.

The new rule applies to the 25 flares located at the five Bay Area refineries: *ChevronTexaco* in Richmond (nine flares), *ConocoPhillips* in Rodeo (two), *Valero* in Benicia (three), *Tesoro* in Avon (six), and *Shell* in Martinez (five flares). These flares are already being monitored to some degree, but the new rule requires each of the refineries to significantly upgrade its monitoring capacities and equipment.

The Air District committed to adopting a flare monitoring regulation in Control Measure SS-15 of the *2001 Bay Area Ozone Attainment Plan*.

The new rule was developed through a lengthy process that included a workshop, three community meetings (in Richmond, Martinez, and Rodeo), and many sessions of a flare study workgroup that included representatives of environmental groups, government agencies, and industry.

Flares, as defined in the new rule, are combustion devices that burn combustible gases in an open flame, using the ambient air surrounding the flame as combustion air. They are intended to be employed as safety and pollution control devices, burning gases that would otherwise be released to the atmosphere in an uncombusted form..

Flares are designed to handle large fluctuations in both the volume and the chemical content of gases. They are generally accepted to be the most reliable way to ensure that the flows that may result from an accident or shutdown of a large refinery unit, a large block of units, or an entire refinery, can be controlled.

There are two primary mechanisms by which flares produce air pollution. The

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Air District Plans Changes to Air Toxics New Source Review Program

This summer, the Air District held a series of five public workshops to review and discuss proposed changes to its Air Toxics New Source Review (NSR) Program.

The workshops took place between May 30 and June 12 in San Francisco, Richmond, Oakland, and East Palo Alto.

The Air District's Air Toxics NSR Program applies to industrial and commercial facilities that emit toxic air contaminants (TACs). These are pollutants that can potentially cause adverse health effects, such as cancer or birth defects.

The Air Toxics NSR Program requires facilities to undergo a permit review

before undertaking major construction projects. The goal of the program is to prevent significant increases in public health risk that might result from projects involving new or modified toxic emission sources. The program also aims to reduce health risk by requiring companies to update their existing emission controls when they modify or replace older, more highly polluting sources.

Current Policies

For the last sixteen years, the Air District has implemented the Air Toxics NSR Program according to policies and procedures established by our Air Pollution Control Officer (APCO).

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TOLL-FREE NUMBERS

| | |
|--------------------------|----------------|
| DAILY AIR QUALITY | 1-800-HELP-AIR |
| COMPLAINT LINE | 1-800-334-ODOR |
| SMOKING VEHICLES | 1-800-EXHAUST |

Flare Rule

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first is incomplete combustion. Like all combustion devices, flares do not burn all of the fuel that is directed to them.

Combustion efficiency is a measure of the extent to which the oxidation reactions that occur in combustion are complete, thereby converting the gases entering the flare into fully oxidized combustion products.

The second mechanism is through the oxidation of flare gases to form other pollutants. For example, the gases that are burned in flares typically contain varying amounts of sulfur compounds. Combustion can oxidize these compounds to form the pollutant sulfur dioxide.

Pollutants from flares are difficult to measure because flares burn in the open air, and there is no easy way to capture the combustion products for measurement. Although research scientists are using remote sensing methods to measure flare emissions, these methods are extremely expensive and not suited to daily monitoring of flares at this time. Instead, the Air District's new monitoring regulation requires the collection of information that can be used to *calculate* flare emissions. The most important measurable parameters are *vent gas flow* and *vent gas composition*.

Vent gas flow, or the volume of gas that is sent to a flare during a given period, is best measured by devices called time-of-flight (TOF) ultrasonic flow monitors. Two of the Bay Area refineries have older ultrasonic monitor models, but the new rule would require all refineries to install newer, more sophisticated, and more accurate TOF monitors.

The new rule allows two options for measuring *flare gas composition*: (1) the manual collection of samples for subsequent lab analysis, or (2) the use of continuous analyzers that sample gas and analyze it automatically.

The new rule requires that monitoring data be submitted to the Air District in a monthly report, due within 30 days of the

Public Meetings on Ozone Strategy

This year, the Air District, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, will be preparing the 2004 Ozone Attainment Strategy and the 2003 Clean Air Plan—the region's strategies for attaining the national and California health-based one-hour ozone standards.

We are inviting all interested individuals and organizations to a series of public meetings to discuss measures for reducing ozone air pollution in the Bay Area.

Two of these meetings will serve the additional purpose of soliciting community input regarding the Air District's Supplemental Environmental Projects (SEP) Plan. SEPs are essentially projects beneficial to air quality, funded by monies collected through Air District enforcement actions. We hope that residents will assist the Air District in developing formal SEP guidelines, prioritizing funding, and determining worthy projects to improve local air quality.

These two dual-purpose meetings will be held at the following locations (dates are *tentative* and subject to change, please check at the phone number or website below before attending):

September 4, 6:30 – 8:30 pm

Rodeo Senior Center
169 Parker Ave. (at 3rd St.)
Rodeo, CA

September 10, 6:30 – 8:30 pm

East Palo Alto Senior Center
560 Bell St.
East Palo Alto, CA

Public meetings to discuss the ozone strategies are also tentatively planned for the following cities and dates:

September 11 — Richmond

September 16 — Oakland

September 24 — San Jose

September 30 — San Francisco

Contact Henry Hilken at (415) 749-4642 for more information, or visit our website at www.baaqmd.gov.

end of each month. This report must include the *vent gas flow* data, *vent gas composition* data, and subsequent emissions estimates, along with descriptions of all flaring activity and information on any downtime for the monitors. The rule also requires a semi-annual report comparing the flow monitor data for a given period of time with a set of flow data from the same period derived by other methods.

The rule's requirements go into effect quickly. By September 2003, all refineries that are not already doing so will have to start taking daily *vent gas composition* samples. By December 2003, each refinery will have to have continuous TOF *vent gas flow* monitors installed. By March 2004, each refinery will be required to monitor *vent gas composition* at more

frequent intervals, through sampling or continuous analyzers.

For a copy of *Regulation 12, Rule 11*, visit the Air District's website at www.baaqmd.gov. For a detailed discussion of the rule, view the rule adoption materials at www.baaqmd.gov/ruledev/12-11/r1211bm2.htm.

—Aaron Richardson, Bill Guy,
and Alex Ezersky

Air Toxics Rule

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The program requirements are based on the results of health risk assessments, which analyze health risk for individuals potentially affected by toxic emissions.

The Air Toxics NSR Program uses a health risk assessment methodology that

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is specific to air pollution programs in California. This methodology is outlined in State health risk assessment guideline documents, which have recently been updated.

Following these guidelines, Air District staff complete a particular kind of health risk assessment, known as a site-specific health risk screening analysis (HRSA), as part of the permit evaluation process for any proposed project with toxic emissions over specified levels.

Depending on the results of the HRSA, the Air District may require facilities to install or implement a set of pollution controls referred to as the Best Available Control Technology for Toxics (TBACT). This might be a piece of equipment, or an operational procedure, that would constitute the highest level of emission control that has been successfully achieved in practice for a particular kind of pollution source, or that has been determined to be technologically feasible and cost-effective by the Air District.

New Draft Rule

The Air District is now proposing to codify these Air Toxics NSR policies and procedures into a new formal rule, to be considered by the Board of Directors for adoption. This will be *Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants*. (Related amendments to currently existing rules, and to the Manual of Procedures, are also being considered.)

This draft rule will also make some changes to current policy. The most significant changes to the program are:

a) Under current policy, health risk screening analyses only evaluate the health risks from *chronic*, or long-term, exposure to toxic emissions. The proposed rule will require the additional evaluation of health risks from *acute*, or short-term, exposures.

b) The proposed rule will lower the current threshold for requiring TBACT from a chronic hazard index of 1.0 to a chronic hazard index of 0.2.

c) The proposed rule will update toxicity values and exposure assessment procedures to conform with the new 2003 State health risk assessment guidelines. These are the two central components of health risk assessments, and are used to estimate the magnitude and duration of toxic exposure in a population and the extent of injury or disease that might ensue.

d) The proposed rule will remove current exemptions from health risk limits for dry cleaners. Perchloroethylene, also known as tetrachloroethylene or perc, has traditionally been the industry standard chemical solvent for dry cleaners. However, significant advances have been made in less-toxic technologies. Under the proposed rule, new and modified dry

cleaning facilities will need to meet the Air District's 10 in a million cancer-risk standard, even if this requires them to switch to less-toxic, non-perc alternatives.

e) The proposed rule will clarify and expand requirements under which the APCO can make discretionary risk management actions. It will also provide the opportunity for public participation in any discretionary permitting decisions.

A draft Staff Report describing the proposed new rule and amendments is available on the Air District's web site at www.baaqmd.gov. Written copies are available upon request. Any questions should be directed to Brian Bateman, Manager of the District's Toxic Evaluation Section, at (415) 749-4653, or sent electronically to bbateman@baaqmd.gov.

—Aaron Richardson and Brian Bateman



City of Oakland to Host Walk/Bike California 2003

The first Statewide Conference on Walking and Bicycling will be held at downtown Oakland's Marriott Hotel on October 15–18, 2003. Sponsored by the City of Oakland and the California Bicycle Coalition, with support from other local sponsors, the event is expected to draw hundreds of attendees.

The first *Walk/Bike California* conference will tackle education, accessibility, public health programs, multi-use trails, legal issues, safe routes to school, and more. Professionals can take advantage of a variety of sessions on the nuts and bolts of planning, engineering, and maintaining facilities.

Oakland's conference will be the first of its kind to focus on the interface between walking, bicycling and public transit. As the transportation hub of the East Bay, with BART, AC Transit, Amtrak, and the Alameda/Oakland Ferry services all located here, Oakland is the ideal location to explore nonmotorized connections with transit.

For more information, e-mail Karen Hughes, Oakland's Bicycle and Pedestrian Program Manager, at khughes@oaklandnet.com, or visit the conference website at www.calbike.org/conference.htm.

Published bimonthly
B.A.A.Q.M.D.
 939 Ellis Street
 San Francisco, CA 94109

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2003 Lawn Mower Buyback Ends

Between April 12 and May 3, the Air District's *Lawn Mower Buyback Program* held its annual series of exchange events to promote reduction of air pollution and green waste. Bay Area residents were invited to seven locations where they could trade-in their old gasoline mowers for recycling and receive a \$100 rebate on a Black & Decker corded electric mulching mower, which was available for the reduced price of \$79 plus tax.

These *Lawn Mower Buyback* events were run as partnerships between the Air District and local waste management agencies. Five counties participated (Marin, Contra Costa, Solano, Sonoma, and Napa), along with the City of Sunnyvale. The events were held in the parking areas of Home Depot stores.

This spring, "overflow vouchers" ensured that any resident who showed up at one of these events could get a mail-in rebate, even if new mower supplies ran out. Approximately 32 overflow vouchers were used in Contra Costa County.

In all, 1,096 mowers were exchanged at these Air District-sponsored events (see table below).

Late Summer Events Planned

One, and possibly two, additional lawn mower buy-back events are expected to occur in the fall. An event for San Francisco residents is tentatively scheduled for September or October. A second event will occur in the Livermore area in October. For details about these events, contact Ralph Borrmann at (415) 749-4791.

Lawn Mowers Exchanged Spring 2003

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|----------------------------|----------|--------------|
| Contra Costa County | April 26 | 258 |
| (second event) | May 3 | 225 |
| Marin County | April 12 | 78 |
| Napa County | May 3 | 162 |
| Solano County | April 12 | 128 |
| Sonoma County | April 26 | 138 |
| City of Sunnyvale | April 26 | 107 |
| TOTAL | | 1,096 |