

AIR CURRENTS

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Air District Scores \$620,000 in Tosco Penalty Settlement

In February, the Air District negotiated an innovative settlement totaling \$620,000, including civil penalties, permanent retirement of emissions credits, and funding for air monitoring equipment. The settlement resolves 86 violation notices issued by the Air District to Tosco's refineries in Rodeo and Martinez, California, from late 1997 through January 2000.

Tosco will pay a monetary civil penalty of \$314,530 to the Air District and surrender for permanent retirement 37 tons per year of emission credits, valued at \$270,470. In addition, Tosco has agreed to buy and install a hydrogen sulfide ground-level air-monitoring unit in the City of Martinez, downwind from the facility.

Emissions credits are generated when facilities clean up their processes or reduce the amount of emissions beyond reductions required by law. The emissions credits retired by Tosco include 28 tons of volatile organic compounds, and nine tons per year of oxides of nitrogen, both smog-forming gases. If they had not been permanently retired, these 37 tons per year of emissions credits could have been used by Tosco at a later time for industrial expansion, or they could have been sold on the open market, enabling another facility to increase its emissions.

"This is one of the Air District's largest violation settlements," said the Air District's Executive Officer, Ellen Garvey. "The emissions credits are now

permanently deleted from the Air District's emissions inventory and can never be used again. In essence, the Air District now has 37 tons per year less smog-producing gases to worry about," Garvey added.

—Lucia Libretti



Central California Ozone Study Begins this Summer

Air quality regulations almost always rest on a solid foundation of measurement and quantification. But this link is complicated by the fact that—except in the worst cases—air pollution can be very difficult to see. Blending science and intuition, air quality modeling can be viewed as an ongoing attempt to recognize the invisible by its manifestations, to capture facts out of thin air and put them to use in the service of public health.

This summer the Air District will take part in an historic multi-million-dollar air quality "fact-capturing," a large-scale field and modeling project known as the Central California Ozone Study, or CCOS. Participating air districts will use this study to lay a technical foundation for their compliance with federal and State ambient ozone standards. In the process, CCOS should also enhance our understanding of the formation and

complex cross-district transport patterns of ozone in the extensive central area of the State.

There are several reasons that CCOS was slated to begin this summer. For one thing, the EPA plans to designate various regions in nonattainment for the eight-hour ozone standard this year (even though, legally, this standard has been set aside by a US Court of Appeals). Federal plans for these nonattainment areas (most likely including the Bay Area), would be due in 2003. Districts that fail to comply with the State of California's one-hour ozone standard will also have to submit revised State air quality plans this year and in 2003.

Development of the technical basis for a nonattainment plan usually takes place in several stages over a number of years. To prepare for these plans that are due

in 2003, any initial field study monitoring data will have to be collected this year. That leaves three years for the extensive subsequent work to be completed—including data review, archiving, formatting, inventory updates, analysis, regional modeling, control strategy development, and plan preparation.

When it gets underway this year, CCOS will also benefit from comprehensive field data collected by the concurrent California Regional Particulate Air Quality Study—itsself a \$27 million dollar study designed to lay the groundwork for air districts' plans to meet the EPA's newest PM₁₀ and PM_{2.5} standards.

These regional field studies are expensive because they cast a wide technical net, collecting meteorological and air

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CCOS

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quality measurements, at the surface and aloft, over a large geographical area. Because they are so expensive, such studies have only been conducted once every ten years or so in the major metropolitan areas of California. The last big study in our region, the San Joaquin Valley Air Quality Study, took place in 1990.

Since planning for the relatively new eight-hour standard means weighing ozone concentration averages over a much longer period of time, taking into account the mechanics of ozone drift and transport, the CCOS study area has to be particularly large: in this case, the largest ever in California. The study domain extends from Redding in the north to the Mojave Desert in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. CCOS will concentrate its monitoring efforts in those areas with the most severe ozone air quality problems, such as the San Joaquin and Sacramento valleys, and in those areas necessary to model transport—for example, measuring the impact of Bay Area emissions on the downwind districts.

In the Bay Area, the Air District expects CCOS to improve our understanding of ozone activity in the Livermore Valley, where our highest ozone levels and most frequent exceedences occur. To ensure that the specific needs of our district are not overlooked, the Air District's Board of Directors has supported in concept additional funding to expand the measurement program in the Bay Area.

This additional funding should also enable us to purchase a radar profiler, a new instrument that measures wind direction and speed. Profilers operate unattended, automatically and continuously, and provide critically needed upper air data for forecasting and modeling. All of the major California air districts have them, except the BAAQMD. Under CCOS, the California Air Resource Board is offering the Air District a deal—we pay for the installation and operation of one of the units for the four-month CCOS study period (at a cost of approximately \$100,000), and permanent ownership of that profiler will be transferred to the Air District. This represents a significant savings over the normal price of \$250,000.



Besides the Air District, CCOS's primary financial participants are CARB, the California Energy Commission, the San Joaquin Valley Air District, the Sacramento Air District, various other air districts, and representatives of the regulated community.

The overall CCOS process will be guided by several central oversight committees, with members from government agencies and the regulated community. A Policy Committee will direct the study, a Technical Advisory committee will provide technical alternatives and recommendations, and a Joint Powers Agreement



BAAQMD BESTSELLERS

Recent Papers by Air District Employees

Fairley, David. "Daily Mortality and Air Pollution in Santa Clara County, California: 1989-1996." *Environmental Health Perspectives* 107, no. 8 (August 1999): 637-641.

Fairley, David. "Overshoot Bias and the National Ozone Standard." *Journal of the Air & Waste Management Association* 49 (April 1999): 370-385.

Fairley, David, Tom Perardi, and Robin De Mandel. "Stability of Ozone Attainment Designations." *EM* (February 1999): 11-15.

Hess, Peter, and Sam Altshuler. "Profiles in History: John S. Lagarias, P.E., DEE, A Lifelong Commitment to Clean Air." *Environmental Engineering* 34, no. 4 (October 1998): 14-19, 25.

Mangat, Tirlochan S., Minh H. Nguyen, and Stuart A. Schultz. "Tracking Emission Levels Using Regulatory Control Levels and Effectiveness Factors." Paper presented at the Air & Waste Management Association's conference on *The Emission Inventory: Regional Strategies for the Future*, Raleigh, North Carolina, October 1999.

Also—to be published in March: Hess, Peter, "Bread Baking" and "Semiconductor Manufacturing." In *Air Pollution Engineering Manual*, 2d ed. John Wiley & Sons, 2000.

will handle fundraising and finances. Technical subcommittees will provide guidance on specific topics, such as emissions, meteorology, and modeling. The Air District will be an active participant on the Policy and Technical committees, as well as a few of the subcommittees.

CCOS field work will be performed from June 1 through September 30, 2000. Quality assurance and data archiving should be completed by June 2001. Base-case modeling will be finished in March 2002, and sensitivity studies and plan preparation should begin in 2002 and finish in 2003.

For more information, you can visit CARB's CCOS website at www.arb.ca.gov/ccaq/ccos/ccos.htm.

—Aaron Richardson

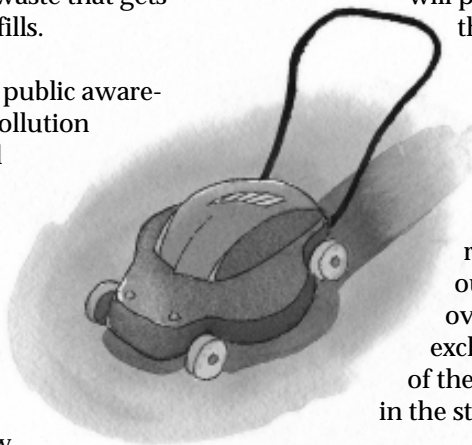
Lawn Mower Buyback Continues This Summer

Did you know that your lawn care habits may cause air pollution and waste-disposal problems? During the growing season, gasoline-powered lawn mowers create an estimated nine tons of air pollution every day in the Bay Area. Grass trimmings also make up a significant portion of the waste that gets buried in local landfills.

In order to increase public awareness about the air pollution caused by lawn and garden equipment, the Air District is co-sponsoring a lawn mower buyback campaign in several Bay Area counties this spring. For the second year in a row, the Air District will partner with other public and private organizations to provide a \$150 rebate for residents who exchange their gas-powered mowers for cleaner electric ones. A limited supply of 24-volt battery-operated *Toro* mowers will be available on a first-come first-served basis. "We want the public to understand how their consumer choices

affect air quality," said Teresa Lee, Director of Public Information.

Beginning in late March, a total of six programs will take place throughout the region. The counties of Sonoma, Napa, Solano, Contra Costa, and Santa Clara will participate, along with the City of Palo Alto.



One-day trade-in events will be held in Santa Clara (April 15) and in Napa (April 29), while the remaining counties will offer the rebates at selected retail outlets. A grand total of over 1,350 mowers will be exchanged, making this one of the largest buyback efforts in the state.

The lawn mower buyback campaign is offered to residents of the participating localities only. Proof of residency (drivers license, utility bills, etc.) will be required. See your local newspaper for details or call Ralph Borrmann at the Air District at (415) 749-4791 for more information.

—Ralph Borrmann

Board Officers Stay on For Two-Year Term

The Board of Directors has amended the Air District's Administrative Code to extend to two years the terms of the Chairperson, Vice-Chairperson, and Board Secretary. These officers previously served one-year terms.

The board officers for 1999, Supervisor Mike Nevin of San Mateo County (Chairperson), Councilperson Randy Attaway of Los Gatos (Vice-chair) and Supervisor William Carroll (Secretary) will continue their terms until the end of 2000, when a new slate of officers will be chosen.

The Air District's sister agencies, the Metropolitan Transportation Commission and the Association of Bay Area Governments, both have two-year terms for their chairpersons. In addition to providing better continuity with these regional agencies, the two-year terms will allow for more effective leadership in setting and implementing long term policies and practices for the District, and facilitate better coordination with the Executive Officer and staff.

—Teresa Lee

Why Use an Electric Mower?

Gas mowers help create ground-level ozone. A typical gas-powered lawn mower can emit the same amount of ozone-forming gases in one hour as a new car driven 340 miles. Ground-level ozone can impair lung function and stunt plant growth. Children and people with heart and respiratory problems are especially sensitive.

To top it off, each year homeowners across the nation inadvertently spill 17 million gallons of gasoline while refilling their lawn mower tanks. That's more gas than was spilled by the *Exxon Valdez*! This gas seeps into the ground, where it can contaminate groundwater. Some of it also evaporates and contributes to summertime smog.

By using an electric mulching mower you *completely eliminate* emissions from fuel combustion and evaporation. Electric mowers are also easy to start, with no awkward pull cords. They don't require gas, oil, tune-ups, or spark plugs—making them almost maintenance-free. They are also 50 percent quieter than gas models, a feature your neighbors will appreciate!

Recent Board Actions

January 19, 2000

RESOLUTION NO. 00-1: Amendments

Manual of Procedures, Volume III: Laboratory methods

Filing of a CEQA Notice of Exemption for the amendments

Adds three new laboratory methods: (1) Method 44A: Determination of Reduced Sulfur Gases and Sulfur Dioxide in a Gaseous Matrix Using the Sulfur Chemiluminescence Detector, (2) Method 45: Determination of Butanes and Pentanes in Polymeric Materials, and (3) Method 46: Determination of the Composite Partial Pressure of Volatile Organic Compounds in Cleaning Solvents. These new laboratory methods are required for the enforcement of amended regulations or to incorporate advances in analytical equipment.

February 16, 2000

RESOLUTION NO. 00-2: Amendments

Regulation 10: Standards of Performance for New Stationary Sources
Approval of CEQA Notice of Exemption

Incorporates by reference EPA amendments to the federal New Source Performance Standards (NSPS). EPA has delegated enforcement of the NSPS to the Air District, which adopts these NSPS updates biennially. The NSPS are applied to new facilities through the Air District's New Source Review program in Regulation 2.

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Teresa Lee, Director of
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PUBLIC WORKSHOP

Tuesday, March 21

A public workshop will be conducted at 1:30 PM in the 4th floor Conference Room, 939 Ellis Street, San Francisco, to discuss proposed amendments to:

Regulation 11, Rule 9: Ethylene Oxide Sterilizers, rescinding the rule and adopting by reference the State's Airborne Toxics Control Measure, which was amended in 1998 to consolidate the State and federal ethylene oxide sterilizer operating and recordkeeping requirements into a single regulation, while maintaining the public health protections of both regulations.



Do you know someone whose efforts to improve air quality deserve special attention, someone whose exploits on behalf of clean air should be the stuff of legend—in short, an indomitable clean air warrior? Could that someone be YOU?

To get a **CLEAN AIR CHAMPION 2000** nomination form, call 1-800-HELP AIR, or click on www.sparetheair.org. Self-nominations are encouraged. **DEADLINE: MAY 15, 2000.**

BAAQMD ACTIVITIES

ENFORCEMENT	DEC	JAN
Total Inspections	610	958
Complaints Processed	234	237
Violation Notices	117	135

LEGAL

Cases Resolved	120	149
Mutual Settlement	\$ 98,540	\$101,499
Civil Penalties	\$ 26,500	\$ 0

PERMIT SERVICES

Authorities to Construct Granted	35	24
Permits to Operate Granted	102	94

TECHNICAL

Highest Ozone AQI	30	32
Highest CO AQI	61	43
Highest Particulates AQI	60	56
State Excess Days	0	0
Source Tests	68	34

Pollutant values are expressed according to the Air Quality Index Scale: 0–50 Good; 51–100 Moderate; 101–150 Unhealthy for Sensitive Groups; 151–200 Unhealthy; 201–300 Very Unhealthy; Over-300 Hazardous.

The District issues "Spare the Air Tonight" requests when air quality forecasts predict that concentrations of CO or particulates will exceed the national health standard.

YEAR TO DATE (02/29/00)

State Ozone Violations	0
Federal Ozone Violations (8-Hour)	0
Carbon Monoxide Violations	0

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

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