



Valley Air News

A publication of the San Joaquin Valley Air Pollution Control District

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ARB Funds FACES

The California Air Resources Board (ARB) and the University of California, Berkeley (UCB) are seeking children to participate in the Fresno Asthmatic Children's Environment Study (FACES) which will examine the health effects of air pollution on children with asthma.

The five-year study, funded by the ARB, addresses several research exacerbations and may help identify asthmatic children who are more sensitive to regional and seasonal pollutants. FACES will also examine whether these short-term asthma exacerbations influence the progression of childhood asthma. Finally, this study will examine whether other environmental factors such as tobacco smoke, allergens or housing characteristics influence children's response to air pollution.

"The two principal investigators are Drs. Ira Tager and Katharine Hammond with School of Public Health at the UCB," reported Kathleen Mortimer, FACES project coordinator. "The full research team includes investigators from numerous academic and health care institutions, and a research staff."

More than 400 children are currently being recruited to participate in the study. Only children who have a physician diagnosis of asthma and whose asthma is currently active will be included. The population will be restricted to children aged six to ten years old who live within the Fresno and Clovis areas.

The results from this study will be used to assist the ARB and other regulatory agencies in developing appropriate air pollution regulations.

"The findings may also help health care providers identify children who are at the greatest risk for adverse effects of air pollution and guide future decisions about environmental and medical interventions," added Mortimer.

For further information or to enroll a child, please contact FACES at (559) 294-6700. Details on the ARB is available @ www.arb.ca.gov.

Equipment Breakdowns

A breakdown is the unforeseeable failure or malfunction of equipment which causes a violation of any rule, permit condition, emission limitation; or any in-stack Continuous Emission Monitoring (CEM) equipment malfunction. When breakdowns occur, facility operators may qualify for relief from enforcement action if specific requirements are met.

"Only breakdowns that violate a Valley Air District rule or permit condition should be reported," explained Wayne Clarke, compliance manager with the Valley Air District.

Emission-related breakdowns must be reported within one-hour of detection, while CEM equipment breakdowns must be reported within eight hours. Notification, via telephone or facsimile, should include the time, specific location, equipment involved, and the cause of the occurrence.

Facilities that qualify for relief may continue to operate free from enforcement action for up to 24 hours or the end of the production run. CEM equipment breakdowns may qualify for up to 96 hours of relief.

For additional information about breakdowns, please consult the Valley Air District at (559) 230-5950. Specific details are also available @ www.valleyair.org/busind/comply/breakdown.htm.

Governing Board Review

The Governing Board took the following action during the December 14th Governing Board Meeting:



- Approved recommendations from the Governing Board Ad Hoc Finance Subcommittee.
- Approved the creation of a Gasoline Lawn Mower Trade-In Program and appropriated \$200,000 for funding incentives for the purchase of 1,200 rechargeable electric lawn mowers.
- Adopted proposed Amendments to Rule 4653 (Adhesives).
- Approved Resolution increasing the 2000-01 District Budget in the amount of \$12,827,700 for implementation of the Governor's Traffic Congestion Relief Program and enhancement of the District's Public Education Program.
- Approved Resolution amending the 2000-01 District Budget in the amount of \$630,000 for additional State Subvention grant revenue and appropriations for recommended staffing and equipment necessary to meet mandated requirements of the grant.
- Approved the renewal of contract with ARB to maintain District owned monitoring equipment, provide laboratory analysis and to operate Kern County air monitoring stations for \$99,708.
- Approved the selection of recommended vendors for public relations and advertising agency representation for a comprehensive, multi-lingual public outreach campaign.
- Received and filed proposed Rule 3160 (Prescribed Burning Fee) and set January 18, 2001 for the Public Hearing to consider the proposed rule.
- Approved and authorized the application for Carl Moyer Memorial Air Quality Standards Attainment Program Funds.
- Approved an amendment to the REMOVE Program grant award contract with the City of Delano extending the term of the contract to December 31, 2000.



**The next Governing Board meeting will be held on
Thursday, January 18, 2001, at 9:00 AM
in the District's Central office in Fresno, and via video-conference in the Modesto and Bakersfield offices.**

Swaney Named Northern Permit Services Manager

The Valley Air District is pleased to announce that Jim Swaney has been promoted to the position of Northern Region Permit Services Manager. Jim brings with him nine years of environmental and air quality experience. He started in private industry, at Sea World in San Diego, where he worked to ensure that Sea World met or exceeded all environmental media regulations, including air quality, hazardous materials and hazardous waste, fresh and salt water quality, wastewater treatment, solid waste, and recycling.

He then joined the San Diego County Air Pollution Control District as an Inspector, in order to concentrate on air quality in a regulatory agency. Next, Jim joined the Valley Air District in October 1997, as an Engineer in the Southern Region Permit Services. In June 1999, he was promoted to Senior Engineer in the Central Region Permit Services. With his varied and extensive experience, Jim brings to his new position the technical and leadership skills to continue the District's commitment to serving the public and regulated community.



Health Problems and Particulate Matter

By John Reinsch, M.D.

Contributing writer John Reinsch, M.D., has training in internal medicine, hematology and oncology. He currently practices Oncology at Kaiser Permanente. A resident of Fresno since 1977, Dr. Reinsch is concerned about air pollution health impacts on his patients and all residents of the San Joaquin Valley.

Lately, there has been increasing concern over air pollution caused by particulate matter, tiny particles less than ten microns. Individually they are invisible, but collectively they are seen as haze or smog.

When breathing, our lungs draw air into a branching system of progressively smaller tubes. These airways terminate in the alveoli- the air sacs where oxygen and carbon dioxide exchange occurs. Filtering takes place in the upper airways where the larger particulate matter is trapped in the mucous membranes. Ultra-fine particulate matter is dangerous because it escapes the upper airway defense system and is delivered to the alveoli where absorption into the blood stream may occur. Presence of particulate matter in the alveoli may also cause damage to the walls of these structures.

The particulate matter in the air comes from a variety of sources- fine and coarse particles are derived from soil, industrial and construction dust, coal and oil combustion. The ultra-fine particles, composed primarily of sulfates and nitrates, are produced in high temperature processes such as diesel combustion. Molecules which adhere to the surface of particulates are responsible for many adverse effects on our bodies. The source of much of this molecular baggage is the more than one billion pounds of toxic industrial and individual chemical waste that is annually released into the air over the United States. Unfortunately, there are potentially 18,000 different carbon compounds and free radicals in this chemical waste that can end up in our urban air and ultimately be transmitted on the surface of particulate matter into the alveoli of our lungs.

Fine particulate matter air pollution will cause symptoms exactly like asthma in people who did not previously have asthma, nor an allergy history. In the San Joaquin Valley, the incidence of bronchial asthma is twice the national average. Currently, the long term health and developmental repercussions of this pollution-associated asthma on Valley children is being researched in the Fresno Asthmatic Children's Environment Study (FACES).

In older adults, increased rates of acute cardiac and lung illness and death following severe episodes of particulate matter air pollution are often observed, especially in those with a pre-existing chronic disease.

An analogy may be made between cigarette smoking and particulate matter in relation to human disease. While we do not know exactly how cigarettes do it, they are associated with high rates of cancer and other diseases in smokers. Similar associations are being identified for particulate matter air pollution. Not knowing the mechanism should not prevent us from taking reasonable actions to safeguard the public's health. When there is a strong relationship between an exposure and illness, the first step is to reduce the exposure, even when we do not know the exact path that leads to the illness.