Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Advisory Council Public Health Committee Meeting
1:30 p.m., Monday, February 10, 2003

1. **Call to Order – Roll Call. 1:30 p.m.** Quorum Present: Brian Zamora, Chairperson, Elinor Blake, Ignatius Ding, Linda Weiner**.** Absent: Jane Kelly.

2. **Public Comment Period.** There were no public comments.

3. **Approval of Minutes of December 9, 2002.** Ms. Blake requested that in the last sentence of the next to last paragraph on page three, "Group" be replaced with "Coalition and other organizations." She moved adoption of the minutes as amended; seconded by Mr. Ding; carried unanimously.

4. **Update on Model Woodsmoke Ordinance.** Luna Salaver, Public Information Officer, stated that the ordinance will be heard by the City of Sebastapol on February 25 and presented to the Contra Costa Council of Mayors in April. The Santa Clara County Board of Supervisors will hold a hearing on the ordinance at a future date. Eleven of the 15 cities in that county have adopted the ordinance. The City of Campbell has included the ordinance in its General Plan and will hold a public hearing on it in the near future. The District has contacted the Mayors of the Cities of Oakland and El Cerrito, and is working with several District Board members, regarding the adoption of the ordinance in their jurisdictions.

   To date, 73 cities in the Bay Area have not adopted the ordinance, and the District is preparing wood burning information packets for them. During their next meetings the Spare the Air Resource Teams will discuss ways to advocate the ordinance. The Committee urged the District to coordinate with the Sonoma County Planning Department and the American Lung Association in promoting the ordinance before the City of Sebastopol. Ms. Salaver indicated she would contact American Lung Association staff in the North Bay as well as Board member Pamela Torliatt who has been active in advocating the ordinance before many cities in Sonoma County.

5. **Understanding Optical Remote Sensing and How It Relates To Fence Line Monitoring.** Alton Arnett, Business Manager of TerraAir Services in Houston, Texas, stated that optical remote sensing (ORS) technology is currently being used to monitor ambient air at the fencelines of refineries and chemical plants. Emitting separate beams of infrared (IR) and ultraviolet (UV) light, ORS detects toxic compounds in the atmosphere and distinguishes them by how they absorb light radiation. The compounds measured can be quantified and speciated in real-time. TerraAir Services operates and provides service to the ORS systems at the ConocoPhillips refinery in Rodeo, California and the Westlake Petrochemical facility in Lake Charles, Louisiana. It also processes the data they generate. The ConocoPhillips system contains 16 separate pieces of equipment monitoring 38 compounds at the 930 meter north fence and the 855 meter south fence. It was installed in 1996 as a result of a Catacarb release in 1994 and cost approximately $2 million.

Mr. Arnett displayed slides of ORS equipment in monitoring shelters, as well as the system's computer screen that includes data for the compounds monitored, a map of the facility and the surrounding area and meteorological conditions. Compound detection levels are identified by color-coding with green, yellow and red lights. If there is a red flash for 60 seconds, a high level alarm flashes on the screen. If the system operator does not acknowledge the computer alarm after another 60 seconds, a refinery alarm sounds. This has occurred once in the last seven years.

Dial-in access to the screen is permitted to four community members and the staff of the Air District. Ms. Blake added Contra Costa County also has access to this data in real-time. The screen display will soon be posted on the County's website, although the specific features are not yet determined. Of the meteorological indicators, the windrose are of greatest interest to the community for sampling purposes. There was brief discussion of whether the screen display is user-friendly to the layman and if a primer would help to introduce the screen features.

Mr. Arnett added that fenceline monitoring provides for "turf protection" in cases in which a release occurs in one of several adjacent facilities. ORS provides for early detection of a release that can lead to the prevention of a subsequently catastrophic release. It has been utilized to activate a water cannon system around an industrial facility. It has also increased employee safety by identifying compounds at the fenceline of a Houston plant that lead facility staff to discover previously undetected in-house equipment malfunctions.

In response to Committee member questions, Mr. Arnett provided the following comments:

a) the ability of ORS equipment to operate under diverse or adverse atmospheric conditions, such as subjugation to prolonged, heavy rains or a thick dust cloud, depends upon the density of the water or particulate matter that would block the projected beams of light. This has happened once in heavy precipitation and only for a few minutes. While there is no back-up to the optical equipment, the system has electrical back-up power.

b) ORS technology is being applied to ambient air monitoring in a field at a considerable distance from a large chemical complex in Seabrook, Texas and also to monitoring for ozone precursors in downtown air in one municipality in the State of Maine.

c) a portion of the scientific community still regards UV readings with some skepticism due to problems associated with developing a commonly accepted UV data baseline.

d) a TerraAir Services Project Manager visits the ConocoPhillips refinery every two months to perform general maintenance on the optics, fiber optic cables and the meteorological stations.

e) TerraAir Services turns over its data to community groups but does not follow their use of it and he was not aware of any community uses of it.

f) the number of contaminants that can be speciated depends on the type of monitor that is used.

g) the use of ORS in evaluating the composition of refinery flare emissions or as an opacity evaluation tool is difficult because the flares are very high. Peter Hess, Deputy Air Pollution Control Officer, stated that portable Lidars could be calibrated to evaluate specific compounds in refinery flares. Mr. Arnett added that ORS applies primarily to ground level, fugitive emissions from pump seals, valves, flanges and floating roof tanks. Measurements of flare emissions at ground level would have to be conducted several miles downwind of the flares.

h) data are inputted every five minutes from the system and are downloaded at the end of a monitoring period over the telephone line. Three weeks are usually required to process such data, and a total of 28 days is allowed to complete quality assurance.

i) cost estimates for the ORS system vary, but the Westlake facility in Lake Charles, Louisiana allocated $400,000 for equipment, monitoring shelters and training. TerraAir Services charges an annual fee of $350,000 to operate the system.

j) in the event of a loss of power or a high-level alarm, the system initiates an autopage that notifies all clients via e-mail. With regard to round-the-clock notification, this is largely dependent on the refinery staff that have pager numbers of health department staff.

k) since the system was installed at the ConocoPhillips refinery in 1996 there have been no exceedances of the safety levels that have been set by the ORS system.

l) the ORS system has detected emissions on the refinery's south end that did not originate in the refinery.

m) the infrared beam projected at the fenceline leaves the scope at 10 inches in diameter and measures three feet in diameter at a distance of 1,000 feet.

n) the following websites provide additional information concerning ORS technology: Boreal Laser at www.boreal-laser.com, IMACC at www.imacc.com and Opsis at www.opsis.se.

Mr. Hess stated that the issue before the Committee is whether ORS technology should be recommended for fenceline emissions monitoring at the other four Bay Area refineries. This technology enables the community to know more about emissions crossing the fenceline in real-time. By contrast, static canister samples are a technology of the 1960's. They measure only a few compounds and cannot be located in every community. The processing and analysis of samples from fixed monitors is also two months behind their collection. Ms. Blake observed that the real-time fenceline monitoring data takes a month to quality assure. She added that the District does not post data from its fixed monitors on its website, although such information would be useful over time to provide a picture of emissions. Mr. Hess replied that the District plans to post its fixed monitor data on its website when it is upgraded, although it will not be in speciated real-time.

6. **Committee Member Comments/Other Business.** The Committee briefly reviewed the comments of the Technical Committee on draft particulate matter abatement recommendations.

7. **Time and Place of Next Meeting.** Monday, March 10, 2003, 1:30 p.m., 939 Ellis Street, San Francisco, California 94109.

8. **Adjournment.** 2:40 p.m.

Respectfully submitted by:

James N. Corazza
Deputy Clerk of the Boards