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

APPROVED MINUTES

Advisory Council Public Health Committee Meeting
12:30 p.m., Monday, April 19, 2004

1. **Call to Order – Roll Call.** 1:35 p.m. Quorum Present: Linda Weiner, Chairperson; Diane Bailey, Elinor Blake, Jeffrey Bramlett, Victor Torreano. Absent: Brian Zamora.

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

3. **Approval of Minutes of March 10, 2004.** On page four, Ms. Blake requested the deletion of the last clause of line two in paragraph three; and the addition of "due to the Technical Committee's full schedule" at the end of the second sentence in paragraph four. Ms. Bailey requested that "routinely conducts" replace "is trained to conduct" in the final sentence of paragraph four. Mr. Torreano moved approval of the minutes as amended; seconded by Ms. Blake; carried.

4. **Proposed Community Risk Reduction Program.** Eric Stevenson, Air Monitoring Program Manager, presented "Community Risk Reduction Program." He stated that $500,000 from the general reserve has been allocated for this new program Fiscal Year 2004-05. Two new staff positions will be added, on each in the Engineering and in Planning Divisions.

   Air toxics monitoring began at the District in 1985 with five monitoring sites sponsored by the California Air Resources Board (CARB). The District began operating its own sites in 1986. The current toxics monitoring network includes three CARB sites and 18 District sites and measures such major gaseous toxics as benzene, 1,3 butadiene, perchlorethylene, and carbon tetrachloride. Approximately 80% of the total cancer risk in California, excluding the risk associated with diesel particulate matter (PM), is attributable to the above four gaseous toxics.

   The air toxics risk that is attributable to the above four ambient toxics, excluding diesel PM, has dropped from 315 in a million in 1994 to 173 in a million in 2001. CARB estimates that statewide average risk attributable to diesel PM dropped from 900 in a million in 1990 to 510 in a million in 2000. These decreases are due to mobile, stationary and area source control measures, new vehicle emission standards, clean diesel fuel and cleaner burning gas. The latter reduced benzene by 50%. AB 2588, the District's Toxics New Source Review program and Toxics Best Available Control Technology have also reduced air toxics risks. Alternative technologies available to dry cleaners and chrome platers have further reduced risk.

   Air monitoring network data demonstrate a decrease in the coefficient of haze (COH). Data from stations in Concord show a decrease since 1990 that coincides with cleaner burning diesel fuel. A similar trend is evident at the Napa, Redwood City and the San Jose stations.

The program's technical foundation is based on the estimate that 3/4 of the statewide cancer risk from mobile sources comes from diesel PM. The main component of diesel PM is organic (OC) and elemental (EC) carbon. Using Carbon 14 dating, staff will analyze 16-24 PM_{10} filters for fossil fuel and wood combusted carbon. These filters will contain samples from the weekday and weekend, as well as summer and winter, to account for variation in traffic density and season. As total EC varies with location, season and day of week, ambient EC measurements will be used as a relative indicator of diesel PM. Other carbon components of diesel PM will be analyzed using the PM emission inventory to assess the contribution of diesel PM to total carbon emissions. Desert Research Institute (DRI) will also analyze archived District PM filters to establish a baseline for EC and OC levels dating back to 1998. The District will begin regular EC/OC analysis for PM filter stations and will purchase an analyzer for this purpose.

The District will begin a pilot cumulative risk assessment program in selected areas. It will compare carbon emission inventory trends with trends in ambient measurements of COH, EC/OC filters and aethalometer data on black carbon. The latest generation of monitoring equipment can distinguish particulate size as well. Staff will take into account impacts on air quality from current control measures and those with future effective dates, and the impact of additional controls focused on reducing diesel PM emissions in impacted communities.

Using CARB modeling programs, staff will develop a one square kilometer gridded inventory for diesel PM for mobile, point and area sources. Subsequently, the District will develop a one square kilometer gridded emission inventory for all toxic emissions including diesel PM for mobile, point and area sources using source profiles and the District's emission inventory.

DRI will conduct EC/OC analysis of archived PM_{10} filters for two Bay Area Children's Environmental Health Protection Program monitoring sites, as well as for PM_{10} filters from the Bayview Hunters Point monitoring site. The one or two community locations most heavily impacted by toxic emissions will be monitored for one year for PM and toxics emissions to assess seasonal data variation. The District will then conduct risk assessment based on these data.

Targeted action plans include developing and implementing area-specific risk reduction measures. Some are incentive-based, such as diesel retrofits or replacements that will be funded by the Transportation For Clean Air, Carl Moyer or Proposition 40 funds. Others include working with fleet operators to reduce heavy-duty diesel usage, and with transit agencies and school districts to retrofit and replace school buses. Other approaches are regulatory and include working with CARB to establish heavy-duty diesel inspection stations, and with the California Highway Patrol to enforce the Vehicle Code on smoking heavy-duty vehicles. Low sulfur diesel fuel in 2007 will enable more effective emission control technology to be put in place. Other programs including working with cities, counties and Caltrans to re-route traffic to ports away from routes through neighborhoods. Public outreach will be included by establishing an advisory committee that will include scientists, community groups, environmental groups, industry and port operators, and academicians. Community meetings on this process will then be held.

The legislative and regulatory agenda also includes further efforts to reduce toxic emissions from such area sources as dry cleaners and gas stations. The District is also trying to obtain legislative authority to regulate heavy-duty diesel fleets and trains.

In reply to questions from Committee members, Mr. Stevenson stated:

- The program will likely have results earlier—within two to three years after the analysis begins, rather than five.
- The diesel emissions under the District's rather than CARB's control are not fully defined. The District may affect diesel engine emissions only through incentive programs.
- Alternative project analysis occurs under the California Environmental Quality Act (CEQA).
- PM_{10} filters generate higher flow rates and deposition levels than $PM_{2.5}$ filters. Subsequent EC/OC analysis of the filters will allow for analysis of the fractions of smaller particles.
- There are more incentive programs geared toward mobile than stationary sources because the majority of risk derives from mobile sources.
- The placement of District air monitors is guided by regulations from the US Environmental Protection Agency (EPA). In future presentations on trends in ambient data from monitoring stations, information will be included on the distance of air monitors from freeways.
- Community involvement in monitor placement for the pilot program, review of risk assessment, and communication of information will be based on recent District approaches and will be used to select the most affected communities.

5. **Proposed Air Toxics New Source Review Program.** Brian Bateman, Engineering Division Director, presented "BAAQMD Proposed Air Toxics New Source Review Rule." He stated that the Toxics New Source Review (TNSR) is a preconstruction permitting program for new and modified stationary sources that allows the District to create new emission standards within a permit as well as ensure compliance with existing limits. NSR exists for criteria pollutants and the applicability of requirements are based on emission levels. EPA's Prevention of Significant Deterioration (PSD) program concerns criteria pollutants and is cumulative to the extent that it considers background levels for specific pollutants. If project impacts are below low significance levels, the project is not considered to contribute to an excess of an air quality standard, regardless of the existing background air quality.

   TNSR has no specific state or federal mandate and is a local program within an air district. Emission applicability is health-risk based, and program requirements are based on health risk assessment. Risk management involves policy judgment as to whether a risk is significant. California's risk assessment guidelines were developed in 1987 by an inter-agency group that included the air districts, CARB, and the Office of Environmental Health Hazard Assessment (OEHHA). The Air Toxics Hot Spots Program risk assessment guidelines were published in 1993 and were updated by OEHHA in 2003. EPA has largely similar health risk assessment guidelines, although the EPA guidelines are generally less health protective.

   Risk management guidelines for permitting were issued by CARB in 1993. EPA's risk management permitting guidelines are more concerned with risk management for EPA regulatory actions. Neither CARB nor EPA recommends "bright line" risk assessment in regulation due to uncertainties in risk assessment. At very low levels, risks may be deemed insignificant, while above such levels the risk manager may exercise discretionary judgment and consider a variety of factors in characterizing risk. The District's TNSR program uses risk assessment procedures based on the State's 1993 risk assessment guidelines with updated health effect values from OEHHA. The District assesses an applicant's source emissions with reference to toxic trigger levels. If risk screening analysis is warranted, staff conducts air dispersion modeling to calculate exposure for residents and offsite workers. Pollutant effects are considered additive.

The District's risk management policy for permitting provides that, if all sources in a project do not have Toxics Best Available Control Technology (TBACT), the maximum lifetime cancer risk cannot exceed one in a million, and the maximum chronic non-cancer risk hazard index cannot exceed 1.0. If all the sources in a project do have TBACT, then the lifetime cancer risk is 10 in a million, and the non-cancer risk remains the same. If PERC dry cleaners have TBACT and also employ all feasible risk reduction measures, the maximum cancer may approach 100 in a million. During the energy crises several years ago, the District established a risk management policy that allowed the emissions during emergencies from back-up emergency generators to not be counted.

In 1999, the District conducted an average of 15 toxic risk screens per month and this increased to 50 per month in 2002 due to the elimination of exemptions for stand-by engines. The District is seeking to convert its toxics risk assessment policies and procedures into a rule. It will use the new OEHHA numbers for toxicity values and exposure assumptions. It will also establish a project risk limit for acute impacts at hazard index of 1.0, and a TBACT requirement for non-cancer hazard index of 0.2 as per CARB risk management guidelines. TBACT will be applicable at the source level and thus rendered consistent with criteria pollutant NSR. Staff proposes to eliminate the 100 in a million project cancer risk option for PERC dry cleaners since alternative technologies are now available.

Mr. Bateman distributed two documents: "Preliminary Response to Comments on BAAQMD Air Toxics NSR Draft Proposed Rule and Rule Amendments made by Golden Gate University Environmental Law & Justice Clinic (ELJC): BAAQMD Toxic Evaluation Section – November 2003" and "BAAQMD Staff & APCO Meeting – March 3, 2004: Some Suggestions for Addressing Cumulative Health Impacts & the Precautionary Principle in Toxics New Source Review (prepared by ELJC)." He reviewed the foregoing documents, stating as follows:

a) It is not feasible to lower the acceptable risk levels by a factor of 10. No single gas station in the Bay Area can achieve an off-site exposure risk level of 1 in a million. Disagreement among stakeholders as to what constitutes an acceptable risk is unavoidable. Staff follows CARB and EPA guidelines for risk management.

b) The use of community risk caps, based either on emissions from all sources of toxic air contaminants or only those from permitted stationary sources, requires detailed data on source emissions and nearby structures for modeling. From a policy standpoint, current guidelines on what constitutes a significant risk derive from incremental risk. Cumulative risk will be dealt with at the state level and staff will follow guideline development there.

c) Health risk calculation from toxic air contaminants and cumulative effects from criteria pollutants should not be combined. The latter should be evaluated separately through the criteria pollutant NSR program.

d) It is inappropriate to require TBACT for acute risks at a hazard index at 0.2. This level is appropriate for chronic health risks. Most sources on which the District focuses have routinely consistent emissions, which are more appropriately characterized as causing chronic exposures.

e) The consideration of options for requiring less toxic compounds and technologies happens indirectly from risk-based District programs. However, the District has limited regulatory authority to require the use of specific compounds and technologies.

f) CARB is already developing web-based emissions data for health risk maps.

g) OEHHA's assumptions already resolve scientific uncertainty in favor of health protection.

h) Public participation in permitting should indeed be meaningful but must also be balanced with other factors such as permit streamlining. Sources that now involve formal public comment for toxic permitting are those that are within 1,000 feet of a school site.

i) Current CEQA exemptions from project risk are appropriate and should remain in place.

j) Staff will continue to collaborate with CARB to collect data for cumulative health risks.

k) The District will conduct a pilot program to evaluate cumulative risks in one neighborhood. It will start in one neighborhood with the evaluation of cumulative stationary source risk and compare it with the incremental risk to assess the difference between the two approaches.

l) The District is using a one-kilometer gridded parcel for toxic emissions. This is similar to the study and assessment of air toxics risk in the South Coast AQMD. Assessing cumulative risk in actual settings is a higher priority than conducting hypothetical cumulative risk.

m) The District is already converting gasoline dispensing facilities from area to point sources.

n) The District's Community Risk Reduction Program is a result of efforts to develop new programs and goals to limit community health risks.

o) It is too early to develop more stringent criteria for areas with higher health risks; nor is it known which areas these are. Health risk assessment should be consistently performed.

In response to Committee members' questions, Mr. Bateman noted:

- the extent to which a community risk cap is flexible also needs further policy evaluation.
- the District is scheduled to adopt the TNSR rule either late this year or early next year.
- CARB is considering making the South Coast AQMD rule on dry cleaner use of perchlor-ethylene into a statewide rule. If the District eliminates the 100 in a million risk threshold for dry cleaners with TBACT, this will accelerate the use of alternative technologies locally.

6. **Discussion of Community Risk Reduction Program and Toxics New Source Review.** Chairperson Weiner noted that these will be discussed in detail at the next Committee meeting.

7. **Committee Member Comments/Other Business.** There were none.

8. **Time and Place of Next Meeting.** 12:30 p.m., Wednesday, May 12, 2004, 939 Ellis Street, San Francisco, California 94109.

9. **Adjournment.** 3:11 p.m.

James N. Corazza
Deputy Clerk of the Boards