



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

ADVISORY COUNCIL REGULAR MEETING

WEDNESDAY
MARCH 10, 2004
10:00 A.M.

SEVENTH FLOOR
BOARD ROOM

AGENDA

CALL TO ORDER

Opening Comments
Roll Call

Elinor Blake, Chairperson
Clerk

PUBLIC COMMENT PERIOD

Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3. *The public has the opportunity to speak on any agenda item. All agendas for Advisory Council Committee meetings are posted at the District, 939 Ellis Street, San Francisco, at least 72 hours before a meeting. At the beginning of the meeting, an opportunity is also provided for the public to speak on any subject within the Committee's purview. Speakers are limited to five minutes each.*

CONSENT CALENDAR

1. Approval of Minutes of January 14, 2004

COMMITTEE REPORTS

2. Report of the Air Quality Planning Committee Meeting of February 3, 2004 Chair Brazil
3. Report of the Public Health Committee Meeting of February 23, 2004 Chair Weiner
4. Report of the Technical Committee Meeting of February 24, 2004 Chair Bedsworth
5. Report of Executive Committee Meeting of March 10, 2004 Chair Blake
6. Applicant Selection Working Group Meeting of February 23, 2004 Chair Hayes

PRESENTATION(S)

7. The NYC Urban Atmospheric Observatory (UAO) and its role in emergency planning: Lessons for the San Francisco Bay Area?

Advisory Council member, Robert Bornstein, Ph.D., will provide a summary of a new real-time observational and modeling capability for dealing with toxic atmospheric releases.

OTHER BUSINESS

8. Report of the Executive Officer/APCO Jack Broadbent
9. Report of Advisory Council Chair Elinor Blake
10. Council Member Comments/Other Business

Council or staff members on their own initiative, or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on their own activities, provide a reference to staff about factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda.

11. Time and Place of Next Meeting

10:00 a.m., Wednesday, May 12, 2004, 939 Ellis Street, San Francisco, California 94109.

12. Adjournment

EB:jc

CONTACT CLERK OF THE BOARDS - 939 ELLIS STREET SF, CA 94109

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- To submit written comments on an agenda item in advance of the meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- To request special accommodations for those persons with disabilities notification to the Clerk's Office should be given in a timely manner, so that arrangements can be made accordingly.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

CLERK OF THE BOARDS OFFICE:
MONTHLY CALENDAR OF DISTRICT MEETINGS

MARCH 2004

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting (<i>Meets 1st & 3rd Wednesdays each Month</i>)	Wednesday	3	9:00 a.m.	BART Board Room 800 Madison, 1 st Floor Oakland, CA 94607
Board of Directors Personnel Committee (<i>Meets as needed</i>)	Thursday	4	9:30 a.m.	4th Floor Conf. Room
Advisory Council Executive Committee	Wednesday	10	9:00 a.m.	Room 716
Advisory Council Regular Meeting	Wednesday	10	10:00 a.m.	Board Room
Advisory Council Public Health Committee	Wednesday	10	12:30 p.m.	Room 716
Board of Directors Mobile Source Committee (<i>Meets 2nd Thursday each Month</i>) – CANCELLED -	Thursday	11	9:30 a.m.	4th Floor Conf. Room
Board of Directors Regular Meeting (<i>Meets 1st & 3rd Wednesday each Month</i>) - CANCELLED -	Wednesday	17	9:45 a.m.	Board Room
Regional Agency Coordinating Committee (RACC)	Friday	19	1:30 p.m.	MTC 101 8 th Street Oakland, CA 94607
Board of Directors Stationary Source Committee (<i>Meets 4th Monday every other Month</i>)	Monday	22	9:30 a.m.	Board Room
Board of Directors Budget & Finance Committee (<i>Meets 4th Wednesday each Month</i>) – CANCELLED -	Wednesday	24	9:45 a.m.	4th Floor Conf. Room
Board of Directors Executive Committee (<i>Meets 5th Wednesday of Months that have 5 Wednesdays</i>)	Monday	29	9:30 a.m.	4th Floor Conf. Room

APRIL 2004

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Advisory Council Joint Air Quality Planning & Technical Committees	Tuesday	6	9:30 a.m.	Board Room
Board of Directors Regular Meeting (Meets 1 st & 3 rd Wednesdays each Month)	Wednesday	7	9:45 a.m.	Board Room
Board of Directors Mobile Source Committee (Meets 2 nd Thursday each Month)	Thursday	8	9:30 a.m.	4 th Floor Conf. Room
Board of Directors Public Outreach Committee (Meets 2 nd Monday every other Month)	Monday	12	9:45 a.m.	4 th Floor Conf. Room
Advisory Council Public Health Committee	Monday	19	1:30 p.m.	Board Room
Board of Directors Regular Meeting (Meets 1 st & 3 rd Wednesday each Month)	Wednesday	21	9:45 a.m.	Board Room
Board of Directors Budget & Finance Committee (Meets 4 th Wednesday each Month)	Wednesday	28	9:45 a.m.	4 th Floor Conf. Room

MAY 2004

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting (Meets 1 st & 3 rd Wednesdays each Month)	Wednesday	5	9:45 a.m.	Board Room
Advisory Council Executive Committee	Wednesday	12	9:00 a.m.	Room 716
Advisory Council Regular Meeting	Wednesday	12	10:00 a.m.	Board Room
Advisory Council Public Health Committee	Monday	12	12:30 p.m.	Room 716
Board of Directors Mobile Source Committee (Meets 2 nd Thursday each Month)	Thursday	13	9:30 a.m.	4 th Floor Conf. Room
Board of Directors Regular Meeting (Meets 1 st & 3 rd Wednesdays each Month)	Wednesday	19	9:45 a.m.	Board Room
Board of Directors Stationary Source Committee	Monday	24	9:30 a.m.	Board Room
Board of Directors Budget & Finance Committee (Meets 4 th Wednesday each Month)	Wednesday	26	9:45 a.m.	4 th Floor Conf. Room

MR:hl
3/3/04 (2:35 p.m.)
P/Library/Calendar/Moncal

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

DRAFT MINUTES

Advisory Council Regular Meeting & Retreat
and
Meeting of the Public Health Committee
Meeting of the Air Quality Planning Committee
Meeting of the Technical Committee
10:00 a.m., Wednesday, January 13, 2004
Bayside Conference Room – Port of San Francisco
Pier 1, San Francisco, California 94111

CALL TO ORDER: 10:06 a.m.

Opening Comments: Chairperson Blake thanked newly appointed Council member Jeffrey Bramlett for arranging the for Council’s use of the Bayside Conference Room with the Port of San Francisco.

Roll Call: Present: Elinor Blake, Chairperson, Sam Altshuler, P.E., Louise Bedsworth, Ph.D., Jeffrey Bramlett, Harold Brazil, Pamela Chang, Irvin Dawid, Emily Drennen, Fred Glueck, William Hanna, Stan Hayes, John Holtzclaw, Ph.D., Kraig Kurucz, Kevin Shanahan, Victor Torreano, Linda Weiner, Brian Zamora.

 Absent: Robert Bornstein, Ph.D., Norman A. Lopera, Jr.

Introductions of New Advisory Council Members: Chairperson Blake welcomed Diane Bailey and Emily Drennen in the “Conservation Organization” category and Jeffrey Bramlett in the “Park & Recreation” category.

Role of the Advisory Council: Chairperson Blake noted that the Advisory Council receives referrals from District staff and the Board, and also develops its own issues for review and recommendation. She announced that the Chairs of the Standing Committees for 2004 would be: Harold Brazil – Air Quality Planning; Linda Weiner – Public Health; Louise Bedsworth, Ph.D. – Technical.

COMMENDATION/PROCLAMATION: Chairperson Blake commended outgoing Chairperson Hanna for his leadership of the Council during 2003. He oversaw the development of recommendations regarding intermittent control strategies, particulate matter (PM) abatement, improvements to the state’s vehicle Inspection & Maintenance (I&M) program, refinery flaring, and the optical remote sensing of emissions at refinery fence lines. Mr. Hanna represented the Council at Board of Directors Executive Committee meetings and several Regular meetings, and continued to serve on the Technical Committee and the Applicant Selection Working Group. His leadership was both practical and affable.

PUBLIC COMMENT PERIOD: There were no public comments.

CONSENT CALENDAR:

1. **Approval of Minutes of November 12, 2003.** Mr. Zamora moved approval of the minutes; seconded by Dr. Holtzclaw; carried unanimously.

COMMITTEE REPORTS:

2. **Report of the Air Quality Planning Committee (AQPC).** Mr. Kurucz stated there was no report.
3. **Report of the Technical Committee Meeting of December 9, 2003.** Dr. Bedsworth stated the Committee received presentations from District staff on Bay Area trends in ambient concentrations of ozone precursors and the status of the photochemical modeling for the California Central Ozone Study (CCOS) and the District's 2004 Ozone Attainment Plan.
4. **Report of the Public Health Committee (PHC) Meeting of December 8, 2003.** Mr. Zamora stated that preliminary recommendations were discussed on refinery fence line optical monitoring.

PRESENTATION: “Cumulative Impact Assessments and the Precautionary Principle.”

Brian Bateman, Director of Engineering, stated that Cumulative Impact (or Risk) Assessment and the Precautionary Principle have become part of the Environmental Justice (EJ) movement, which concerns disproportionate health impacts in low income and minority communities. The California Environmental Protection Agency (Cal-EPA) EJ Advisory Committee recently recommended that Cumulative Risk Assessment and the Precautionary Principle be included in the state's regulatory programs. According to Cal-EPA, cumulative risk assessment concerns the “total burden of all emissions and discharges in a geographic area” and the federal EPA indicates it is “an analysis, characterization and possible quantification of the combined risks to the human health or the environment from multiple agents or stressors.” This leads to the determination of health impacts through considering cumulative impacts.

Cumulative Impact Assessment may be divided into categories of scope and scale. The complexity of the analysis increases with its scope. EPA categorizes the scope of analysis in the following fields:

- Stressors (chemical; biological (pathogens, allergens); physical (temperature, radiation); psychological; socio-economic (availability of health care))
- Routes of Exposure into human physiology (inhalation, ingestion, absorption)
- Pathways and media (indoor or outdoor air, surface water, ground water, soil)
- Sources (activities that create or release stressors; sources can be stationary, such as industry; area-wide sources such as fireplaces; and mobile sources, both on and off-road)
- Receptors and subpopulations (workers, sensitive individuals, ecosystem)
- Exposure conditions (frequency, duration, often distinguished as acute effects which occur in the short-term or chronic effects which are measured over the long-term)
- Endpoints (measures of effects of stressors, such as cancer or asthma, or various irritants)
- Metrics (manner in which health risks are expressed). Maximum risk is deterministically assessed based on a single endpoint, or through stochastic analysis with distributions of risk, or through population exposure analysis to assess cancer burden.

Risk Assessment may be conducted on a range of spatial scales: macro scale (national), meso scale (regional) or micro scale (individual neighborhood or microclimate). The complexity of an analysis does not necessarily increase with scale.

Air Quality Risk Assessment requires data on ambient concentrations in specific locations and/or deposition rates, and these are determined either through monitoring or modeling. Monitoring is considered the most definitive method, but it is limited by costs, pollutant-specific approaches, and the number of monitors. Modeling is more flexible but more uncertain as it is a representation of reality. Most risk assessments are model-based but rely on monitoring to validate the modeling. Prominent risk assessments include the EPA National-Scale Air Toxics Assessment (NATA), the Air Resources Board (ARB) Community Health Program that will assess statewide cancer risk and conduct pilot neighborhood-scale assessment programs in the Barrio Logan (San Diego) and Wilmington (Los Angeles) neighborhoods. The latter two studies are comprehensive air emission risk assessments and will include mobile, area-wide and stationary sources. The Multiple Air Toxics Exposure Study (MATES) in the South Coast AQMD contained strong monitoring and modeling components and found that cancer risk was dominated by mobile sources. The regional scale analysis of this study was considered adequate to estimate spatial impacts. A forthcoming update to this program is in the planning stage and will include some additional micro scale components. The Air Toxics Hot Spots program in California is an incremental, facility-wide risk assessment program. The Bay Area AQMD conducted a limited scope Risk Assessment in 1993 that focused on 54 industrial sources, with three to five facilities between each sub-area. The study focused on individual cancer risk and found that the cumulative concentrations did not significantly increase maximum risk.

Gaps in emissions data pose the greatest methodological challenges. Mobile and area-wide sources are the most uncertain, and their spatial and temporal patterns require further evaluation. While stationary source emissions are better understood, uncertainties arise when evaluating a combination of multiple sources and distinguishing among synergisms and antagonisms. There are different levels of uncertainty in health effects data for different pollutants. The mix of occupational and animal studies also presents some challenges in terms of developing a baseline.

The District's Air Toxics New Source Review (NSR) Program is a pre-construction permitting program that applies to new and modified stationary sources. NSR programs exist for criteria pollutants that are addressed in the Prevention of Significant Deterioration program. This program addresses pollutant-specific cumulative air quality impacts for a project. If the incremental project risk for a given pollutant is below a "significant air quality impact level" a full Cumulative Impact Assessment is not required.

The District's Air Toxics NSR program conducts Health Risk Assessment based on incremental risk at a project level and considers combined effects from multiple pollutants within a project. Staff conducts the health risk screening analysis of a facility. The Health Risk Assessment guidelines from the Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA) are used to estimate health risks. Staff starts with dispersion modeling to focus on micro scale impacts. Land-use features regarding proximate residential neighborhoods, along with specific population exposure categories are evaluated. Toxicity values are applied to calculate health risks both for cancer and non-cancer risks. Staff uses an additive approach to estimate risk due to exposure to different toxic compounds. A permit applicant may provide its own analysis, and if a consultant is hired to perform the analysis, staff will conduct a separate analysis to evaluate the consultant's results. Statewide public noticing requirements for this program require public review for sources located within 1,000 feet of a school site.

The District's Air Pollution Control Officer (APCO) is responsible for risk management at the District and establishes the criteria for permit approval. Projects in which all sources do not use Best Available Control Technology for Toxics (TBACT) will be approved if maximum lifetime cancer risk does not exceed 1 in a million and maximum chronic non-cancer hazard index does not exceed 1.0. Projects in which all sources use TBACT will be approved if maximum lifetime cancer risk does not exceed 10 in a million and maximum chronic non-cancer hazard index does not exceed 1.0. Criteria for perchloroethylene (perc) dry cleaners allow project approval if the facility uses TBACT and all reasonable risk reduction measures such that lifetime cancer risk does not exceed 100 in a million.

The District adopted a risk management policy for diesel stand-by engines during the recent California energy crisis that provided an exemption for emissions that occur during their emergency use. The District intends to modify its Air Toxics NSR program by reducing the trigger level for TBACT for non-cancer risk from 0.2 to 1.0 and also to eliminate the increased risk provision for perc dry cleaners. A review of available technology shows that substitutes for perc, such as high flash-point hydrocarbons (HCs), are entirely sufficient.

The District's Air Toxics NSR program began in 1987. Routine higher risk sources include diesel back-up generators, gasoline dispensing facilities, dry cleaners, crematories, furniture strippers, and gas-fired combustion sources with short stacks. Until 2000, the District averaged 15 risk screens per month. In 2002, the average rose to 50 per month following the removal of the exemption for stand-by diesel engines. Recent advances in risk evaluation preparation include improvements to modeling software and digital data in maps and land feature terrain that are available on the web at little cost.

The comments received to date from community and environmental groups on the District's Toxics NSR program request inclusion of Cumulative Impact Assessment for all permitted sources and the creation of a community risk cap. The above-mentioned project risk levels would be used in this approach. Sophisticated software and database capability would be required to conduct dispersion modeling, source attribution, building structural layout and land-use patterns for facility boundary lines, risk assessment calculation, database management, as well as reporting and mapping functions for micro scale analysis. A computer system that could handle the data for all of the approximately 22,500 sources of toxics in the Bay Area at 12,000 facilities would cost an estimated \$1.2 million.

In making policy judgments, acceptable levels of risk are based on ARB and EPA guidelines. These are based on incremental risk analysis at a project or facility level rather than cumulative risk analysis, for which there are no guidelines at this time. The Cal-EPA EJ Advisory Committee recently urged that such recommendations should be developed. However, it is unclear whether such permitted facilities, which must have BACT, contribute significantly to health impacts cumulatively or individually. Maximum risks tend to be geographically localized from individual facilities, and so cumulative risks may not emerge in a given region. Moreover, data on lifetime cancer risk due to inhalation of average ambient levels of toxic contaminants in the Bay Area indicate that the toxics of greatest concern—formaldehyde, benzene, 1,3-Butadiene and diesel particulate matter—come primarily from mobile sources.

The Precautionary Principle emphasizes “how little harm is possible” rather than “how much harm is allowable.” It originated in Germany in the 1970s and was subsequently discussed at several international conferences. The United Nations Conference on Environment and Development has adopted a statement on the Precautionary Principle. In 2000, the European Commission Communication on the Use of the Precautionary Principle linked the Principal to the risk management process, suggesting that

measures that derive from the Precautionary Principle should be proportionate to the risk and the accepted level of health protection. The “Wingspread Statement” that derived from a 1998 science and environmental health conference in Wisconsin characterized the Precautionary Principle as (1) emphasizing precautionary assumptions where causality is not fully established scientifically, (2) shifting the burden from the public to the proponent of the permit activity in question, and (3) requiring the evaluation process to be informed and democratic, involving the affected parties and including a proposed range of alternatives that could include no action. If this approach were applied to a Toxics NSR program, it could have major consequences. The Precautionary Principle has not been used very much in the United States, but the City and County of San Francisco adopted an ordinance last year that covers City actions and requires implementation of principles with criteria regarding anticipatory action, right to know, alternatives assessment, full cost accounting and a participatory decision-making process.

The Cal-EPA EJ Advisory Committee has urged that an alternatives assessment be conducted for new and modified source permitting in areas with a disproportionately high cumulative impact. This would include a “top-down” selection of alternative materials beginning with non-toxics and working to toxics, a justification for using any material other than the least toxic, and other alternatives analyses. The opposition opinion of the California Council on Environmental and Economic Balance (CCEEB) contends that regulators should not mandate chemical and process substitutes because they are not responsible for product performance, safety, warranties or liability. CCEEB further contended that regulators should be limited to setting emission limits and establishing risk levels.

Ms. Weiner noted that some public health department data reveal a high incidence of lung cancer and asthma in neighborhoods without multiple pollution sources. The purchasing department of the City and County of San Francisco is working to implement the Precautionary Principle. The Bay Area Clean Air Task Force is working with the District and EJ Air Quality Coalition to define percentage risk and to evaluate possible sponsorship of a pilot study in a specific community of concern. The Cal-EPA EJ Advisory Committee is also working to develop guidelines on these same matters.

Council members posed additional questions, and Chairperson Blake directed the Standing Committees to discuss them under Agenda Item No. 7. These questions were as follows:

- a) Why are lifetime cancer risks the highest in San Jose, and were wood smoke, dioxins and polycyclic aromatic hydrocarbons included in the analysis?
- b) Does the District use data from on-site workers and the Occupational Safety & Health Administration data for hazard analysis?
- c) Does the Precautionary Principle include such risks as hormone disruptors or mercury content?
- d) Is there any discussion around the concept of financial risk assessment in trying to develop solutions that allow the Precautionary Principle to become manifest, given that the technological solution must be available? Does the process take into account costs relative to the availability, or unavailability, of technology in the initial phase of implementing the Precautionary Principle?
- e) How can this broad concept that covers cumulative impacts and data assessment fit into workable guidelines that will not lead to endless redefinition, and how are the value decisions made by a regulator with regard to criteria concerning product development and environment?
- f) How much of the estimated annual cancer cases, which are estimated to occur in one out of every three persons, are due to air pollution, and what is the percentage of cancer cases that derive from sources other than mobile sources?

- g) To what extent has the District conferred with water quality application of the Precautionary Principle and what can be learned from these other experiences?
- h) Is there synergy between irritants from PM and other cancer causing agents: are effects primarily between or within classes of stresses? Is cancer risk considered additive to an additional irritant?
- i) Can “highly susceptible groups” be included in the discussion of sub-populations, and can maps be developed showing areas of cumulative exposure, even if very generalized, including smoking?
- j) How can the Precautionary Principle be used to address mobile sources?
- k) When was the largest change in risk since the District has started monitoring for ambient air toxics in 1986, and what was the reason attributed to that major change?

RETREAT FORMAT:

6. Round Table Discussion with District’s Management on Key Issues Facing the District, Candidate Assignments Proposed by District Staff and Topics Suggested by Advisory Council Members. Prior to reviewing the Candidate Assignments suggested by staff, the Council members suggested the following topics for review, to which any topics continued from last year would be added, and these were assigned to the Standing Committees for consideration as follows:

- a) Update on Smog Check II: recent program modifications and the outcome of Council recommendations made last year to improve the program. Include forthcoming CARB evaluation of the program and associated vehicle scrappage programs. Include staff topic on reviewing vehicle power through liquid and compressed natural gas. *(AQPC and Technical)*
- b) Land-use/air quality nexus, with reference to the work of other air districts in this area. Include reference to adoption of air quality elements in general plans in the District. *(AQPC)*
- c) Develop a list of disproportionately impacted communities. *(PHC)*
- d) Assess air quality impacts of construction sites on residential neighborhoods, hospitals, schools and include staff regulation through District rules regarding fugitive and visible emissions, as well as California Environmental Quality Act (CEQA) mitigation. *(PHC and Technical)*
- e) Review the regional transportation planning process, and the MTC 2030 plan. *(AQPC)*
- f) Review the Association of Bay Area Government’s Smart Growth planning document and consider how the District might be involved in implementing the recommendations. *(AQPC)*
- g) Continue to review the development of emission inventories of greenhouse gases. *(Technical)*

The Council agreed on the following assignments, including the staff’s Candidate Assignments list:

- 1) Review the control measures for volatile organic compounds (VOCs), nitrogen oxides (NOx) and particulate matter (PM) in the South Coast AQMD attainment plan recently approved by the Air Resources Board (ARB) and make recommendations to the Air Pollution Control Officer (APCO) for implementing them in the Bay Area. *Assigned jointly to the Air Quality Planning and Technical Committees. Comments due in the spring.*
- 2) Review and provide comments to the APCO on the draft Bay Area AQMD State and Federal Air Quality Attainment and Maintenance Plans. Continue participation on the Modeling Advisory Committee and the Ozone Working Group. *Assigned to the Air Quality Planning and Technical Committees. Comments due in the Spring.*

- 3) Review and provide comments to the APCO on the ARB mobile source emission calculation model and its impact on the development of Bay Area attainment plans for ozone. *In addition to hydrocarbons (HC) and nitrogen oxide (NOx), nitrogen dioxide (NO2) and other reactive organics such as formaldehyde may be evaluated to better assess relative reactivity. Assigned to the Technical Committee with a long-range time frame for study and use in future plan development.*
- 4) Review studies and provide comments to the APCO on the impact of further NOx emission reductions on the attainment of the National and State ozone standards in the Bay Area. *Assigned to the Technical Committee with a long-range time frame for use in air quality management planning.*
- 5) Review and provide comments to the APCO on the Toxic New Source Review (NSR) Rule amendments. *Assigned to the Public Health Committee. Recommendations to the full Council due in May.*
- 6) Review and provide comments to the APCO on the draft California Environmental Protection Agency (Cal-EPA)/ARB Environmental Justice implementation protocols. *Assigned to the Public Health Committee. Comments due during the first half of 2004.*
- 7) Review the role of fuel cells, hydrogen, liquid natural gas (LNG) and compressed natural gas (CNG) in fueling the transportation sector of California and the Bay Area. Make recommendations pertaining to the benefits and disadvantages of each technology. *Assigned to the Air Quality Planning and Technical Committees for longer-term analysis.*
- 8) Consider the role of the District in evaluating indoor air quality. What does regulatory authority provide, or is the District's role advisory? *Assigned to the Public Health Committee for long-term review.*
- 9) Complete the review of whether the optical fence line monitoring technology in operation at the ConocoPhillips Refinery in Rodeo should be applied to other refineries and chemical plants in the Bay Area. *Public Health Committee assignment continued from 2003, due mid-year or during the second half of 2004.*
- 10) Identify communities disproportionately impacted by air pollution, and evaluate the air pollution impacts of construction site activities on communities. *Assigned to the Public Health Committee for review in the second half of 2004.*
- 11) Receive an update on Smog Check II and on the implementation of Advisory Council recommendations adopted in 2003 to improve the state's vehicle inspection and maintenance program. *Assigned to the Air Quality Planning Committee for review at mid-year or thereafter.*
- 12) Review Smart Growth implementation and its connection with transit mode shift and regional transportation planning. *Assigned to the Air Quality Planning Committee for review at or after mid-2004.*
- 13) Review and provide comments to the APCO on the impact of daylight savings time on peak ozone concentrations with respect to the one hour and eight hour ozone standards. This topic will be deferred to later in the year pending completion of other topics.

Mr. Dawid urged that topic No. 3 include PM generated from road dust and tire wear, and Mr. Altshuler suggested adding lube oil to the evaluation, as it is relevant to PM_{2.5} analysis. Mr. Kendall replied that this could be included in topic No. 1 under PM control measures. The extent to which the South Coast AQMD might have looked at this issue may be of special note.

7. Convene to Working Lunch for Meetings and Discussion Sessions of the Public Health Committee, Air Quality Planning Committee and Technical Committee. The Advisory Council convened to Standing Committee format at 12:30 p.m.

8. Reconvene to Full Council Format for Follow-up on Committee Discussion Sessions. The Advisory Council reconvened at 1:38 p.m. The Committee Chairs reported out as follows:

Public Health Committee. Ms. Weiner reported that during the first half of 2004, the Committee will comment on the District's NSR program and the Cal-EPA EJ recommendations, and review the update of the Ozone Attainment Plan if time permits. Thereafter, the Committee will complete its recommendations on optical fence line monitoring at refineries. It will then take up the issues of indoor air quality, communities disproportionately impacted by air pollution and construction site activities. The Committee meeting schedule for 2004 is as follows:

- 1:30 p.m., Monday, February 23
- March 10 after the Advisory Council Regular Meeting
- 1:30 p.m., Monday, April 19
- May 12 after the Advisory Council Regular Meeting
- 1:30 p.m. Monday, July 19
- September 8 after the Advisory Council Regular Meeting
- 1:30 p.m., Monday, October 25

Air Quality Planning Committee. Mr. Brazil reported that topic Nos. 1 and 2 would be the Committee's first priority, given the more immediate deadlines. The Committee anticipates involvement with topic No. 5 and may schedule review of that issue based on the minutes of other Committees within the first half of 2004. For the June 1 meeting, the Committee will continue with its review of Smog Check II. Thereafter it will focus on Smart Growth implementation issues, transit mode shift and its connection with Smart Growth, fuel cell technology and regional transportation planning. The Committee meeting schedule for 2004 is as follows:

- 9:00 a.m., Tuesday, February 3
- 9:30 a.m., Tuesday, April 6 (Joint Meeting with the Technical Committee)
- 9:30 a.m., Tuesday, June 1
- 9:30 a.m., Tuesday, August 3
- 9:30 a.m., Tuesday, October 5
- 9:30 a.m., Tuesday, December 7

Technical Committee. Dr. Bedsworth reported that the Committee will first meet on February 13 at 9:30 a.m. to discuss topic No. 1. In April, the Committee will meet jointly with the AQPC on the Ozone Attainment Plan. The Committee will meet again in June to further address that issue. Other meeting dates will be scheduled at a future meeting of the Committee. The next priority will be topic No. 3 on mobile source emission factor modeling. Thereafter the Committee will focus on alternative fuels and combine the analysis with climate change issues.

- 8. Committee Member Comments/Other Business.** Mr. Hess indicated that the state budget was published this week. Advisory Council budget requests for fiscal year 2004/05 should be submitted to the Clerk's Office.

Chairperson Blake requested the Applicant Selection Working Group members contact Stan Hayes regarding convening a meeting to review the applications for the Architect category.

- 9. Time and Place of Next Meeting.** 10:00 a.m., Wednesday, March 10, 2004, 939 Ellis Street, San Francisco, CA 94109.

- 10. Adjournment.** The meeting was adjourned at 2:00 p.m.

James N. Corazza
Deputy Clerk of the Boards

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

DRAFT MINUTES

Advisory Council
Air Quality Planning Committee Meeting
9:00 a.m., Tuesday, February 3, 2004

- 1. Call to Order – Roll Call.** 9:40 a.m. Quorum Present: Harold Brazil, Chairperson, Emily Drennen, Irvin Dawid, Fred Glueck, John Holtzclaw, Ph.D., Kraig Kurucz, Kevin Shanahan. Absent: Pamela Chang.
- 2. Public Comment Period.** There were none.
- 3. Approval of Minutes of July 22 and September 30, 2003.** Dr. Holtzclaw requested that “Bittle” be corrected to “Brittle” in line one of paragraph two on page four of the September 30, 2003 minutes. Mr. Glueck moved approval of the September 30, 2003 minutes as amended, as well as the approval of the July 22, 2004 minutes; seconded by Mr. Shanahan; carried unanimously.
- 4. Control Measure Review.** Dan Belik, Rule Development Section Manager, stated he would review pollution control measure criteria, the legal background concerning them, the control measure suggestions received to date by the District, and the control measures in the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the South Coast Air Quality Management District (SCAQMD) that are being evaluated for possible inclusion in the forthcoming update to the District’s Ozone Attainment Plan.

The District’s evaluation criteria for pollution control measures include the type of pollutant controlled, amount and rate of emission reduction, technical feasibility, public acceptability, enforceability, cost effectiveness, socioeconomic impacts, environmental impacts, and determines whether or not the reductions are eligible for credit in the State Implementation Plan (SIP) process by being real, quantifiable, permanent, enforceable and surplus.

The California Clean Air Act (CCAA) requires the District either to achieve a 5% reduction in ozone precursors annually or implement “all feasible measures.” Guidance for defining the latter is derived from “Best Available Retrofit Control Technology” (BARCT) as well as the categories in the CCAA that refer to relative cost-effectiveness, technological feasibility, total pollution reduction potential, rate of reduction, public acceptability and enforceability. The District defines “feasible” as reasonable and necessary; capable of being successfully implemented within a reasonable time period, taking into account economic, environmental, legal, technological and social factors; and either approved or approvable by the California Air Resources Board (CARB).

The federal planning process is less stringent in the consideration of control measures. It requires measures based on all Reasonably Available Control Technology (RACT) but only within the context of local environmental circumstances rather than in consideration of advancing an attainment date. Pollutant transport between States is also a consideration in the federal process.

The District has evaluated 370 pollution control measures. Many were suggested by the Ozone Working Group, community members, the Advisory Council, Board of Directors and CARB, as well as a review of the rules and plans of other air districts in the state. In its preliminary findings, staff has categorized these measures as follows:

- 5 - not enforceable
- 6 - not technically feasible
- 9 - need legislation
- 14 - not cost-effective
- 17 - pose pollutant transport problems
- 29 - require further study
- 29 - require funding
- 31 - potentially viable
- 53 - already implemented
- 82 - offer only negligible emission reductions
- 95 - under the regulatory jurisdiction of other agencies

The District has already adopted many of the control measures that are under consideration in the SJVUAPCD. The SCAQMD is working to develop control strategies that are under the jurisdiction of CARB. Of the potentially viable measures, preliminary findings identify as most promising the SCAQMD measure on miscellaneous industrial coatings and solvent operations. This measure concerns facilities that annually emit greater than 25 tons of volatile organic compound (VOCs) emissions. Similarly, the SJVAPCD measure on sumps, pits and wastewater processing equipment was contained in the District's 2001 Ozone Attainment Plan as a further study measure. This will be the subject of a future Technical Assessment Document. Four potential measures in the SJVAPCD that mitigate nitrogen oxide (NOx) transport include agricultural irrigation engines, stationary gas turbines, water heaters and boilers, and steam generators, boilers and process heaters. Modeling will assess the downwind impacts of NOx reductions from these sources.

Measures requiring further study include (a) an SCAQMD NOx mitigation fee program for planes, trains and ships, the funds from which would be used to reduce emissions elsewhere; (b) an SJVAPCD indirect source mitigation program addressing traffic emission increases resulting from large developments; and (c) stationary source controls in both of these air districts on stationary internal combustion engines, livestock waste, glass melting furnaces, architectural coatings and solvents, commercial and industrial composting and commercial char broilers.

Measures requiring legislative authorization in the SCAQMD relate to off-road vehicles and equipment, an emission fee program for port-related mobile sources, and an emission fee program of \$5,000 per ton of VOC for facilities that emit more than 10 tons annually. In the SJVAPCD, such authorization would be needed for a federally mandated ozone non-attainment fee program.

Measures in the SCAQMD and SJVAPCD that are not technically feasible include further emission reductions from large VOC sources and industrial process operations which would be based on far-reaching emission reduction plans that have not yet been demonstrated to be feasible. The District could consider these as further study measures but cannot incorporate them into an attainment plan.

The District has concluded that some measures are not cost-effective, such as the SJVAPCD measures on boilers, steam generators and process heaters, as well as wineries, and the SCAQMD measure on further emission reductions from restaurant operations.

Control measures in the SCAQMD with either negligible emission reductions or which lack emission sources in the Bay Area include truck stop electrification, urban heat island mitigation and further NO_x reductions from the RECLAIM emissions trading project. Controls on chamber fumigation of agricultural products in the SJVAPCD have no counterparts in the Bay Area.

There are more steam driven oil production wells in the SJVAPCD than in the BAAQMD, and proposed controls in the SJVAPCD on low-pressure flares are not applicable to Bay Area refinery flare controls. There is only one lime kiln in the SJVAPCD and none in the Bay Area. The District has already adopted and implemented a rule for polymeric foam manufacturing, the stringency of which cannot be increased in the Bay Area. The SJVUAPC is considering a similar rule.

Many of the other measures proposed in the SCAQMD are under the regulatory jurisdiction of other agencies—in particular, CARB—and concern engine exhaust, off-road construction, weed trimmers, lawnmowers, and vehicle Inspection and Maintenance (I&M). The proposed control of fuel transfer into aircraft is pre-empted by Federal Aviation Administration regulations. Ground support equipment at airports, low sulfur diesel fuel standards, and land-based emissions at ports are under consideration by the SCAQMD but are under the regulatory jurisdiction of CARB.

In discussion, Mr. Glueck suggested staff consider a measure to reduce government employee work trips through improved transit and telecommuting options. Mr. Belik responded that mobile source emissions account for half of the total emission inventory and are becoming cleaner over time. The effort to reduce the percentage of government employees work trips would be the subject of a transportation control measure (TCM) adopted by the Metropolitan Transportation Commission (MTC), which is holding public workshops and community meetings to promote education regarding the use of carpools, trip linking and taking public transit.

Chairperson Brazil added that TCMs must conform to specific criteria to be eligible for inclusion in the Regional Transportation Plan. Work trips in excess of the number of government employee work trips would have to be reduced to significantly impact mobile source emissions. Changing land-use patterns to make transit usage more convenient provides an ideal approach to reducing vehicle usage, notwithstanding that the Bay Area as a region is already fairly well built-out.

Ms. Drennen inquired as to whether the District's cost-effectiveness criteria for pedestrian and bike facilities may impede project implementation with only marginal air pollution improvements. Jean Roggenkamp, Planning Division Director, responded that the Transportation Fund for Clean Air (TFCA) has assisted in funding bicycle facilities that are associated with commute services, with cost-effectiveness criteria focused on an incentive, rather than regulatory basis. The cost-effectiveness criterion for TFCA projects is \$90,000 per ton of emissions reduced.

Mr. Brazil inquired if District funding criteria posed obstacles to increasing the number of bicycle lockers at BART stations. Mr. Dawid noted that he recently participated in a mobile tour of bike facilities at BART stations and found major differences between them in terms of security, proximity to the station, etc. Mr. Hess responded that staff would investigate this issue.

Mr. Shanahan observed that more progress would be made by the State's air districts in reducing pollution if CARB were to adopt more stringent rules. Mr. Hess replied that CARB recently held an ozone control summit meeting with the State's air districts on pollution control measures and emission reductions. Further emission reductions from heavy-duty trucks and off-road sources could be obtained from additional regulations. Mobile source emissions can be further reduced. The District, the SCAQMD and SJVAPCD each have a seat on the CARB Board of Directors.

Gary Kendall, Technical Division Director, stated that 10% of the vehicle fleet is estimated to emit more than 50% of total vehicle emissions. This poses challenges for both vehicle I&M and scrappage programs. Over the long-term the fleet is going to become cleaner. Mr. Kurucz noted that last year this Committee made several recommendations to improve vehicle I&M and scrappage programs and later this year will receive an update on their implementation. One issue concerns how the Enhanced I&M program in the Bay Area is receiving emission reduction credits. Mr. Hess replied that CARB has added the emission reductions from the Enhanced I&M program into its Emission Factor Model (EMFAC) and it now receives federal emission reduction credit.

Ms. Drennen inquired as to how vehicle I&M and scrappage programs take low-income groups into account, and whether the District facilitates the encouragement of mode shift among low income groups in the Bay Area. Ms. Roggenkamp replied that the Bureau of Automotive Repair (BAR) sponsored a subsidy program geared toward low-income owners whose cars failed the emissions test, but the funds for that program have been cut. The District sponsors a vehicle scrappage program and surveys the program participants. The results suggest that significant emission reductions are achieved. Mr. Kurucz added that last year this Committee found that the number of Bay Area vehicle owners that received a repair waiver was approximately 200. The Committee requested the Deputy Clerk to provide copies of its minutes and reports on I&M.

Mr. Dawid inquired as to the relationship of vehicle speed to air quality. Chairperson Brazil replied that he could refer him to one of the consultants who contracts with MTC to perform this type of analysis. Mr. Dawid and Dr. Holtzclaw added that reducing a three-lane road to two lanes with a turning median tends to increase road capacity to carry cars and reduces vehicular crashes. Mr. Glueck noted that it is not only vehicle age that effects its emission levels but also its mileage. Mr. Kurucz suggested that staff develop emission estimates per category of vehicle. Mr. Shanahan requested that the staff report also compare advanced diesel fuel sports utility vehicles with gasoline powered ones by fuel economy. Mr. Hess noted that such data would prove useful for the analysis of mobile source emissions of ozone precursors and greenhouse gases.

Dr. Holtzclaw suggested that extra credit be given in the SIP for Smart Growth measures because these will reduce pollution over time. Urban heat island strategies relate symbiotically to improved livability and Smart Growth. Mr. Belik responded that quality of life improvements and socio-economic impacts concern public acceptability and the rephrasing of evaluation criteria more than emission reduction credits. From a federal perspective, emission reductions must be enforceable to receive credit, and under the State program all feasible measures must be implemented. Urban heat island measures are most effective in regions with consistently high temperatures.

Mr. Hess added that Advisory Council member Lapera is overseeing the removal of eucalyptus trees in the East Bay. These trees are high emitters of ozone precursors. The District has written to Bay Area cities and counties and requested that they plant trees that emit low levels of ozone precursors.

Mr. Kurucz inquired if further VOC emission reductions were possible, based on the SCAQMD architectural coatings rule, and further, if District the is considering control measures on consumer products. Mr. Belik replied that the SCAQMD architectural coatings rule has been amended twice, and the challenge is whether coatings with further VOC reductions could be successfully applied to all intended applications. CARB has surveyed the coatings rules in California and has obtained product reactivity data from coating manufacturers. CARB also regulates consumer products and has scheduled a round of emission reductions in 2006 followed by another in 2008-2010. No such measures are presently found in the attainment plans of the SCAQMD or SJVAPCD.

Mr. Kurucz inquired if the SCAQMD rule on small water heaters applies to residences. Mr. Belik responded that the rule concerns small industrial water heaters. However, the manufacturers have been unable to meet the emission standard, and therefore they pay fees to the SCAQMD in lieu of attaining that standard. In addition, energy conservation standards also conflict with the emission limits proposed by the SCAQMD, and the manufacturers have recently addressed the SCAQMD Board of Directors with their concerns on this issue.

Mr. Kurucz inquired if the measures under consideration on composting operations are industrial or municipal. Mr. Belik stated that these relate to industrial composting operations that develop large amounts of compost for gardening and farm use. The rule addresses controlling rooms where the compost is stored. The District will review this rule as a further study measure.

Dr. Holtzclaw inquired as to the distinctions in the reactivity of various VOC compounds as it relates to the peak formation of ozone within or downwind from the District. Mr. Belik stated that Dr. William Carter of U.C. Riverside has developed extensive data on the reactivity of VOC compounds. Mr. Hess added that the Modeling Advisory Committee would address this issue in its evaluation of the photochemical modeling analysis that is part of the update to the ozone attainment plan.

Chairperson Brazil thanked District staff for its presentation and noted that the Committee appreciated the opportunity to discuss these control measure suggestions and provide input.

5. **Committee Member Comments/Other Business.** Ms. Drennen requested that staff make a presentation, at a future meeting, about what the District does regarding pedestrian and bike issues in the region, including what funding sources can be used or are already being used, which cannot be used, and what guidelines preclude the use of such funds. It would be useful to review how an exemption might be obtained for small ticket projects that improve air quality but do not meet the \$90,000 per ton cost-effectiveness criterion. Mr. Hess noted that this presentation would be available after the staff's work on the ozone attainment plan has been completed.
6. **Time and Place of Next Meeting.** 9:30 a.m., Tuesday, April 6, 2003, 939 Ellis Street, San Francisco, CA 94109.
7. **Adjournment.** 11:22 a.m.

James N. Corazza
Deputy Clerk of the Boards

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

DRAFT MINUTES

Advisory Council Public Health Committee Meeting
1:30 p.m., Monday, February 23, 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 December 8, 2003.** Ms. Blake moved approval of the minutes; seconded by Mr. Torreano; carried unanimously.
4. **Cumulative Risk Assessment and the Precautionary Principle.** Chairperson Weiner stated that the Committee is reviewing proposed modifications to the District's Toxics New Source Review (TNSR) program. Both Cumulative Risk Assessment (CRA) and the Precautionary Principle are becoming increasingly important to community groups. Health data indicate that adverse impacts occur in low-income areas with multiple pollution sources. The City and County of San Francisco has adopted the Precautionary Principle and its Purchasing Department is evaluating its practical application. The business community is concerned over the possible financial costs that would be incurred in implementing the Precautionary Principle.

Brian Bateman, Engineering Division Director, stated that TNSR programs have historically focused on the incremental risk from a single project rather than the broader assessment of cumulative risk from other sources within a given area. The risk management policy question that emerges is whether or not the determination of project acceptability should be based on incremental or cumulative risk.

The application of the Precautionary Principle to a TNSR rule concerns whether or not regulatory agencies should require an alternatives analysis to a proposed project. Although an alternatives analysis is presently conducted within the context of the California Environmental Quality Act (CEQA) review process, the issue is whether or not it should become more routine in the permit review process.

Cindy Tuck, General Counsel, California Council on Environmental and Economic Balance (CCEEB) stated that CRA is important as it addresses the pollution to which people are exposed. However, this is a new issue, and policies that address it should do so appropriately. Regional air toxics modeling indicate that mobile sources—in particular, diesel particulate emissions—contribute the most to air toxics risk. Stationary sources also contribute to air toxics risk but to a lesser extent.

The California Environmental Protection Agency (Cal/EPA) is now focusing on the analysis of air toxics risk at the community level. In 2001, the California Air Resources Board (CARB) adopted its Environmental Justice (EJ) policy in which it committed to assessing and reducing cumulative health risk, and to developing the needed tools to be able to assess and reduce cumulative risk at the neighborhood level. To date, CARB has not issued either guidance documents or policies on CRA but is working to develop tools and policies in this area.

Both CARB and the District continue to adopt regulations and rules to reduce air toxics and more are on the way. CARB will adopt airborne toxic control measures this week for both stationary and portable diesel engines, which air districts will then implement. There are also discussions at the state level on combining air toxics with criteria pollutant regulations for the analysis of cumulative air quality impacts, thus raising further questions on the scope and definition of cumulative air quality impacts. In the meetings of CARB's Environmental Justice Stakeholders Group, CCEEB has noted that ozone and particulate matter (PM) regulatory programs are already cumulative in nature, and therefore the current focus should be on developing the appropriate tools and policies for air toxics issues.

The South Coast Air Quality Management District (SCAQMD) has done ground-breaking work in air toxics monitoring. It estimates that the air toxics cancer risk in that basin is 1,400 in a million with diesel emissions included, and 400 to 600 in a million excluding diesel emissions. For the Bay Area, the most recent air toxics cancer risk estimate is 174 in a million with diesel emissions excluded. The SCAQMD White Paper on Cumulative Risk observes that any given suggested control strategy must be carefully reviewed and not presumed to result in a rule as it may not be necessary or either technically or economically feasible.

The Cal/EPA Advisory Committee on Environmental Justice (ACEJ) has recommended that Cal/EPA develop a definition of "cumulative impacts" which would lump air quality and water quality issues together. In its Alternative Opinion to the ACEJ report, CCEEB noted that such an approach is premature and should not be considered until the means to assess the issues regarding individual media, such as cumulative air toxics risk, are developed.

CCEEB also notes that the ACEJ recommendations are not binding on Cal/EPA or any other agency in California. The Cal/EPA Inter-Agency Working Group and the Cal/EPA Secretary will develop Cal/EPA's EJ Strategy, and Cal/EPA has committed to considering categories of reasonableness, feasibility, legal authority and resource requirements in the strategy development. The measures that ACEJ recommended to address cumulative pollution burden—such as denial of a permit to operate, establishment of buffer zones, and small source relocation—are extreme in CCEEB's view, particularly in the absence of tools that assess cumulative impacts and policies that allow the agency to determine where there is a problem relative to cumulative impacts. Such measures are premature and inappropriate as modifications to a TNSR rule. The District should work further with both CARB and Cal/EPA on these issues.

Regarding issues of precaution, a precautionary approach is inherent in Cal/EPA and District regulatory programs, which are more stringent than the regulatory programs of other states. The risk assessment guidance from the Office of Environmental Health Hazard Assessment (OEHHA) is more conservative than that promulgated by federal EPA. Cal/EPA's ACEJ ultimately decided not to incorporate the term Precautionary Principle into its recommendations.

CCEEB considers the Precautionary Principle to be an extreme form of precaution that is unworkable in practice because it:

- a) allows agencies to act on mere on mere allegations of harm for which neither criteria nor evidentiary standards have been promulgated.
- b) shifts the burden of proof to the proponent of the project and requires proof of a negative through a series of hypotheticals.
- c) provides for no consideration of benefits from a given activity.
- d) requires regulators to decide which chemical or product a company can use, but regulators are not trained in product design or manufacturing and are not responsible for product development, safety, liability or warranty.
- e) creates significant uncertainty for businesses in obtaining a permit to operate. One manual on the Precautionary Principle even identifies it as a means for stopping the development of new technology. This is counterproductive. Looking at this matter holistically, CCEEB is concerned that this is not good for the Bay Area or California for job creation and retention.

Amy Cohen, Staff Attorney, Environmental Law and Justice Clinic (ELJC), Golden Gate School of Law, stated the ELJC represents a number of community organizations and communities that see the District's TNSR rule-making as an opportunity to address their concerns on health impacts. In July of 2003, the Clinic provided written comments on how the District's TNSR program could include more of the Precautionary Principle and conduct CRA. ELJC staff met with the District in December of 2003 to discuss those recommendations. The challenge is how to obtain District Board support for developing the scientific tools and policies concerning them. The SCAQMD is devoting major resources to the CRA issue. The Bay Area AQMD can take intermediate steps now address CRA until it is able to develop a more comprehensive program.

The ELJC contends that the District's TNSR rule-making does not address cumulative health risk in any context as its incremental approach considers only one project under permit review. This is true for projects at larger facilities such as refineries and other, smaller but high-risk sources, such as dry cleaners, gas stations, etc. Secondly, the risk levels proposed by the District are too high, especially given the absence of considering risk from proximate sources. Sources of risk must be identified and assessed for their significance rather than assumed to be insignificant. District staff stated in rule-making workshops that the Precautionary Principle is fine in principle but not in practice, and requested specific recommendations to consider how the District could incorporate the Precautionary Principle into its permit process. The ELJC provided specific recommendations that translate the Principle into regulatory practice. The District could now incorporate some of these recommendations relatively easily, while others would require the support of the District Board and in some cases budgetary support as well.

Ms. Cohen stated that while the Precautionary Principle calls for more and better scientific data, an informed decision-making process, and places the burden on the proponent of the activity that emits pollution. The assumption that cumulative risk is not a problem places the burden of proof on the public to demonstrate that it is. Since the District has a responsibility to protect the public from harm against air contaminants, the public should not bear the burden to prove that cumulative risk is not a problem. The assertion that there is no evidence of a cumulative risk problem in the absence of studying that problem in practice is unfair and arrives at an answer without having asked the question to begin with.

The District should obtain input on this issue both inside and outside of rule-making. It should not rely on the numbers it has been using for proposed risk limits but instead should ascertain whether there is cumulative harm. Until it has an answer, it should take precautionary measures. The implication is that the risk assessment that the District uses should be conducted more comprehensively.

Mobile and stationary source emissions are both problematic. For residents near freeways and ports a new pollution source is another concern. The District should assess the added risk and work with CARB to find further ways to reduce mobile source emissions to the extent possible. This requires taking measures now to account for overall risks. Other than noting that CARB had not yet developed the tools to assess or the policies to limit cumulative risks, the District has not indicated that it is moving forward on CRA issues.

California's air pollution control officers have noted that they look to the SCAQMD for guidance on the implementation of CRA, but to date that district has not adopted cumulative risk limits. The District has indicated that it would need over \$1 million to establish a CRA program. Given that California is operating under fiscal constraints, the ELJC has suggested interim measures. For example, businesses already pay for a risk assessment as part of their application for a permit to operate. This could be expanded to a regional or area study and the costs passed through permit fee increases.

Ken Kloc, Staff Scientist, ELJC, stated that making the Precautionary Principle operational is a major concern of businesses. Reducing threats of harm to public health is the means through which this is accomplished. Risk assessment protects most of the people most of the time, but more sensitive individual and groups are often left unprotected. This gap creates a context for incorporating a principle of precaution into a regulatory framework.

For example, the SCAQMD has conducted relatively sophisticated modeling exercises using the emissions inventory for the State Implementation Plan (SIP) process, and showed where mobile source and stationary source risk overlapped and peaked. Similar calculations were conducted for stationary source risk, and certain areas were identified with high cumulative point source risks. These were then evaluated with census tract data to map demographic profiles in relation to the hot spots. The Huntington Park community has a high cumulative point source risk and a high population of people of color. The SIP process in the Bay Area provides both the modeling tools and the emission inventories that would enable such work to be conducted in the Bay Area. This type of mapping could also be adopted as an additional criterion for permit review.

CRA could also be folded into hypothetical modeling for a number of cumulative source scenarios that address a specific number of point sources in an area. The District conducted some of this kind of work in a TNSR review model and found that in one scenario the cumulative risk was more than twice as much as the incremental risk from individual sources.

Criteria pollutants are also toxic. The consideration of the aggregate risk from air pollution is becoming increasingly important. For individuals predisposed to asthma, exposure to PM and a toxic air contaminant is of particular concern. Use of recent guidance from OEHHA on including the toxicity of criteria pollutants in conducting risk assessment would be a step forward to adding CRA to the District's rule-making.

The Precautionary Principle can be added to TNSR through hypothetical modeling. This would establish orders of magnitude by which cumulative risk could be measured and lowered to acceptable levels. The ELJC suggests lowering the level of acceptable risk by a factor of 10 across the board. This is a sound substitute for the absence of funds to conduct the necessary studies at this time. In the next 15 years, CARB wishes to reduce mobile source cancer risk from diesel PM to less than 100 per million. The ELJC believes that the total maximum risk for point sources in an area should be less than that, at perhaps 10 in a million. The District proposes to allow some facilities to use a hazard index of up to 10. However, this index has built-in safety factors and is set at one (1.0): an increase in the hazard index for a project removes protection for the most sensitive person.

Members of the Committee posed questions of the guest speakers, who replied as follows:

- Ms. Cohen noted the Clinic would soon meet with the District's Executive Officer, Jack P. Broadbent, to discuss the status of its recommendations on the TNSR program.
- Ms. Tuck stated that after the tools are developed, the appropriate way to address cumulative air toxics risk would begin by identifying the significant source categories in a community in which cumulative risk is of concern and ascertaining if the source or sources comply with existing regulations. The next step would be to evaluate the regulatory structure, assess whether there are gaps in the existing rules, and if so, then respond programmatically through a rule or rule amendment. Businesses must be treated fairly, and regulatory certainty is critical for businesses to function.
- Ms. Tuck stated that for areas where cumulative risk is a problem and facility compliance has been achieved, there may be mobile or port or other sources that require further assessment. Facilities that are not in compliance will be addressed under existing rules. How to assess a cumulative air toxics risk at the neighborhood level has not yet been resolved by CARB. Questions of modeling, data and policy development must be answered.
- Ms. Tuck observed that a precautionary approach acceptable to CCEEB would be for Cal/EPA to conduct research on product/chemical alternatives and to provide a clearing-house with such information available to businesses. The concern is where regulators mandate the use of alternatives. Companies already implement pollution prevention, and it saves them money.
- Ms. Cohen stated that the Precautionary Principle has been incorporated into many regulations around the world and information on where it has may be found at www.besafenet.com under the "Policies" page in this website.
- Ms. Cohen noted that the next steps for Cal/EPA and CARB to implement the ACEJ recommendations endorsed by Cal/EPA are unknown. In September, the ACEJ adopted its EJ recommendations and the Cal/EPA Interagency Working Group endorsed these in October. There is considerable discussion with the new head of Cal/EPA about the future of this Working Group, but the Cal/EPA Legal Director has committed to move forward on the recommendations and implement them. The Spring 2004 deadline for receipt of implementation suggestions was set in September of 2003, prior to the gubernatorial recall.

- Ms. Tuck added that CCEEB is not opposed to a CRA strategy but supports a uniform program coming out of Cal/EPA. At CARB, a stakeholder group is working on a land-use handbook for local government that addresses cumulative impacts and cautions against siting incompatible uses adjacent to one another.
- Mr. Bateman noted that the SCAQMD is not presently conducting NSR rule development, and its White Paper on Cumulative Impacts did not identify any specific changes to the toxics NSR rule to consider cumulative impacts other than to suggest adding a provision on buffer zones for toxic sources within a radius of a school. Ms. Cohen added there is an appendix to the SCAQMD White Paper that proposes to take some actions related to EJ and CRA. The SCAQMD has taken the key step to study cumulative risk and identify areas of concern.
- Ms. Tuck suggested that a staff member from CARB address the Committee on the issue of status of analytical tools for studying cumulative risk.
- Mr. Hess indicated that at a minimum the Committee would have six months within which to review this topic before the proposed modifications to the TNSR goes are presented to the District Board of Directors.

Chairperson Weiner thanked the speakers for their excellent presentations.

- 5. Committee Member Comments/Other Business.** There was discussion of the topics comprising the Committee's work plan for 2004.
- 6. Time and Place of Next Meeting.** 12:30 p.m., Wednesday, March 10, 2004, 939 Ellis Street, San Francisco, California 94109.
- 7. Adjournment.** 3:03 p.m.

James N. Corazza
Deputy Clerk of the Boards

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

DRAFT MINUTES

Advisory Council Technical Committee
9:30 a.m., Tuesday, February 24, 2004

1. **Call to Order – Roll Call.** 9:37 a.m. Quorum present: Louise Bedsworth, Ph.D., Chairperson, William Hanna, Stan Hayes, John Holtzclaw, Ph.D. Absent: Sam Altshuler, P.E., Robert Bornstein, Ph.D., Norman A. Lapera, Jr.
2. **Public Comment Period.** There were no public comments.
3. **Approval of Minutes of December 9, 2003.** Mr. Hanna moved approval of the minutes; seconded by Dr. Holtzclaw; carried unanimously.
4. **Control Measure Review.** Dan Belik, Rule Development Manager, stated the District is updating its Ozone Attainment Plan (OAP) and has received suggestions on control measures from the Ozone Working Group, California Air Resources Board (CARB), Advisory Council, Board of Directors, community members and downwind air districts. The plans and draft plans of other air districts have also been reviewed. The applicability to the Bay Area Air Quality Management District (BAAQMD) of control measures contained in the plans of the South Coast Air Quality Management District (SCAQMD) and San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is the subject of today's presentation.

Federal evaluation criteria require an air district to adopt all reasonably available control measures in light of local circumstances, except if an attainment date is not advanced, adverse economic or environmental impacts would ensue, or only minor emission reductions would be achieved at a major administrative cost. For measures to be eligible to receive emission credit in the State Implementation Plan (SIP) they must be real, quantifiable, permanent, enforceable and surplus.

The California Clean Air Act (CCAA) requires an air district to achieve either a 5% reduction in ozone precursors annually or to adopt "all feasible measures." No region in California has been able to meet the 5% goal. Therefore, all feasible measures must be adopted. In defining feasibility, transport mitigation regulations and aspects of the state law provide some guidance in taking into account economic, environmental and energy factors, as well as the emission reduction rate.

The BAAQMD considers a control measure feasible if it is reasonable and necessary; capable of being successfully implemented in a reasonable time period, taking into account legal, economic, environmental, social and technological factors; and is approved or approvable by CARB. Evaluation criteria include the pollutant controlled (i.e., volatile organic compounds (VOC) or nitrogen oxide (NOx)), amount and rate of emission reduction, technical feasibility, public acceptability, enforceability, cost effectiveness, socioeconomic impacts, environmental impacts, and whether the reductions are real, quantifiable, permanent, enforceable and surplus.

Mr. Belik noted that the federal Environmental Protection Agency (US EPA) has not adopted rules or guidelines regarding reactivity among VOC compounds. Perhaps as the emission reductions decrease and costs per ton of emissions reduced increase, reactivity may play a greater role in rule feasibility assessment. With regard to the role reactivity plays in influencing ozone formation and transport downwind, Mr. Belik stated that greater weight is given to the total ozone produced rather than to specific rates of production. However, reaction rates have been measured against the one-hour ozone standard in reactivity studies, and this issue is under discussion in some scientific circles. Reactivity would have less impact under the eight-hour ozone standard.

Saffet Tanrikulu, Research & Modeling Manager, stated that while VOC species can be differentiated according to reactivity, the process that converts nitrogen oxide (NOx) to nitrogen dioxide (NO₂) in the atmosphere takes approximately 20 minutes. Varying levels of VOC reactivity will therefore not likely affect pollution transport. Gary Kendall, Technical Division Director, added that the most modern models allow an emissions inventory, when compiled and disaggregated in space and time, to be queried according to VOC species reactivity profiles for a specific source category at a given point in time. Mr. Hayes noted that the consideration of the time at which a VOC emission would be reduced would be of importance in review of ozone formation.

Mr. Belik stated that staff has reviewed over 370 control measures in its update to the 2004 OAP, and has placed these measures into categories as follows:

- 5 – not enforceable
- 6 – not technically
- 9 – need legislation
- 14 – are not cost effective
- 17 – have potential transport mitigation
- 29 – require funding
- 29 – require further study
- 31 – potentially viable
- 53 – area already implemented in the District
- 82 – offer only negligible reductions
- 95 – are under other jurisdictions.

There are control measures in these plans for which the BAAQMD has no, or very few, sources, or which are already more stringently controlled by it. The BAAQMD has already implemented many of the measures proposed in the SJVUAPCD. It appears that the SCAQMD is adopting measures to force CARB to be more aggressive in adopting regulations. The SCAQMD rule on miscellaneous industrial coatings required add-on controls for the largest paint booths that emit more than 25 tons of VOCs. If applied on an operation-by-operation basis in the Bay Area, this approach may cost-effectively reduce emissions in the BAAQMD. The SJVUAPCD measure on sumps, pits and wastewater processing equipment may also entail notable VOC emission reductions if applied in the Bay Area. It would result in the installation at refineries of water traps in wastewater drain systems and seals after the oil-water separation phase to reduce emissions from wastewater treatment processes.

The potentially viable measures in the SJVUAPCD that, if adopted in the Bay Area, would reduce NOx transport include controls on agricultural irrigation engines, water heaters and boilers, stationary gas turbines, steam generators and process heaters.

Measures in the SCAQMD that would require further study by the BAAQMD include a federal source mitigation fee program, and an architectural coatings and solvents rule. Further study measures from the SJVUAPCD plan would include an indirect source mitigation program, a measure on NOx emissions from stationary internal combustion engines, glass melting furnaces, livestock waste, commercial and industrial composting and commercial char broilers.

SCAQMD control measures that require legislation include off-road vehicles and equipment, an emission fee program for port-related mobile sources, a program imposing a VOC emission fee of \$5,000 per ton for facilities emitting more than 10 tons per year and a federally mandated ozone non-attainment fee. In reply to Mr. Hayes, Ms. Roggenkamp stated that, for port-related mobile sources, the District will not adopt regulations to implement cold ironing but has recommended that the City of Oakland investigate this through the environmental review process. CARB is also reviewing cold ironing for possible application statewide. Mr. Belik added that the addition of a new port facility or cruise terminal provides an ideal opportunity to implement cold ironing, and it might be considered as a mitigation measure in the permit review process. Mr. Hanna observed that a federal mandate to require cold ironing at all ports in California would minimize adverse the impacts on commerce and industry that would occur if it were applied in a piecemeal manner.

Mr. Belik stated that measures in the SCAQMD plan that are considered by staff to be technically infeasible include further emission reductions from large VOC sources, industrial process operations and residential water heaters. There may be conflict between energy efficiency mandates and existing regulations regarding residential water in the SCAQMD.

Measures in the SCAQMD with negligible emission reductions or for which there are no comparable Bay Area sources include truck stop electrification, urban heat island mitigation, economic incentive programs and additional NOx reductions under the emissions trading RECLAIM project. Similar measures in the SJVUAPCD include asphalt batch plant dryer and heaters, bakery ovens, and can and coil coatings, natural gas fuel specifications, among other rules.

Many of the control measures considered by the SCAQMD are already under CARB jurisdiction. The SCAQMD also wants to improve vehicle Inspection & Maintenance (I&M) beyond its most stringent form. Ms. Roggenkamp added that CARB has recently reviewed areas with further emission reduction potential and is considering a pilot program to replace or upgrade the emission control systems on passenger vehicles. The District is interested in sponsoring such a program.

Chairperson Bedsworth and Mr. Hayes notes that the air quality dynamics in the SJVUAPCD and BAAQMD differ, and ozone control measures implemented in one region would have different impacts on the other. Mr. Belik added that there is a high VOC to NOx ratio in the SJVUAPCD. NOx measures would likely be more effective there than in the SCAQMD.

Chairperson Bedsworth noted that revenue generation for control measures and the need to reduce mobile source emission are key concerns. She inquired as to what authority the District has to generate revenue for emission reduction programs and the extent to which remote sensing of vehicle emissions and vehicle scrappage programs will figure into the update to the OAP. Ms. Roggenkamp replied that vehicle license registration fees at \$20 million fund the Transportation Fund for Clean Air (TFCA) annually. The District also received funds from the Carl Moyer Program for reducing heavy-duty engine emissions. The future of this program is uncertain, and the District recently received what may be the final installment of Moyer program funds.

Mr. Kendall noted that neither CARB nor the Bureau of Automotive Repair (BAR) is enamored of remote sensing technology in the evaluation of vehicular emissions. CARB has a greater interest in vehicle scrappage programs. Ms. Roggenkamp added that the District sponsors a scrappage program for vehicles manufactured prior to 1981. This program has worked well to date.

Mr. Belik stated that there are additional measures in the SCAQMD plan that are regulated by CARB, such as new hand-held and non-hand-held small engines, new off-road gas engines, enhanced vapor recovery at aboveground storage tanks, portable internal combustion engines, the recovery of fuel vapors at marinas, and fuel permeation through gasoline dispensing hoses and promulgates low sulfur fuel standards for diesel. The Federal Aviation Administration regulates aircraft fuel transfer. The Department of Pesticides adopts strategies on pesticide emissions.

There was discussion of the aggregate emissions reductions from measures considered potentially viable, and whether the inclusion of a criterion regarding toxics reductions affects the ranking of control measures. Ms. Roggenkamp responded that staff does not have an aggregate emission reduction estimate for all of the measures it considered. Mr. Belik added that some of the measures are more promising for toxics reductions. While reducing diesel PM is not a part of ozone control strategy development, it may still offer guidance on giving priority to certain control measures.

Mr. Belik added that the SCAQMD's goal is to inspire CARB to require further reinforcement synthetic rubber fuel line hoses to reduce emissions that occur through permeation. Mr. Kendall added that gasoline dispensing nozzles are tested for disconnect spills, leaks and drips. Recently, staff discovered that some metal nozzles retain liquid prior to being returned to its position on the tank and that fuel evaporates into the atmosphere. Standards have since been adopted regarding this design problem, which affects many, though not all, of the gasoline dispensing nozzles in the Bay Area. Eight million gallons of gasoline are dispensed daily in the Bay Area. Therefore the total emission reduction achieved by such a measure is potentially significant.

In reply to questions on the schedule for implementing these measures in the context of updating the OAP, Ms. Roggenkamp stated staff is now in the process of drafting detailed control measure descriptions. Some measures may fall out of consideration and others may become further study measures. This list will be presented to the Ozone Working Group at the end of March. The next step is to issue the draft OAP in May or June for public discussion. While the deadline to submit the District's plan to attain the state one-hour ozone standard was the end of last year, CARB has informed the air districts that are also working on federal plans that they may submit the updated state plan with their SIP submittal. The District was also to have made an attainment demonstration for the one-hour federal standard in April of this year. However, the last three years of ozone monitoring indicate that the District has an attainment record. If the EPA declares this record to constitute attainment, the District will instead submit an Ozone Maintenance Plan for which there is no deadline. EPA Region IX has expressed its intention to review this matter quickly. However, there is no deadline by which it must render its decision.

- 5. Committee Member Comments/Other Business.** There was discussion regarding holding a one-hour meeting of the Technical Committee following the Advisory Council Regular meeting on March 10, 2004. Chairperson Bedsworth stated the Committee had decided at the January 14, 2004 Retreat that it would devote its April meeting to the District's SIP submittal and possibly continue that discussion into June, and then take up issues regarding mobile source emission modeling in the summer and fall, with the winter to be devoted to discussing the connection between local air quality actions and global climate change.

Ms. Roggenkamp observed that in April staff could provide an update to the Air Quality Planning and Technical Committees on the ozone planning process, along with comments on mobile source emission modeling since this category figures into the planning process. Staff could also present which of the potentially viable control measures were included in the update to the OAP.

The Deputy Clerk noted that Chairperson Blake has scheduled Advisory Council member Robert Bornstein, Ph.D., to make a presentation at the March 10 Regular Meeting on real-time emissions monitoring in New York City which is part of an environment and security effort. Mr. Kendall added that for the last year District air monitoring staff has conducted biowatch air monitoring. This is distinct from incident management and accidental releases, for which staff has a number of measures available for field collection data. These include hand-held equipment that collects data on various compounds including sulfur, organics, carbon monoxide, among others, and now the capability has been developed to use this equipment for PM data collection as well.

County and city hazardous materials staff are the first-line responders for these types of emergencies. The District is charged with making measurements and collecting samples from a measurement and air monitoring perspective. However, at the request of a facility, District staff have reviewed Risk Management Prevention Plans. Chairperson Bedsworth inquired if the topics raised by Mr. Kendall could be discussed with Dr. Bornstein's presentation. Mr. Kendall indicated that he and a staff member from the Enforcement Division could attend the meeting and provide input.

6. **Time and Place of Next Meeting.** Tentatively, following the Advisory Council Regular Meeting of March 10, 2004, and as per the Committee schedule developed at the Retreat, 1:30 p.m., Tuesday, April 6, 2004, 939 Ellis Street, San Francisco, California 94109.
7. **Adjournment.** 11:27 a.m.

James N. Corazza
Deputy Clerk of the Boards