



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

ADVISORY COUNCIL MEETING

WEDNESDAY
FEBRUARY 9, 2011
9:00 A.M.

7TH FLOOR BOARD ROOM
939 ELLIS STREET
SAN FRANCISCO, CA 94109

AGENDA

CALL TO ORDER

Opening Comments
Roll Call

Ken Blonski, 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 meetings and 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 Council's purview. Speakers are limited to three minutes each.

CONSENT CALENDAR

1. Approval of Minutes of the January 12, 2011 Advisory Council Meeting.

OVERVIEW: HEALTH EFFECTS VALUES

2. Health Effects Values and Use in Air District Actions

Jean Roggenkamp

A speaker from the Office of Environmental Health Hazard Assessment and Air District staff will provide an overview of health effects values and how they are used in Air District actions and activities.

A. Health Effects Values: Ambient Air Quality Standards, Cancer Potency Factors and Reference Exposure Levels

Melanie Marty, Ph.D.
Chief, Air Toxicology and Epidemiology Branch
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency

B. Air Quality Impact Analysis and Health Risk Assessment

Brian Bateman
Director, Engineering Division, BAAQMD

C. Multi-Pollutant Evaluation Method for Health Benefits of Control Measures

David Burch

Principal Environmental Planner, Planning and Research Division, BAAQMD

David Fairley

Statistician, Planning and Research Division, BAAQMD

DISCUSSION

3. Health Effects Values and Use in Air District Actions

The three speakers will convene for a discussion with the Advisory Council on health effects values and how they are used in Air District actions and activities.

OTHER BUSINESS

4. Council Member Comments/Other Business

Council Members may make a brief announcement, provide a reference to staff about factual information, or ask questions about subsequent meetings.

5. Time and Place of Next Meeting

9:00 a.m., Wednesday, March 9, 2011, 939 Ellis Street, San Francisco, CA 94109.

6. Adjournment

CONTACT EXECUTIVE OFFICE - 939 ELLIS STREET SF, CA 94109

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BAAQMD homepage:

www.baaqmd.gov

- 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.
- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District's offices at 939 Ellis Street, San Francisco, CA 94109, at the time such writing is made available to all, or a majority of all, members of that body. Such writing(s) may also be posted on the District's website (www.baaqmd.gov) at that time.

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

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF DISTRICT MEETINGS

FEBRUARY 2011

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|--|------------|-------------|---|-------------------------------------|
| Advisory Council Meeting | Wednesday | 9 | 9:00 a.m. | Board Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> - CANCELLED | Wednesday | 16 | 9:45 a.m. | Board Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> - CANCELLED | Thursday | 24 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Maritime Sources & Ports Committee <i>(At the Call of the Chair)</i> | Thursday | 24 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Budget and Finance Committee <i>(At the Call of the Chair)</i> | Thursday | 24 | 11:00 a.m. Following Maritime Source & Port Meeting | 4 th Floor Conf. Room |

MARCH 2011

| <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 Wednesday of each Month)</i> | Wednesday | 2 | 9:45 a.m. | Board Room |
| Board of Directors Stationary Source Committee <i>(At the Call of the Chair)</i> | Thursday | 3 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Public Outreach Committee <i>(At the Call of the Chair)</i> | Thursday | 3 | 11:00 a.m. Following Stationary Source Meeting | 4 th Floor Conf. Room |
| Board of Directors Legislative Committee <i>(At the Call of the Chair)</i> | Monday | 7 | 9:45 a.m. | 4 th Floor Conf. Room |
| Board of Directors Climate Protection Committee <i>(At the Call of the Chair)</i> | Monday | 7 | 11:00 a.m. Following Legislative Meeting | 4 th Floor Conf. Room |
| Advisory Council Meeting | Wednesday | 9 | 9:00 a.m. | Board Room |

MARCH 2011

| <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 Wednesday of each Month)</i> | Wednesday | 16 | 9:45 a.m. | Board Room |
| Board of Directors Budget & Finance Committee <i>(At the Call of the Chair)</i> | Wednesday | 23 | 1:00 p.m. | 4 th Floor Conf. Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Thursday | 24 | 9:30 a.m. | 4 th Floor Conf. Room |

APRIL 2011

| <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 Wednesday of each Month)</i> | Wednesday | 6 | 9:45 a.m. | Board Room |
| Board of Directors Executive Committee Meeting | Monday | 11 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 20 | 9:45 a.m. | Board Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Thursday | 28 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Budget & Finance Committee <i>(At the Call of the Chair)</i> | Thursday | 28 | Following Mobile Source | 4 th Floor Conf. Room |

HL – 2/2/11 (1:50 p.m.)
P/Library/Forms/Calendar/Calendar/Moncal

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Blonski and
Members of the Advisory Council

From: Jack P. Broadbent
Executive Officer/APCO

Date: February 1, 2011

Re: Advisory Council's Draft Meeting Minutes of January 12, 2011

RECOMMENDED ACTION:

Approve attached draft minutes of the Regular Advisory Council's meeting of January 12, 2011.

DISCUSSION

Attached for your review and approval are the draft minutes of the January 12, 2011 Advisory Council meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-5000

DRAFT MINUTES

Advisory Council Retreat and Regular Meeting
9:00 a.m., Wednesday, January 12, 2011

CALL TO ORDER

Opening Comment: Chairperson Bramlett called the meeting to order at 9:00 a.m.

Roll Call: Chairperson Jeffrey Bramlett, M.S., Vice Chairperson Ken Blonski, M.S., Secretary Stan Hayes, and Council Members Sam Altshuler, Louise Bedsworth, Ph.D., Benjamin Bolles, Robert Bornstein, Ph.D., Harold Brazil, John Holtzclaw, Ph.D., Kraig Kurucz, Gary Lucks, JD, CPEA, REA I, Elizabeth Lutzker, Jane Martin, Dr.Ph.D., Kendall Oku, and Dorothy Vura-Weis, M.D., M.P.H.

Absent: Jennifer Bard, Alexandra Desautels, Rosanna Lerma, Debbie Mytels, Jonathan Ruel

Also Present: Board of Directors Chairperson Brad Wagenknecht (arrived later) and outgoing Advisory Council Member Robert Huang, Ph.D.

Introduction of New Advisory Council Members – Chairperson Bramlett introduced the following new Advisory Council Members:

- A) Sam Altshuler, under the *Engineer* category, to a term of office effective January 1, 2011 through December 31, 2012; and
- B) Elizabeth Lutzker, under the *Public Health Agency* category, to a term of office, effective January 1, 2011 through December 31, 2011.

Oath of Office - The Clerk of the Boards administered the Oath of Office to new Council Members Sam Altshuler and Elizabeth Lutzker.

Public Comment Period - There were no public comments.

CONSENT CALENDAR

1. Approval of Minutes of the October 13, 2010 and November 10, 2010 Advisory Council Minutes:

Council Action: Member Holtzclaw made a motion to approve the minutes of the October 13, 2010 Advisory Council Meeting; Member Bornstein seconded the motion; carried unanimously without objection.

Dr. Vura-Weis requested the spelling of her name be corrected in the November 10, 2010 minutes.

Council Action: Dr. Holtzclaw made a motion to approve the minutes of the November 10, 2010 Advisory Council Meeting, as amended; Dr. Vura-Weis seconded the motion; carried without objection (Altshuler, Brazil, Kurucz and Lutzker abstained).

RECOGNITION

2. Recognition of Outgoing Advisory Council Members:

The following Advisory Council Members were recognized for their service on the Council, and words of appreciation were personally extended to Dr. Robert Huang, who was present at the meeting:

Robert T.P. Huang, Ph.D.
Rosanna Lerma, P.E.
Debbie Mytels
Michael Sandler

Advisory Council Liaison, Gary Kendall, reported that the Personnel Committee would meet this afternoon to interview and consider candidates to fill two additional Advisory Council vacancies, with terms expiring December 31, 2011 and 2012 under the *Community Planning, Architect* and/or *Conservation Organization* categories.

RETREAT

3. Recommendation and Selection of Slate of Officers for 2011:

Council Action: Member Brazil recommended approval of the following Slate of Officers for 2011: Chairperson Ken Blonski, M.S., Vice Chairperson Stan Hayes, and Secretary Robert Bornstein, Ph.D.; Member Holtzclaw seconded the motion; carried without objection (Blonski abstained).

4. Recognition of Outgoing Advisory Council Chairperson:

Vice Chairperson Ken Blonski, on behalf of the Advisory Council, recognized outgoing Chairperson Jeffrey Bramlett for his dedicated leadership and service to air quality in the Bay Area.

Executive Officer/APCO Jack Broadbent recognized Chairperson Bramlett on behalf of District staff, and noted that Board Chairperson Wagenknecht should arrive to extend words of appreciation. He thanked Chairperson Bramlett for his leadership and guidance in the greenhouse gas and climate change arena. The Board is cognizant of recommendations proposed by the Advisory Council, and he presented Chairperson Bramlett a service award for his leadership as Chair for 2010.

Advisory Council Liaison, Gary Kendall thanked Chairperson Bramlett for his sense of humor, fostering cooperation amongst Council Members and keeping the group focused.

Chairperson Bramlett extended thanks to the Advisory Council and staff, expressed his optimism and support of the Air District and its mission, and cited the significant amount of work that goes on behind the scenes.

Chairperson Blonski assumed the role of Chairperson and requested that Item 7; the Report of the Executive Officer/APCO on the State of the District, be moved up on the Agenda.

7. Report of the Executive Officer/APCO:

Mr. Broadbent reported that the Board of Directors will meet for a Special Meeting and Retreat on January 19, 2011, led by Tom Bates, incoming Chairperson. The Retreat will include:

- The state of the Air District;
- An air quality summary;
- An administrative overview;
- Major initiatives for 2011;
- Regional coordination efforts;
- Upcoming Board Committee assignments, possible changes in meeting procedures, and goals

He said a significant issue staff has tackled, in addition to regional smog issues of ozone and particulate matter, is a concerted effort to address localized toxic air contaminant concentrations that characterize certain communities. The District has dealt with these through amendments to CEQA guidelines. There are new lower ambient air quality standards that will direct efforts with regard to particulate matter and ozone; the two issues have driven the regulatory agenda at the District.

The District's climate protection program is very much a part of the overall institution. The District's role is to compliment state and federal programs. The Tailoring Rule will hopefully be implemented through the Title V Rule, and the Advisory Council's work has been instrumental in moving forward recommendations.

Mr. Broadbent highlighted Community Risk Reduction Plans (CRRPs), and a dilemma voiced by some regarding CEQA guidelines which are perceived as impeding infill development. As developments are approved in CARE communities the District works through CEQA to be able to quantify impacts. The District continues to believe that the most appropriate step to take is to have communities develop CRRP's which will merit resources to be directed toward a

collaborative effort with the Bay Area. Mr. Broadbent then reviewed two pilot programs underway in San Jose and San Francisco, as well as expansion in CARE communities.

He presented a chart showing the Clean Air Communities Initiative, which involves regulations and guidelines, monitoring and modeling, outreach and education, grants and incentives and enforcement for priority communities, and is an effort to concentrate localized risk levels down.

Given the density of the Bay Area, it is appropriate to focus on this issue and the Board will monitor this effort. The District wants to better tie to the Sustainable Communities Strategy (SCS) underway and is in discussions with ABAG and MTC staff.

Administratively, the District is at the halfway point of the fiscal year where it finds itself under review. Revenues are received from various sources, all of which are down. Expenditures continue to increase and staff is doing the best job it can to balance the budget while also moving the regulatory agenda. Staff is responding accordingly, contract negotiations are underway with employees, vacancies are not being filled in certain areas, and planning continues to cut costs. Residing in the headquarters building costs a lot and staff thinks it can lower costs by finding a less expensive location, or co-locate in a regional governance center.

Mr. Broadbent discussed the 2011 major Initiatives as:

- Agriculture Engine Rule
- Public Engagement Plan
- Production System Live
- Metal Melting Rule
- Vacuum Trucks Rule
- Contract Negotiations with Employees Association
- 2011/2012 Budget
- Community Development Guidelines
- Air District Conference
- Joint Policy Committee Climate Action Plan
- Refine CEQA Tools
- Centralized Information & Records Management
- Leadership Development Program
- Facility Relocation
- Clean Air Foundation
- Bay Area Business Assistance Program
- New Source Review Rule (amendments)
- General PM Rule

Dr. Bornstein questioned and confirmed with Mr. Broadbent that MTC has put out an RFP for relocation efforts, and they hope to select a contractor in January. It is anticipated that property would be secured in 2011 and the move would occur in 2012.

Member Lucks questioned new developments in terms of what Proposition 26 might mean. District Legal Counsel Brian Bunker reported that there have been new developments and people think it will be litigated. For the District's core program of regulatory fees, it will not make much difference, as justification is in place for these fees through cost recovery. The District has not typically had mitigation fees, and this may affect future plans such as increasing a carbon fee to the point where it impacted people's decision making. In addition, some of the fees considered

in connection with the Indirect Source Rule may be changed in regard to the nature of how to create those.

Member Lucks added that the Advisory Council might need to think more about a tailored, fine-tune nexus in terms of public policy and whether there is a revenue-generating piece.

Mr. Bunger added that another point is that the State has taxing power already, but local agencies only have that which is granted by the legislature. The District cannot create a tax that creates a fee unless authorized by the legislature, and can only have regulatory fees.

Vice Chairperson Hayes questioned if there is an absolute limit to cost recovery in District fees or is there some room to maneuver. Mr. Bunger said the District can only charge fees that cover the reasonable cost of providing the service or product. There are some limited exceptions and regulatory fees are one, but those must be tied to the reasonable cost of delivering the product.

Director Technical Services, Eric Stevenson, discussed recent air quality and said for 2010 the ozone season was similar in the number of exceedances they had in 2009. There were 9 exceedances at the federal standard and in 2009 we had 8 exceedances. Much of it was caused by weather patterns. For this wintertime they encompassed the time period from November 1, 2010 to February 28, 2011 which crosses both years. For this year, the preliminary data is still being reviewed, but it looks like there is one exceedance of the national PM2.5 standard. Last year there were quite a few more but this year it has been wetter which had a large effect.

Vice Chairperson Hayes said in terms of the PM standard, the federal standard is written in terms of 24 hours at the 98th percentile for a 3 year average. Mr. Stevenson agreed and said this is the same for the ozone standard, but for clarity's sake, the District talks about how many days it actually exceeded that number. Vice Chairperson Hayes questioned whether the District was bouncing along in attainment or is the District seeing things which push us in the wrong direction. Mr. Stevenson said in both the ozone and PM world, the trend is going downwards. In both cases, they are hovering closely to the national standard. The ozone standard is likely to be lowered and staff is awaiting word from EPA, but once lowered, additional work will need to be done. It is also likely that the PM2.5 24-hour and annual average standard will also be lowered and matched. If this is the case, they may be closer to the annual standard. Mr. Broadbent said given the fact that it is a 24-hour standard, the Wood smoke Rule is that much more critical.

Member Lucks questioned the California air quality standard status. Mr. Stevenson said it is a much stricter standard for ozone and will probably be more in line when the feds lower their standard close to the level of the California standard. For PM2.5, there is no state standard for 24-hour concentrations. For the annual standard, the District is very close to compliance.

5. 2011 Advisory Council Meetings, Including Format, Topics and Dates:

Gary Kendall welcomed newly appointed members Elizabeth "Liza" Lutzker and Sam Altshuler. He briefly reviewed the work of the Advisory Council for 2010, as follows:

1. Informational meeting in February on Advisory Council programs and activities;
2. Topic Meeting: California's 2050 GHG Emission Reduction Target of 80% below 1990 levels – Industrial Sector

3. Topic Meeting: California's 2050 GHG Emission Reduction Target of 80% below 1990 levels – Technologies and Strategies to Reduce GHGs from the Industrial and Electric Power Generation Sectors
4. Topic Meeting: California's 2050 GHG Emission Reduction Target of 80% below 1990 levels – Strategies and Technologies for the Transportation Sector

The Council was fortunate to have many good speakers, noted the Chairperson of the Board of Directors attended many meetings, and the Council prepared three Final Reports, two of which have been presented to the Board of Directors. The third Report will be discussed and is presented today for discussion with the hopes of finalization and future presentation to the Board of Directors.

Mr. Kendall briefly discussed logistics of meetings for the benefit of new members, reviewed protocols for holding topic meetings, meeting dates and times, forming work groups and report writing. He presented a chart of health benefits of a 1% reduction of air pollutants, which shows that reducing particulate matter accounts for about 80% of the total benefit. For this reason, staff believes it is appropriate for the Council to focus on PM.

In addition, for the past several years, there has been research on ultrafine particulates. The research indicates that ultra-fine particulate may be more harmful than PM10 or PM2.5. Health effects include inflammation of the lungs, blood vessels and heart, exacerbation of asthma and other respiratory diseases, increased cardiovascular and respiratory mortality and cancer.

Mr. Kendall presented a comparison in size of PM10, PM2.5 and ultrafine PM, noting that ultrafine particulate has up to 1 million times as many particles and up to 100 times the surface area. It is these properties that allow ultrafine particles to be trans-located to the lungs, circulatory system, central nervous system, heart, liver, and brain where it can cause many adverse health effects. For 2011, staff proposes the Advisory Council focus on PM and in particular, ultrafine PM because the majority of health benefits come from reducing PM. There are many adverse health effects and there are no ambient or emission standards for ultrafine PM.

Mr. Kendall presented a schedule of proposed Advisory Council meetings, format, topics and dates, stating that the first meeting, scheduled for February 9, 2011, which will focus on health effects values and how these are used in Air District actions and activities. For the next three meetings, staff proposes focusing on ultrafine particulate.

The second meeting will focus on ultrafine particles health effects, measurement and analysis. The third and fourth meetings would also be on ultrafine PM with specific topics to be determined later.

Health effects drive most Air District actions and activities like determining the attainment status of ambient air quality standards, developing federal non-attainment plans, and state Clean Air Plans, permitting of stationary sources, preparing Health Risk Assessments, and evaluating proposed control measures. Staff believes it would be helpful to provide background information and propose three presentations for the February meeting: one on health effect values, cancer potency factors, and reference exposure levels. A second presentation will provide an example of a Health Risk Assessment, and a third presentation on a Multi-Pollutant Evaluation Method used in the 2010 Clean Air Plan.

Mr. Kendall stated for the first topic meeting, one speaker is proposed for ultrafine particulate health effects, one speaker on measurement and analysis, and he presented links to reference materials on Slide 11 of the presentation. He then provided an overview of proposed speakers on topics; John R. Froines, Ph.D., Professor, Environmental Health Sciences, School of Public Health, UCLA; Ralph J. Delfino, M.D., Ph.D., Associate Professor, Epidemiology School of Medicine, UC Irvine; and William W. Nazaroff, Ph.D., Professor, Civil and Environmental Engineering at UC Berkeley.

Options for the second and third topic meeting include: ultrafine particulate sources, control technologies and strategies, measurement technologies, ambient air quality standards, emission standards, research, diesel PM, and wood smoke.

Staff prepared potential questions which include: 1) Is more research required? 2) Should there be ambient air quality standards for ultrafine particulate, and if so, how should it be measured, what should the value of the standard be, what form should the standard have, what should the averaging time be, should it be based on the number of particles, mass, surface area? 3) Should there be emission standards for ultrafine particulate, and if so, what should the values be, how should it be measured, and what units and what should the averaging time be? 4) What are the ambient/source measurement technologies? 5) what are the appropriate control strategies?

Dr. Bornstein referred to Slide 4, shown is 1% of the economic impact for toxics, which he thinks is low. Mr. Kendall said he somewhat agrees, but in looking at the health end points and the dollar value placed on toxics, which is typically cancer, it turns out that PM is the 600 pound gorilla in the room. He was a little surprised, but if you run the numbers it is the way it turns out. It really demonstrates that in the state of California, a great job has been done to reduce ambient air toxics over the last 30-40 years.

Dr. Bornstein commented that it could be that some of the PM is actually toxic material where toxins adhere to the PM. He asked how this feeds into the CARE program, as originally he thought the program was focused on toxics, but it might be shifted to include or focus on ultrafine particles. Mr. Kendall said it was focused on toxics in the beginning, but now PM has been included as a component.

Director of Planning and Research, Henry Hilken, added that the CARE program started focusing on toxics in part because of recommendations from the Advisory Council. He would say PM 2.5 is also a focus of the CARE program. He noted there is a wedge in the chart that is diesel PM, and toxics refer to air toxics that are not diesel PM. This is the "other stuff." Diesel PM is still very much a focus of the CARE program and this is the darker blue wedge.

Dr. Bornstein referred to slides 13 and 14, modeling was not mentioned and he suggested this be tied into the questions and issues. Mr. Kendall agreed this is a good point; the list of future topics was not meant to be all-inclusive and this could be added to the list. He said they want to make sure the Council touches on the most important things in terms of helping the staff and the Board with future policy direction, and there are a limited number of meetings, time, and speakers.

Dr. Holtzclaw asked to make sure the physical chemistry of how the particulates are formed, what comes out of a tailpipe, and how it conglomerates or not so as to get a sense of the

chemistry or physics and chemistry of it. Mr. Kendall said this is a good suggestion which could fit in when talking about the sources, primary and secondary ultrafine particles, what goes on in the atmosphere, and studies that look at particle size next to a freeway and how that changes when moving away from the freeway, how the particle size and chemical composition changes, and so on. He agreed it is a rich topic and this could definitely be considered for the third or fourth topic meeting. He asked whether Dr. Holtzclaw might have some speaker suggestions which could be discussed later.

Dr. Holtzclaw said he would also like to cover briefly epidemiological studies done so that we know the depth of research that supports this. Mr. Kendall said there would be an opportunity for this during the discussion on health effects. He referenced the links provided in Slide 11 and some of those presentations talk about epidemiological studies and others done on animals.

Member Kurucz said he has been involved with EPA studies on nano-technology and PM from paint booths where they found that particles acted very differently from what was expected. He said at the AW&MA meetings he attended, he often goes to presentations by Dr. Merrick who does his research from a university in Texas especially on diesel PM and because the particles are small and have high surface area, they act like sponges and a good chemical delivery system where there are other unburned chemicals clinging to the surface of it. He noted it is on the agenda, but questioned whether it was the number of particles that is more important or the mass of the chemical that makes up that particulate matter. Mr. Kendall said from what he has read and come to understand, surface area is the critical thing. Much of ultrafine PM is what is termed elemental carbon. Carbon likes to absorb all kinds of chemicals on its surface. A lot of ultrafine emissions are carbonaceous as well as other chemicals like benzene, which hop onto the small carbon particle. They pass through the lungs and the blood stream. Therefore, he thinks surface area is an important characteristic when talking about ultrafines.

Mr. Kurucz said if particles were able to be measured when they were created, a large number of them might be found in the ultrafine size range, but if measured 10 meters downwind, they may have re-conglomerated or increased in size due to humidity or condensation. Mr. Kendall said Dr. Holtzclaw touched on this same issue, and Mr. Kendall suggested reviewing the reference materials on Slide 11. While he is not an expert in particle physics, there are different phases and he thinks some of the tiny particles go through nucleation and condensation and wind up being somewhat larger, but they still end up being fairly small as compared to PM_{2.5} or PM₁₀.

Vice Chairperson Hayes said he likes the idea of returning to public health as a theme, thinks the Council has made some very interesting conclusions and heard some very relevant speakers on this issue. He is trying to imagine how the information developed through the course of Advisory Council meetings would be used to help in the District's actions. One area has to do with control strategies. Given new source rules for PM and more stringent standards suggest there is a high priority to understanding this type of research to see whether this could help inform the choice of control measures put into a future plan or requirements built into a new source review rule by the end of the year.

He noted Slide 14 talks about various metrics that could be used to set ambient air quality standards, and if it turns out that it is the number of particles rather than mass that is critical, this might suggest that as we develop information about potential candidate control measures for a

PM plan, we might want to calculate these additional measures to help distinguish one control measure from another, to anticipate these different kinds of ultrafine particle issues.

With respect to the topics identified for speakers, he thinks these are terrific speakers and as good as it gets. He noted that if Dr. Delfino is unavailable, he knows one of his colleagues, Mike Kleinman who would be equally good.

Lastly, Vice Chairperson Hayes observed that on Slide 4 showing the chart of benefits from different types of controls, one of the things problematic about this kind of chart is that it suggests that the combination of ozone and toxic benefits where we spend 90% of efforts over the years produces less than 10% of the benefits. He thinks we should be careful not to send a message that toxics are not important, ozone is not important, and this is all about PM and forget about the rest.

Mr. Kendall thanked Mr. Hayes for his good points, said the chart is a snapshot of today, but in rolling back to the late 1960's when ozone was a lot higher, you would not get the same result. This shows the success in reducing ozone precursors and ambient ozone levels, as well as reducing air toxics. It also pointed out that we knew less about PM, and he discussed work from the 1980's to date. Also to keep in mind, in the process of cleaning up ozone, you also reduce precursors for fine PM, which is why the EPA came out with PM2.5 and ozone standards in the late 1990's, they were linked; because they shared precursors. He said it is a complicated story and this is just a snapshot.

He added that Dr. Bornstein discussed the skinny pie slice for toxics. He thinks this is limited to cancer, and when looking at it that way, there are many other health effects that are non-cancer, but this small slice is cancer.

Member Altshuler said with the adoption of Spare the Air Tonight for wood smoke PM, there should be a set of data that shows the impact of reduced wood smoke on air quality. With that data, they should be able to look at mortality and morbidity data at local hospitals to see whether the program has had any impact on health. It would be unique within the Bay Area to be able to really see the direct health effects of wood smoke. Mr. Alshuler said one could embark on a PM2.5 or ultrafine PM control strategy of reducing NOx but this may not really affect health, whereas if one were to go after metals, it would have a much bigger impact.

Mr. Kendall responded, stating this is a good point. In terms of monitoring and where we are taking samples that we can use to get the elemental carbon content and composition of PM during the winter and have those over a series of winters including before, during and after the wood smoke program, the District's statistician is looking at this. It is not as easy to do as you might think it is because there is transport, meteorology and other things, but the District is working on this.

Council Action: Member Bramlett made a motion to approve the proposed 2011 Advisory Council meetings, including format of meetings, topics and dates; Member Altshuler seconded the motion; which carried unanimously without objection.

Mr. Kendall thanked the Council and said the first topic; symposium-like meeting is scheduled for March. Regarding meeting logistics, a work group of Council Members prepares the Report

for each topic meeting. It would be appropriate for the March meeting to identify a small working group to prepare the report. Chairperson Blonski asked for volunteers to serve on the first work group, and members Mr. Hayes, Dr. Bornstein (final English edit), Dr. Martin, and Dr. Vura-Weis volunteered for the March working group.

Break

Chairperson Blonski called for a brief break, and thereafter, reconvened the regular meeting.

8. Brown Act Requirements Update:

District Counsel, Brian Bunger, provided an update on the Brown Act which he said is an open meeting law and embodies requirements that apply to the Advisory Council, the Board of Directors and Hearing Board, as well as other governmental bodies.

He reviewed requirements for agendas to be physically posted 72 hours ahead of meetings which staff handles. While state law does not require staff post agenda materials on the Internet, this is done as a courtesy by staff. There are provisions that allow closed session meetings to be held without the public's presence for certain purposes which do not relate to the Advisory Council, and the Brown Act defines meetings as a collection of the Advisory Council which amounts to more than half to discuss business.

Two things to be careful of are serial meetings, which are defined as members contacting each other outside of the public meeting and also a situation where one member contacts several members to obtain feedback and shares information back and forth. During social gatherings, members should not discuss business of the Advisory Council. Information of general interest can be shared; however, the Council should not have a back and forth. Editing sessions through email is not appropriate under the Brown Act. An Ad Hoc Committee is less than a majority of the Board and is formed for a specific purpose, such as when working groups are formed to meet where they can communicate on the topic, as the final discussion will occur at a general meeting.

Dr. Holtzclaw confirmed that the District will hold an ethics training workshop on March 24, 2011 from 1:00 to 3:00 p.m., which is required every two years. New members are required to take/attend ethics training within one year of appointment.

Member Lucks questioned the consequence of members responding to email and/or providing input to a draft document, and more than 11 are providing comments. Mr. Bunger said the law does provide that it is a misdemeanor and the FPPC could pursue enforcement based upon a complaint. He noted that because members are not aware of who is being sent and/or reviewing the draft report, it should not be circulated to the entire Advisory Council but only the small working group. When ready, the report should be agendized and then provided in the packet and heard by the full Advisory Council in open session.

Noted Present:

Board Chairperson Wagenknecht was noted present at 10:30 a.m. He said he appreciates the Advisory Council's work, wished them well in their 2011 year, voiced the Board's commitment to the work of the Advisory Council and congratulated the new Slate of Officers.

Dr. Holtzclaw confirmed that the working group must avoid not including more than eleven members deliberating on the draft report outside of the regular meeting. He suggested simply allowing the small working group debate the issue at hand and present the draft report at the regular meeting in open session. Dr. Bornstein confirmed that less than eleven people can discuss the matter, but any member can send their comments (without discussion) to the Chair of the Subcommittee.

DISCUSSION

7. Continued Discussion of Draft Report on the Advisory Council's October 13, 2010 Meeting on California's 2050 GHG Emission Reduction Target of 80% Below 1990 Levels – Strategies and Technologies for the Transportation Sector:

Member Bramlett suggested that members provide the Clerk with any and all miscellaneous edits to the Report.

Motion:

Dr. Holtzclaw made a motion to adopt the Report on the Advisory Council's October 13, 2010 Meeting on California's 2050 GHG Emission Reduction Target of 80% Below 1990 Levels – Strategies and Technologies for the Transportation Sector; Dr. Bedsworth seconded the motion.

Discussion:

Member Kurucz said the working group did an excellent job writing the report and confirmed with Member Bramlett the report would be addressed section by section.

Dr. Vura-Weis said the speakers made their individual recommendations and the Advisory Council also makes recommendations. She referred to page 5 under Dr. Simon Mui, "Recommendations". For consistency, she asked that this be entitled, "Key Actions for Air District and Regional Agencies." More importantly, she suggested that at the top of each page, a heading is carried which states Mr. Cohen's presentation, Mr. Tumlin's presentation and Dr. Mui's presentation, and then have a heading that states "Advisory Council Recommendations" so Board Members can identify who is suggesting the recommendation. Advisory Council Members concurred.

Dr. Bornstein suggested amending all terms entitled, "Key Actions for Air District" and "Key Actions for Regional Agencies" to "Speaker Recommended Key Actions for Air District" and "Speaker Recommended Key Actions for Regional Agencies". He asked that the bullet point be removed on page 4 next to "Key Actions for Regional Agencies".

Dr. Holtzclaw referred to page 5, noted Dr. Mui's recommendations are broadened to both the Air District and regional agencies, and he suggested for this particular heading, both agencies be reflected. Members agreed Dr. Mui's recommendations should be identified as "Speaker Recommended Key Actions for Air District and Regional Agencies".

Member Altshuler referred to the second bullet on page 5 and questioned if anyone has used the Greek model that Argon put together to compare vehicle emissions with various inputs. He recently ran that comparing electricity to gasoline to determine the relative carbon footprint. What is interesting is that if you run the national model for electricity you come up with one

footprint. If you run an EV using this model, the carbon footprint is reduced by 30%. In California, with the mix of many renewables, you get a totally different number. He said what is missing is tailoring to what is in the California environment, which is what the Board might want to know. Member Bramlett noted that the Council is limited to representing his presentation, and members discussed the many variables, the distinction that considers sources of electricity.

Mr. Altshuler said he thinks editorials and opinions are challenging EVs as solving the carbon issue, and Board Members will be reading those. While there are many variables, he thinks it is advantageous for the Council to lay out objectively as possible what the issues are, even if a range of potential reductions is presented rather than an actual number.

Dr. Vura-Weis recommended miscellaneous amendments be made to the second bullet item under Dr. Mui's presentation.

Dr. Bornstein suggested and members agreed to amend page 6 from "EMERGING ISSUES" to "EMERGING ISSUES FROM THE ADVISORY COUNCIL".

Regarding page 7 Recommendations, Vice Chairperson Hayes referred to number 1 and suggested rewording "condition" to "encourage, incentivize, support or promote". Members discussed their preferences on wording and after brief debate authors of the working group did not want the word changed.

Vice Chairperson Hayes referred to page 7, number 2, 4th line, and asked that the word "specify" be changed to "recommend", to which members agreed.

Vice Chairperson Hayes referred to page 8, and asked to change the word "Require the use of cool paving materials," to "Promote the use of cool paving materials," to which members agreed.

Member Kurucz referred to page 8, number 13, and pointed out that the second part of the first sentence and going after the necessary legislative authority is a problem, and mandating employer transportation demand management is a problem. He said the Air District previously had rules to do those; the legislative body is not silent on this and prohibits it. The problem came in as to what an employer can mandate of an employee in terms of their behavior. He said the second part of the paragraph could be replaced with working with employer coalitions to improve the infrastructure and he cited proactive efforts already in place in certain areas.

Members debated the matter, and agreed that the items would be amended, as follows:

13. Develop and promote policies and programs, including securing necessary legislative authority, to achieve significant reductions in employer-related vehicle miles traveled, including ~~mandating~~ employer transportation demand management plans, ~~such as have been adopted by Oakland (GreenTRIP) and San Francisco. Additionally,~~

Mr. Kendall noted that the second portion of number 13 is an attempt to recognize the Air District has included this work in the 2010 Clean Air Plan. Dr. Vura-Weis suggested the second part of the sentence stand on its own as recommendation number 15 and members cited the similar statement which is contained in recommendation numbers 4, 13 and 14 which should be amended to be reflected only in the last item number, as follows:

15. The Air District should continue to implement the relevant Transportation Control Measures and Leadership Platform* in the 2010 Clean Air Plan. ~~to support these policies.~~

Dr. Bornstein requested the Glossary be re-formatted, to which the Clerk agreed.

Council Action: Dr. Holtzclaw made a motion to adopt the Report on the Advisory Council's October 13, 2010 Meeting on California's 2050 GHG Emission Reduction Target of 80% Below 1990 Levels – Strategies and Technologies for the Transportation Sector, as amended; Dr. Bedsworth seconded the motion; which carried unanimously without objection.

Mr. Kendall thanked Dr. Holtzclaw and Ms. Bard for doing the majority of the work in developing recommendations and for those members who participated in the final work.

AIR DISTRICT OVERVIEW

6. **Report of the Executive Officer/APCO** – Provided earlier by Mr. Broadbent.

OTHER BUSINESS

7. **Council Member Comments/Other Business:**

Member Kurucz reported that yesterday's business section of the Mercury News, reported that the Car of the Year at the Detroit Auto Show was the Chevy Volt and the runner up was the Nissan LEAF, and the Prius is starting to branch out and offer many other options. He sees there is more attention on hybrids and electric vehicles.

Member Brazil requested an electronic copy of Mr. Kendall's PowerPoint presentation, which the Clerk agreed to email to all members.

Dr. Bornstein requested Air District staff consider determining attendance to the Air and Waste Management meeting early. The conference will be held June 20-24, 2011 in Orlando, Florida. Chairperson Blonski suggested members let him know of their interest to attend, and he will follow-up on the matter.

Dr. Bornstein questioned whether or not Advisory Council Member photographs and/or biographies could be included on the District's website. The Clerk noted there is limited amount of space within each page of the Board, Hearing Board and Advisory Council sections of the website, and she agreed to follow-up on the matter.

Dr. Bornstein said he sits on the District's Model Advisory Committee (MAC) and meets about 4 times a year. They are having a meeting in February and he is willing to provide a report of the meeting. Chairperson Blonski suggested this be included and provided at the end of the agenda under Committee Member Comments/Other Business.

Member Altshuler questioned the ability for members to conference call in to achieve a quorum. Mr. Bunger said members can participate in meetings telephonically, but the Brown Act requires the location at which the member is calling from be posted on the agenda and open to the public

to participate. He noted this has been discussed by the Board of Directors and the decision reached was that it is not allowed for meetings where decisions and action must be taken, and allowed for meetings where no action is proposed to be taken.

Chairperson Blonski, on behalf of the Council, thanked Mr. Kendall for his work in scheduling the Retreat and securing speakers for topic meetings for the year.

Dr. Bornstein reviewed his suggested topic for the third meeting: A summary of all meetings on PM and how information such as modeling, climate change, how to predict future concentrations of PM based upon what is heard, and control strategies will be used. This may involve having speakers from the Air District and regulatory aspects.

Mr. Kendall said this can be considered; however, the approach this year is somewhat different. They did not necessarily plan on having 3-4 speakers at each meeting due to the complexity of topics, the need for more time for interaction with the Council, and have the ability to have more time for question and answer which allows for more adaptability.

10. Time and Place of Next Meeting - *9:00 a.m – 12:00 noon, Wednesday, February 9, 2011, 939 Ellis Street San Francisco, California 94109.*

11. Adjournment - The meeting adjourned at 11:35 a.m.

Lisa Harper
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ken Blonski and
Members of the Advisory Council

From: Jack P. Broadbent
Executive Officer/APCO

Date: February 2, 2011

Re: Overview: Health Effects Values

RECOMMENDED ACTION:

Receive and File.

BACKGROUND

The Bay Area 2010 Clean Air Plan (CAP) included an analysis of the health benefits of reducing air pollutants by 1%. The CAP shows that the majority, about 80%, of the health benefit comes from reducing particulate matter. While there are ambient air quality and emission standards for PM₁₀ and PM_{2.5}, there are no standards for ultrafine particulate. The Council decided to focus on ultrafine particulate in 2011. About half of the Advisory Council members were first appointed to the Council in 2009 or later. Staff believes that it would be very useful for the Council to have background information on health effects values and how they are used in Air District actions and activities as a reference for the meetings on ultrafine particulate and for recommendations to the Board and staff related to ultrafine particulate.

DISCUSSION

One speaker from the Office of Environmental Health Hazard Assessment and Air District staff will present an overview of health effects values and their use in Air District actions and activities:

- Health Effects Values: Ambient Air Quality Standards, Cancer Potency Values and Reference Exposure Levels
- Air Quality Impact Analysis and Health Risk Assessment
- Multi-Pollutant Evaluation Method for Health Benefits of Control Measures

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Gary Kendall
Reviewed by: Jean Roggenkamp
Brian Bunger