



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## ADVISORY COUNCIL MEETING

WEDNESDAY  
SEPTEMBER 12, 2012  
9:00 A.M.

7<sup>TH</sup> FLOOR BOARD ROOM  
939 ELLIS STREET  
SAN FRANCISCO, CA 94109

### AGENDA

#### CALL TO ORDER

Opening Comments  
Roll Call

Stan Hayes, 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 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 July 11, 2012 Advisory Council meeting.

#### RECOGNITION

2. Recognition of Outgoing Advisory Council Member

Stan Hayes, Chairperson

*The Council will recognize outgoing Advisory Council Member Louise Bedsworth.*

#### PRESENTATION: ULTRAFINE PARTICLES

3. Ultrafine Particles: Exposure Reduction

*Speakers from the University of California, Los Angeles and the San Francisco Department of Public Health will present materials on reducing exposures to ultrafine particles.*

**A. Exposure to Ultrafine Particles On and Near Roadways**

Yifang Zhu, Ph.D.  
Assistant Professor  
Environmental Health Sciences Department  
UCLA School of Public Health

**B. Policy Strategies to Reduce Health Effects from Particulates**

Rajiv Bhatia, MD, MPH  
Director of Occupational and Environmental Health  
San Francisco Department of Public Health  
Assistant Clinical Professor  
University of California, San Francisco

**PANEL DISCUSSION**

4. Ultrafine Particles: Exposure Reduction

*The speakers will convene as a panel for a discussion with the Advisory Council and Air District staff on ultrafine particles, exposure reduction, and the implications for the Air District's regulatory agenda, legislative agenda, and programs.*

**OTHER BUSINESS**

5. 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.*

6. Time and Place of Next Meeting

*Wednesday, October 10, 2012, at 9:00 a.m. at 939 Ellis Street, San Francisco, CA 94109.*

7. Adjournment

**CONTACT EXECUTIVE OFFICE - 939 ELLIS STREET SF, CA 94109**

**(415) 749-5130**  
**FAX: (415) 928-8560**  
**BAAQMD homepage:**  
**[www.baaqmd.gov](http://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](http://www.baaqmd.gov)) at that time.

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**  
**939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109**  
**(415) 749-4963**

**EXECUTIVE OFFICE:**  
**MONTHLY CALENDAR OF DISTRICT MEETINGS**

**SEPTEMBER 2012**

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i> - CANCELLED	Wednesday	5	9:45 a.m.	Board Room
<b>Special Meeting of the Board of Directors</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Monday	10	9:45 a.m.	Board Room
<b>Advisory Council Regular Meeting</b> <i>(Meets 2<sup>nd</sup> Wednesday of each Month)</i>	Wednesday	12	9:00 a.m.	Board Room
<b>Board of Directors Executive Committee</b> <i>(Meets 3<sup>rd</sup> Monday of each Month)</i> - CANCELLED	Monday	17	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Stationary Source Committee</b> <i>(Meets the 3<sup>rd</sup> Monday of Every Other Month)</i>	Monday	17	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	19	9:45 a.m.	Board Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets the 4<sup>th</sup> Wednesday of each Month)</i> - CANCELLED	Wednesday	26	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Mobile Source Committee</b> <i>(Meets 4<sup>th</sup> Thursday of each Month)</i>	Thursday	27	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room

**OCTOBER 2012**

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	3	9:45 a.m.	Board Room
<b>Advisory Council Regular Meeting</b> <i>(Meets 2<sup>nd</sup> Wednesday of each Month)</i>	Wednesday	10	9:00 a.m.	Board Room
<b>Board of Directors Executive Committee</b> <i>(Meets 3<sup>rd</sup> Monday of each Month)</i>	Monday	15	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	17	9:45 a.m.	Board Room

## OCTOBER 2012

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
<b>Board of Directors Public Outreach Committee</b> <i>(At the Call of the Chair)</i>	Thursday	18	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets the 4th Wednesday of each Month)</i>	Wednesday	24	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Mobile Source Committee</b> <i>(Meets 4<sup>th</sup> Thursday of each Month)</i>	Thursday	25	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room

## NOVEMBER 2012

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	7	9:45 a.m.	Board Room
<b>Advisory Council Regular Meeting</b> <i>(Meets 2<sup>nd</sup> Wednesday of each Month)</i>	Wednesday	14	9:00 a.m.	Board Room
<b>Board of Directors Executive Committee</b> <i>(Meets 3<sup>rd</sup> Monday of each Month)</i>	Monday	19	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Stationary Source Committee</b> <i>(Meets the 3<sup>rd</sup> Monday of Every Other Month)</i>	Monday	19	10:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Regular Meeting</b> <i>(Meets 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	21	9:45 a.m.	Board Room
<b>Board of Directors Mobile Source Committee</b> <i>(Meets 4<sup>th</sup> Thursday of each Month)</i> - CANCELLED	Thursday	22	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets the 4th Wednesday of each Month)</i>	Wednesday	28	9:30 a.m.	4 <sup>th</sup> Floor Conf. Room

HL – 8/23/12 (11:35 a.m.)

P/Library/Forms/Calendar/Calendar/Moncal

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairperson Hayes and Members  
of the Advisory Council

From: Jack P. Broadbent  
Executive Officer/APCO

Date: August 20, 2012

Re: Draft Minutes of July 11, 2012 Advisory Council Meeting

RECOMMENDED ACTION:

Approve attached draft minutes of July 11, 2012 Advisory Council meeting.

DISCUSSION

Attached for your review and approval are the draft minutes of the July 11, 2012, Advisory Council meeting.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Sean Gallagher  
Reviewed by: Ana Sandoval

Attachment

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

**DRAFT MINUTES**

Advisory Council Regular Meeting  
9:00 a.m., Wednesday, July 11, 2012

**CALL TO ORDER – ROLL CALL**

Chairperson Stan Hayes called the meeting to order at 9:05 a.m.

Present: Chairperson Stan Hayes; Vice-Chairperson Robert Bornstein, Ph.D.; Secretary Sam Altshuler, P.E.; and Council Members Louise Bedsworth, Ph.D., Benjamin Bolles, Harold Brazil, Jonathan Cherry, John Holtzclaw, Ph.D., Gary Lucks, J.D., Liza Lutzker, Kathryn Lyddan, Jessica Range and Dorothy Vura-Weis, M.D., M.P.H.

Absent: Council Members Jennifer Bard, Jeffrey Bramlett, Kraig Kurucz, Jane Martin, Dr. P.H., Estes Al Phillips and Murray Wood.

Also Present: None.

**OPENING COMMENTS**

Chairperson Hayes thanked the Council Members for attending despite the challenges of the season and the day and asked that they be mindful to utilize the microphones provided.

**PUBLIC COMMENT PERIOD**

None.

**CONSENT CALENDAR**

**1. Approval of Minutes of the June 13, 2012, Advisory Council Regular Meeting**

Member Altshuler requested an amendment to those portions of the minutes that refer to “Guidelines” such that “CEQA” be inserted in advance of each instance, starting at page 8.

Council Action:

Member Altshuler made a motion to approve the minutes of June 13, 2012, as amended. Member Bornstein seconded the motion. The motion was unanimously approved without objection.

**DISCUSSION**

**2. Discussion of revised draft report on the Advisory Council's May 9, 2012, meeting on Ultrafine Particles: Exposure Assessment**

Chairperson Hayes made introductory comments and thanked the members of the report-drafting committee for their efforts. Member Cherry made introductory comments regarding revisions since the last meeting and invited input from Members on sections within the report. Members provided the following comments:

Regarding report section entitled, "Summary"

None.

Regarding report section entitled, "Key Points"

Member Lutzker suggested, regarding the "Note," the insertion of "convenience" before "samples" as it effects the representativeness of the information. Member Bornstein suggested there was also a small number of studies and a small number of people. Member Altshuler suggested "limited" and Chairperson Hayes suggested "a limited number." Member Lutzker clarified that her focus was on the addition of "convenience" as the sampling was not done in a methodologically sound manner and the conclusions that may be drawn are somewhat limited as a result. Chairperson Hayes suggested insertion of "limited number of" before "studies," repeated Member Lutzker's revision and suggested replacing "represent" with "consist of."

Member Altshuler noted the text is rendered in bold at various points throughout the document and asked if it is intentional and about its meaning. Member Cherry responded that it is intentional and provided to assist readers in finding the main points but can be removed if that is the Council's preference. The Council discussed the utility of the formatting and the consensus opted for it to remain.

Chairperson Hayes said this report is the first to include editorial comments about presentations and asked if it is a precedent the Council wants to establish. Member Bornstein agreed and suggested a Key Point or Emerging Issue be added that explains there are relatively few studies in this area. Member Range partially agreed with Chairperson Hayes but noted that Dr. Nazaroff made the same point in his presentation. Member Bornstein suggested attributing the Note to Dr. Nazaroff. Member Lutzker said that it should not be limited to Dr. Nazaroff as it applies to both presentations but adding it to Emerging Issues is acceptable. Member Bornstein said this is a recurring issue for the Council that may deserve greater attention for future reports. Chairperson Hayes said the Note paragraph should be inserted as the first item under Emerging Issues and "Note" should be deleted.

Regarding report section entitled, “Key Points – Dr. Lynn M. Hildemann”

Member Altshuler suggested these presentations represent the first time the Council received information it felt did not make sense, it is not acceptable for the Council to rubber stamp all that it receives, and the editorial comment is a way of addressing this issue by adding value. Member Bolles agreed. Member Bornstein said the Council is free to exclude items that do not make sense and suggested it is the duty of the Council to remove anything of that nature from Key Points.

Member Altshuler said he is troubled by the information about smoking outside next to a roadway, the data was totally useless yet included in the report, and now the Council is working on the proper method to discredit the statement. The Council decided the item for discussion is bullet 5, sub-bullet 2. Member Lutzker asked which specific part seems inaccurate. Member Altshuler said it dilutes prior reports from the Council regarding roadside exposure by saying that smoking is worse. Member Lutzker responded the message is not diluted but modified such that the smoking message is elevated. Member Altshuler said the study suggested the ultra-fine particulates (UFP) from motor vehicles is not significant, running counter to all that has been heard by the Council in prior presentations. Member Range said the bullet point was already revised in an effort to address that very aspect, suggested it is much improved and noted the bullet point is the reason for the Note in the first place. Member Bornstein suggested deleting the last sentence and making slight modifications to the language preceding it. Chairperson Hayes clarified that the presentation concluded that traffic from a heavily travelled roadway is as bad as cigarette smoke. Member Bornstein said the objection is UFP from traffic is downplayed as being similar to cigarette smoke. Member Range said two studies were presented, the first showing that smoking is greater than roadway, the second showing the two as roughly equal, and both were followed by Dr. Hildemann’s hypothesis that the second study involved traffic with a much greater percentage of heavy duty trucks. Chairperson Hayes said this represents a significant take-home message and the Council should clarify the meaning. Member Range said it is inconclusive because two different studies show two different results. Member Bornstein suggested inserting “that could be” before “of similar magnitude.” Member Lutzker said the low-traffic was less and the high-traffic was more than smoke, suggested no revision is necessary but for the addition of the sentence, “This underscores the importance of UFP exposure both from secondhand smoke as well as heavily travelled roads” or in reverse order, as the Council prefers. Member Bornstein said that Member Altshuler did not trust the conclusion drawn but that does not seem to be the sentiment of all the Council Members. Member Altshuler agreed with Member Lutzker’s suggested revision and suggested inserting “potential” before “importance” in the newly added sentence.

Chairperson Hayes asked if this is the final decision of the Council as it seemed Dr. Hildemann was speculating about this conclusion. Member Bolles agreed with Member Altshuler. Member Lucks said he is in favor of Member Lutzker’s suggested sentence as the health consequences of each pollutant are not mutually exclusive. Member Bornstein agreed also, suggested removing “In the two studies presented” and inserting “two” before “outdoor studies” and merging the second and third sentences by replacing the “.” after “smoke” with “, while” and inserting “, while along roadways with fewer heavy duty trucks UFP generated from cigarette smoke” before “was much greater.” Member Lutzker restated the final sentence for insertion as, “This illustrates the potential importance of UFP exposure from both secondhand smoke as well as heavily travelled roads.”

Member Holtzclaw suggested the readership would benefit from receiving the information provided by the speakers about the dynamic nature of UFP and requested a statement be inserted to that end as sub-bullet three under bullet five. Member Bornstein suggested revising the first bullet to expand the scope beyond air circulation patterns alone, to also include dilution levels and perhaps coagulation. Member Holtzclaw suggested including a comparison to fog and rain droplets. Member Bornstein said coagulation is the missing process and asked where it belongs. Member Range said it is in the second bullet on page two. Member Holtzclaw again recommended the inclusion of a fog-rain example. Member Bornstein suggested adding “like with fog droplets” to bullet two. Chairperson Hayes said the bullet seems sound without revision. Member Bornstein said perhaps it is too technical and would benefit from an analogy. The Council discussed the proper language and analogy. Member Vura-Weis recommended “combine” instead of “coagulate” in light of the intended readership, urged the Council to remember that the individual reports will likely be used to generate the final, combined report and thusly, repeated foundational statements are probably unnecessary in each of the separate reports, and agreed with Member Holtzclaw’s suggested addition.

Member Altshuler said that the science of UFP dates as far back as the 1960s, that he has issue with nearly everything attributed to Dr. Hildemann, the Council knew going into the review process that this topic would not be an easy one, various aspects of Dr. Hildemann’s research methods are questionable, the really valuable information is contained in the first four bullets, and the research of cigarette smoke and motor vehicle emissions was too casual in nature to attribute value to. Member Bolles stated that he is not a scientist and agrees. Member Altshuler clarified that he is not downplaying the health consequences of either source and is not advocating on behalf of either group but the data is not quantified. Member Bornstein said it is worth keeping in as currently stated as undue weight was not attached nor were numbers provided. Member Bedsworth suggested the addition of a sentence regarding the findings being limited and more studies can come later. Member Bornstein said that is something for Recommendations. The Council discussed possible ways to revise the bullet. Chairperson Hayes suggested taking it out entirely or leaving it as previously amended today.

Member Vura-Weis noted the Council is not focusing on the additive nature of the two sources and the fact that those exposed to both are getting a double dose, lending to the importance of making mention of both. Member Bornstein suggested including something on the additive nature. Member Lutzker said the sources are at least additive, it may actually be more. Member Altshuler suggested that aspect to be an Emerging Issue. Member Vura-Weis said these are exposure studies, not health effect studies, and questioned what the literature says about the effects of each alone or in combination.

Chairperson Hayes suggested explicitly attributing the two studies to Dr. Hildemann and agreed with Member Altshuler’s assessment that the studies were somewhat anecdotal. The Council discussed the same. Member Bornstein suggested characterizing the studies as “exploratory” and Chairperson Hayes agreed with inserting “exploratory” in the revised language.

Eric Stevenson, Director of Technical Services, reminded the Council of the outstanding “coagulation.” Member Bornstein urged the use of “coagulated (i.e. combined to form larger PM).”

Member Range said that all of the studies were of the same caliber and that was the Council's reasoning for the placing the Note at the beginning of Key Points. Member Bornstein said that Dr. Nazaroff's studies were more quantitative so perhaps varied notes before each speaker's name are appropriate. Member Range reminded the Council that Dr. Nazaroff stated that conclusions should not be drawn from the presentations and the Note should stay at the front of Key Points. Member Bornstein suggested that two Notes be drafted and it be made clear that the Council is not saying there are others that are better but that there are none and the presentations are the best available on these emerging issues. Member Lucks agreed and suggested the statement should be a blanket qualifier at the beginning of the report. Member Bornstein agreed. Chairperson Hayes reiterated his discomfort about editorializing information received by the Council as an opening to the report and the precedent established. Member Lucks suggested noting it is the Council's understanding. Member Range suggested the substance of the Note is itself a Key Point brought up by each speaker. Member Vura-Weis said that if they both said it then an attribution is appropriate and it relieves the Council from the appearance of criticizing the exploratory work done. Member Bedsworth said it is important that the Council does not appear critical of one of the two highly-respected speakers and a general statement is appropriate. Chairperson Hayes asked if any Council members recall Dr. Hildemann making the same comment. Member Lyddan noted her lack of understanding at the time of the presentations that the speakers were pioneers in a cutting edge field and context in this regard is important to provide for readers. Member Altshuler made a motion for deletion of bullet 5, sub-bullet 2, as it was neither the subject of the presentation nor the intended topic in the Council's invitation. Member Bornstein asked if the study had been published. Chairperson Hayes noted the lack of a second to the motion and asked how the Council would care to proceed with the proposed revisions. Member Bornstein recommended a blanket statement at the beginning of the report. Chairperson Hayes suggested use of the phrase, "we understand that." Member Bedsworth suggested, "The Council's understanding, based on the speakers' presentations, is that these results represent the early stages of research in this area." The Council discussed the best wording. Member Bornstein suggested sending the final version to the speakers for approval. Chairperson Hayes said the Note will come back out of Emerging Issues into Key Points and be revised. The Council asked Mr. Stevenson to read back the most recent iteration of the Note. Mr. Stevenson said, "Both speakers emphasized that the limited number of UFP studies generally represent small convenience samples." Member Bornstein said that "necessarily" needs to be included. Mr. Stevenson said, "Both speakers emphasized that the limited number of UFP studies discussed necessarily represent small convenience samples." Member Vura-Weis suggested insertion of "exposure" before "studies." Chairperson Hayes agreed. Member Vura-Weis suggested the insertion of "Until confirmatory studies are available," before "Broad extrapolation is not warranted." Chairperson Hayes disagreed. The Council discussed the proper wording. Member Vura-Weis questioned the need for the last sentence. Chairperson Hayes suggested inserting "For example" at the beginning of the sentence. Member Bornstein questioned the continued use of the sentence. Chairperson Hayes said to insert "For example" at the beginning of the sentence and to delete everything after "occupants."

Regarding report section entitled, "Key Points – Dr. William W. Nazaroff"

Member Lutzker suggested, regarding bullet 1, the insertion of "single family" before "homes" and, regarding bullet 3, sub-bullet 1, replacing "incense" with "terpene-based cleaning products."

Member Bornstein suggested, regarding bullet 3, sub-bullet 2, replacing “The vast majority of these” with “Most.” Chairperson Hayes said to delete “vast” instead.

Member Lutzker suggested, regarding bullet 4, sub-bullet 4, the insertion of “and staff” after “children” because approximately 10% of all cases of work-related asthma result from cleaning product use. Member Bolles noted that information relative to work-related incidences of the onset of asthma was lacking from the presentation and part of the reason the studies seemed so casual. Member Lutzker clarified the statistics are not specific to UFP exposure and noted that of those 10%, 80% are bystanders rather than users. Member Altshuler asked how to include this information in the report. Member Lutzker said that she has some suggestions for Recommendations. Member Vura-Weis said the addition represents a logical step and not that which was presented and should be excluded. Chairperson Hayes said to insert “and staff.”

Member Bornstein suggested, regarding bullet 4, that the exceptions listed do not flow naturally. Member Cherry suggested replacing the parenthetical portion with “except for custodial activities.” Member Altshuler noted the portion of the presentations regarding cafeteria activity that may include the pancake cooking portion. The Council discussed a possible revision. Chairperson Hayes said to replace the parenthetical portion with “except for cooking and custodial activities.”

Regarding report section entitled, “Emerging Issues”

Member Range said, regarding number 1, that her notes say “85%” instead of “89%” and inquired whether any other Members had notes on this point. Member Lutzker and Chairperson Hayes each responded that they have heard from other sources that it is approximately 90%. Member Cherry noted that the minutes read “89%.” Members Bornstein and Altshuler discussed alternative language. Member Bornstein suggested replacing the “.” after “outdoors” with “;”, replacing “According to Dr. Hildemann” with “as” and inserting “at least” before “89%.” Member Vura-Weis expressed her discomfort with “at least.” Member Lutzker suggested “approximately” instead. Chairperson Hayes read the proposed revision. Members Bornstein and Vura-Weis suggested “about” instead of “approximately.” Member Cherry and Chairperson Hayes opted for “approximately 90%.”

Member Lutzker asked, regarding number 4, if the insoluble particles are UFP or if all UFP are soluble and suggested that if the insoluble particles are UFP that “UFPs” replace “particles.”

Chairperson Hayes suggested, regarding number 4, insertion of “, for example,” after “suggested.”

Member Lyddan asked about the structure of the report being prepared and discussed the same with Chairperson Hayes.

Member Bornstein suggested, regarding number 4, deleting “created.” Chairperson Hayes alternatively suggested replacing “created equal” with “the same.”

Regarding report section entitled, “Recommendations”

Member Lutzker said, regarding number 2.a, that landscaping practice is a method of reducing occupant exposure to UFP that was not brought up in these presentations but should be included by inserting “landscaping,” after “siting.” Member Range suggested moving “custodial practices” to a separate bullet, as it does not appropriately belong under ventilation and filtration methods, and include “landscaping” there. Member Cherry recalled the landscape presentation and suggested it goes more to design. The Council discussed the appropriate language and placement. Chairperson Hayes suggested that a new bullet point is unnecessary. Member Bornstein asked why “high MERV value” and “HEPA filtration” are conjoined by “and.” The Council discussed the wording used in the Glossary. Member Cherry suggested inserting “through effective fine filtration such as” before the phrase in question. Mr. Stevenson explained the difference in the systems. Member Bornstein and Chairperson Hayes suggested replacing the phrase in question with “high-efficiency filtration.” Member Vura-Weis suggested instead defining the two terms in the Glossary rather than merely spelling out the acronym. Chairperson Hayes said to delete “high MERV value or HEPA filtration” and insert “high-efficiency filtration” and strike the definitions for MERV and HEPA from the Glossary, provided each is not used elsewhere in the report.

Member Altshuler suggested, regarding number 3.a and b, removing the semicolons and breaking up the paragraphs into sub-bullets. Member Bornstein said the substance of the paragraphs do not immediately lend themselves to bullet points. Members Bedsworth, Bornstein and Lutzker discussed possible formatting. Chairperson Hayes urged for the formatting to remain without sub-bullets. Member Vura-Weis agreed with Member Altshuler. Member Bornstein was tasked with reformatting the paragraphs during final review.

Member Altshuler recalled the discussion from the last Council meeting regarding shelter-in-place, suggested the Air District review its shelter-in-place guidelines, and proposed the addition of a new number 4, “The Air District shall evaluate its shelter-in-place guidelines used during emergency situations and consider amending the same to direct the public to close windows, turn off fans, avoid smoking, cooking, use of candles and cleaning supplies during a shelter-in-place event.” Chairperson Hayes asked if this suggestion is relative to the Air District’s emergency response. Member Altshuler said there is a connection as a shelter-in-place notice directs people to stay indoors and without additional guidelines there may be unintentional exposures to UFP that could be avoided.

Member Bolles asked if the limonenes and terpenes are causing the 10% of all cases of work-related asthma said to result from cleaning product use.

Chairperson Hayes said, regarding Member Altshuler’s suggestion, that the recommendation makes sense but the focus in that situation is minimizing infiltration of hazardous materials from outdoor sources rather than UFP. Member Altshuler said this is a two-part issue, first whether the guidelines provide information on minimizing indoor infiltration of hazardous materials from outdoors, and second, what, if any, direction is provided relative to indoor generation of UFP when ventilation is not viable. Chairperson Hayes said he is uneasy about making a recommendation in light of the limited amount of information the Council has relative to the effects of short-term exposure to UFP. Member Altshuler suggested that at least the first part relative to minimizing infiltration is important. Chairperson Hayes said that the guidelines likely

already provide that basic information. Mr. Stevenson offered to research the wording of the current guidelines.

Member Bolles restated his inquiry regarding limonenes and terpenes. Member Lutzker said the two substances are not themselves responsible for causing all of the work-related asthma attributed to cleaning product use, there are many respiratory irritants in cleaning products, various efforts are underway to limit or eliminate the problem ingredients, and urged explicitly acknowledging that terpenes are respiratory irritants and Recommendation number 3.a be revised to encourage the education of employers, purchasers and suppliers of cleaning products instead of those with the occupational exposures. Member Altshuler asked what the material safety data sheets (MSDS) say for these products. Member Lutzker responded that the MSDS should say that they are respiratory irritants. Member Altshuler asked if that registers with users. Member Lutzker asked how many people read them generally and suggested it is very few people. Chairperson Hayes called for suggested language. Member Lutzker suggested inserting “and are also themselves respiratory irritants” after “formaldehyde.” Chairperson Hayes agreed. Member Lutzker further suggested inserting “Educate and work with employers and manufacturers and suppliers of cleaning products to switch to non-scented and safer alternatives” under the new education bullet to be formed from number 3.a. Member Bornstein asked if this is a proper Recommendation to be made to the District. Member Lutzker said if you are educating employees then why not educate employers as well. Chairperson Hayes said the point of this Recommendation set is to integrate information on UFP into things the Air District is already doing. Member Lutzker agreed and noted there is a sense among many that clean has a certain smell when, in fact, clean has no scent and the associated smell is generally that of a cleaning product. Chairperson Hayes and Member Lutzker discussed the need to retain the phrase regarding education of employees. Member Lutzker said that if a recommendation to employees is retained it should be geared towards recommended use of the products and the importance of visiting a doctor should symptoms arise, continued to urge a Recommendation to employers, and conceded that this may not be the proper place to make a recommendation to manufacturers and suppliers. Member Holtzclaw suggested including a recommendation to the public in light of Member Lutzker’s comment about smells and expectations relative to the same. Member Lutzker agreed and suggested two education bullets, one for employers that reads “Educate employers about switching to non-scented and safer cleaning products” and another for employees and the public under the bullet including “If using such products...” that reads “Educate the public and those with occupational exposures to these cleaning products concerning their proper use.” Members Lutzker and Bornstein discussed possible additional points that could be added as sub-bullets to provide increased clarity. Chairperson Hayes noted the interesting nature of the sub-bullets regarding proper use but questioned the need for their inclusion. Member Lutzker said that if proper use is going to be recommended it seems natural to provide some information in that regard. Member Bornstein suggested allowing the Air District to generate the details. Chairperson Hayes said to delete the end of number 3.a, starting with “Use the right amount...” Members Lutzker and Bornstein discussed the revised formatting and need to retain the portion about ozone.

Member Holtzclaw asked if the agents do anything in the cleaning products beyond scenting. Member Lutzker said they do contribute to the cleaning function for cleaning products but not for air fresheners.

Chairperson Hayes said to leave the sentence intact which begins “Avoid using these products...”

Member Altshuler said the report has veered away from focusing solely on the UFP issue and is instead looking at indoor air quality more generally. Member Lutzker agreed but suggested the recommendation will apply to both UFP and indoor air quality generally. Member Altshuler agreed but noted the infiltration of a much larger topic that begs the question of where the report is headed. Members Bornstein, Lutzker and Cherry discussed the appropriateness and wording of the suggestion.

Chairperson Hayes said, regarding number 3.c, the language is not relative to a UFP issue nor is it crafted as a recommendation and asked if it belongs in Recommendations. Member Lyddan said that if made it should be revised to read as a Recommendation because it currently reads more like a directive than a Recommendation. Chairperson Hayes said he agrees with the statement but suggested it is redundant in light of how universally held the message already is. The Council agreed to remove the statement.

Chairperson Hayes noted that the Council would be wise to remember the need to tie back the Recommendations in this report to existing fine particulate matter (PM<sub>2.5</sub>) programs at the District, as that connection is a primary goal of the Council process.

Jean Roggenkamp, Deputy Air Pollution Control Officer, suggested the connection be made to the District’s particulate matter (PM) programs because of their greater scope.

Chairperson Hayes recommended the insertion of, “The Air District should continue to integrate UFP indoor and outdoor exposures and effects into the Air District’s PM program.” Various Council members suggested it be a new number 4.

Member Lutzker suggested, regarding 3.b, replacing “children” with “those”, deleting “adults”, and asked if the self-cleaning oven feature should be included. Member Range suggested replacing “or” between “stoves” and “ovens” with “,” and adding “, and use of the self-cleaning feature in ovens” at the end of the sentence. Member Bornstein suggested that pilot lights in stoves and ovens is problematic. The Council discussed revised wording. Member Bornstein suggested revising the sentence to read, “from stoves or ovens with pilot lights and from self-cleaning features.”

Regarding report section entitled, “For Discussion at July 11<sup>th</sup> Meeting”

Chairperson Hayes made introductory comments.

Member Bornstein asked if this is a topic that should be considered and discussed. Ms. Roggenkamp responded that the Council may issue a Recommendation on this topic but Air District staff will have to consider the timing of its implementation. Ms. Roggenkamp explained a delay is likely because the Council is significantly in front of general efforts in this subject matter area and the receptivity of others is unclear. Member Lucks asked if someone will be doing a primer on the California Environmental Quality Act (CEQA) for the Council’s benefit. Ms. Roggenkamp said not today.

Member Lucks said the Air District has different tools at its disposal, including public education, regulation, allocation of grant money and planning/CEQA Guidelines, and although there is little or no foundation justifying the use of the other tools at this time, the Air District can inform other agencies that have no guidance on the connection between indoor and outdoor air quality by exploring an amendment to the CEQA Guidelines. Member Lucks suggested the Council may be best served by recommending “the Air District consider amendment to the CEQA Guidelines.” Member Lucks relayed, as an example, that his child’s school was recently rebuilt in a troubled zone and had the CEQA Guidelines provided the suggested information, then perhaps it would have affected the school’s placement and design.

Chairperson Hayes agreed with Ms. Roggenkamp’s assessment that the Council is out in front of the issue by a fair margin, noted both the difficulty in making a connection between health impact and exposure and that the same issue arose in the context of climate change, and suggested the topic be revisited in the future due to the lack of models to look to in crafting a Recommendation. Member Lucks said that many environmental analyses are in the gray areas, which experts will debate the details of, and suggested that the Air District does a disservice to the public by not passing along the information it has available for consideration even if it is not as conclusive as some would want. Member Range noted the presentations were regarding indoor air quality from indoor sources so the contemplated Recommendation does not seem to follow from the presentations, lead agencies are now looking at health effects from exposure to PM<sub>2.5</sub> and diesel PM where there is evidence linking health effects to roadways and other major sources, and her general agreement with Member Lucks but for the timing. Member Bedsworth said there is some regulatory precedent, and provided San Joaquin’s requirement that schools not be cited near dairies, and that there are opportunities to insert this topic in the dialogue at the state level.

Mr. Stevenson said that regardless of whether a Recommendation on this topic is included in this report, the next speakers will be presenting on the topic of mitigation measures and may provide another opportunity to address this topic. Member Lucks asked what mitigation specifically. Mr. Stevenson responded that it will be more inclusive than UFP. Member Bolles said there is also the end of year wrap up. Chairperson Hayes said the Council will hear from the City and County of San Francisco on their mitigation strategies. Member Bolles noted the citing of a bike lane on the 101 Freeway in San Rafael. Member Lucks said he is open to timing the Recommendation differently but insisted it is an important item to address at some point, that the issue is greater than UFP, and that he does not want it to be lost.

Member Vura-Weis agreed that a review of CEQA is important as is greater inclusiveness. Member Altshuler said the Council has moved beyond the two presentations, suggested a motion to approve the report is in order pending a grammar review by Member Bornstein, and said the CEQA discussion is a separate one that has his support whether the recommendation comes in the form of a model ordinance, guidelines or otherwise.

Council Comments: None.

Public Comments: None.

Council Action:

Member Altshuler made a motion to approve the revised draft report, as amended and eventually finalized by Member Bornstein. Member Vura-Weis seconded the motion. Member Range noted that the use of model ordinances and regulations, instead of CEQA Guidelines, would be consistent with the approach of the City and County of San Francisco. The motion was unanimously approved without objection.

Chairperson Hayes thanked the report drafting committee and suggested revisiting the topic of recommending a CEQA Guidelines amendment during discussions on the upcoming presentations.

Member Lucks requested that staff provide the Council with more information on the tools at the disposal of the Air District and the Council, whether regarding CEQA or otherwise.

**3. Report on the Annual Air & Waste Management Association (AWMA) Meeting, June 19, 2012 – June 22, 2012**

Members Altshuler, Holtzclaw, Brazil and Bornstein and Chairperson Hayes reported on their experiences attending the AWMA annual conference.

**OTHER BUSINESS**

**4. Council Member Comments/Other Business**

Member Bornstein asked for staff feedback and updates. Ms. Roggenkamp noted her late arrival to the meeting being the result of her attending a joint meeting of various regional agencies at the new Metropolitan Transportation Commission building that has a project move-in date of early 2014. Member Altshuler asked what will happen to the name of the Air District office building. Ms. Roggenkamp said the building will be sold. Member Altshuler asked if the name will be transferred. Ms. Roggenkamp said it will not because of the joint tenancy of the building but the fate of the building name is a topic for consideration.

Chairperson Hayes, on behalf of the Council, recognized outgoing Member Bedsworth. Member Bedsworth addressed the Council. Ms. Roggenkamp, on behalf of staff, thanked Member Bedsworth for her years of service.

**5. Time and Place of Next Meeting:** Wednesday, September 12, 2012, Bay Area Air Quality Management District Office, 939 Ellis Street, San Francisco, CA 94109 at 9:00 a.m.

**6. Adjournment:** The meeting adjourned at 11:55 a.m.

Sean Gallagher  
Clerk of the Boards

Bay Area Air Quality Management District

# Advisory Council Meeting



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## Ultrafine Particulate Matter: Exposure Assessment

**Date:** Wednesday, September 12, 2012

**Place:** BAAQMD  
939 Ellis Street  
San Francisco, CA 94109

**Time:** 9:00am – 12:00pm

### Presentations include:

#### **Policy Strategies to Reduce Health Effects from Particulates**

Rajiv Bhatia, MD, MPH  
Director of Occupational and Environmental Health  
San Francisco Department of Public Health

#### **Exposure to Ultrafine Particle On and Near Roadways**

Yifang Zhu, Ph.D.  
Assistant Professor  
Environmental Health Sciences Department  
UCLA School of Public Health

For directions, transit, and parking information visit [www.baaqmd.gov/dst/directions/index.htm](http://www.baaqmd.gov/dst/directions/index.htm)

For more information, please contact Eric Stevenson, Director of Technical Services at (415) 749-4695 [estevenson@baaqmd.gov](mailto:estevenson@baaqmd.gov).