

Bay Area Air Quality Management District  
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## APPROVED MINUTES

Advisory Council Regular Meeting  
Monday, October 30, 2017

*Note: An audio recording of the meeting is available on the website of the  
Bay Area Air Quality Management District at  
<http://www.baaqmd.gov/about-the-air-district/advisory-council/agendasreports>*

### 1. CALL TO ORDER

Advisory Council (Council) Chair, Stan Hayes, called the meeting to order at 10:02 a.m.

#### Roll Call:

Present: Council Chair Stan Hayes and Vice Chair Dr. Michael Kleinman; and Members Professor Severin Borenstein, Tam Doduc, Dr. Tim Lipman, and Dr. Jane Long.

Absent: Member Dr. Robert Harley.

Also Present: Cupertino Councilman Rod Sinks, Board of Directors (Board) Liaison.

**Opening Remarks:** Chair Hayes thanked Director Sinks for representing the Air District's Board of Directors. Director Sinks explained that the District's rulemaking landscape has changed considerably since the Council's last meeting, due to the passing of Assembly Bill 398, which, among other things, prevents air districts from adopting or implementing emission reduction rules for carbon dioxide from stationary sources that are also subject to the Cap and Trade Program. Chair Hayes listed the items on the agenda.

### 2. APPROVAL OF THE MINUTES OF FEBRUARY 6, 2017 AND APRIL 3, 2017 MEETINGS

#### Council Comments:

Chair Hayes noted that the minutes of February 6, 2017 were carried over from the April 3, 2017 meeting for further modifications, and have since been finalized. Regarding the minutes of April 3, 2017, Chair Hayes requested that the Clerk make the following changes to Item 5 (*Presentation on Rules 11-18, 12-16, and 13-1*):

- Council Comments regarding Draft Rule 13-1 (page 3): "...the need for a consumption-side ~~intervention~~ inventory, versus a production-side ~~intervention~~ inventory..."
- Council's Consensus on Draft Rule 12-16 (page 3): "The Council opposes this Draft Rule because it feels that the cap is unlikely to be effective in addressing climate change or improvements the air in refinery communities, and will ~~cause~~ be subject to leakage."

Council Action:

Member Kleinman made a motion, seconded by Member Lipman, to approve the Advisory Council minutes of February 6, 2017 as amended; and the motion carried by the following vote of the Council:

AYES: Borenstein, Doduc, Hayes, Kleinman, and Lipman.  
NOES: None.  
ABSTAIN: None.  
ABSENT: Harley and Long.

Member Kleinman made a motion, seconded by Member Doduc, to approve the Advisory Council minutes of April 3, 2017 as amended; and the motion carried by the following vote of the Council:

AYES: Borenstein, Doduc, Hayes, Kleinman, and Lipman.  
NOES: None.  
ABSTAIN: None.  
ABSENT: Harley and Long.

**3. PUBLIC COMMENT ON NON-AGENDA MATTERS**

Public comments were made by Kim Ronan, Valero; and Bob Brown, Western States Petroleum Association.

Council Comments:

Professor Borenstein expressed his concern about the relationship between Staff, the Board, and the Council regarding the proceedings of Rule 12-16. He specifically cited the Council's lack of awareness of the correspondence between the Board and Staff and concern that the Council's reports could be ignored. Jack Broadbent, Executive Officer/Air Pollution Control Officer, explained that the Council's deliberations on the efficacy of caps on greenhouse gas (GHG) emissions at refineries were communicated to the Board, and how the proposed Rule 12-16 began to change over time, due to the California Air Resources Board's change of opinion. Director Sinks apologized to the Council on behalf of the Board, acknowledging the Council's dedication and time, and said that he would strive to increase communication between the Board and the Council. Chair Hayes requested that staff bring back to the Council suggestions on how to improve communication between Staff, the Council, and the Board, as an item on an upcoming agenda.

NOTED PRESENT: Dr. Long was noted present at 10:18 a.m.

**4. PROTECTING REFINERY COMMUNITIES FROM AIR POLLUTION**

Mr. Broadbent introduced Greg Nudd, Acting Rules and Strategic Policy Officer, who gave the staff presentation *Protecting Refinery Communities from Air Pollution*, including: overview; direct regulation of criteria pollutants; capping risk from toxic air contaminants (TAC); monitoring refinery inputs and air pollution; recap: three-pronged approach; and next steps.

Council Comments:

The Council and staff discussed the variety of crude slates at refineries and how much they are changing; how Draft Rule 11-18 addresses concerns about changing crude slates and how those might impact all emissions, including CO<sub>2</sub>; the frozen baseline for the goal of a 20% reduction of refinery criteria pollutants by 2020; how the District’s “three-pronged” approach of addressing community concerns about air pollution in refinery communities will directly improve human health; the types of facilities and sources that will be reviewed under Draft Rule 11-18; and the expanded community monitoring that will result from Assembly Bill (AB) 617 and the District’s concern that the bill’s implementation schedule is too aggressive and unattainable.

Council Action:

None; receive and file.

**5. AIR MONITORING AND ATTAINMENT STATUS OF CRITERIA POLLUTANT STANDARDS IN THE SAN FRANCISCO BAY AREA**

Dr. Jeff McKay, Deputy Air Pollution Control Officer, introduced Eric Stevenson, Director of Meteorology and Measurement, who gave the staff presentation *Air Monitoring and Attainment Status of Criteria Pollutant Standards in the San Francisco Bay Area*, including: chart of example pollutants of concern; Bay Area health impacts; Clean Air Act requirements; pollutants impacting Bay Area air quality; national and state standards; form of the standards; attainment status; air monitoring network; Ozone and Particulate Matter (PM)<sub>2.5</sub> exceedance trends; and changes needed to AB 617.

Council Comments:

The Council and staff discussed the current annual health and social costs of Bay Area pollution chart; the fact that the benefit of reducing PM<sub>2.5</sub> and all its particular forms far outweighs those of other pollutants; how the deployment of many air monitors is cost-prohibitive, however necessary; the different monitoring technologies that the District is exploring, and the District’s methodologies of identifying which neighborhoods are more likely to require more expensive, precise monitoring over time; how the District plans to interpret its monitoring data and communicate the results to the affected communities; and the fact that health impacts from ultrafine PM are not yet well understood.

Council Action:

None; receive and file.

**6. ADVISORY COUNCIL NEXT AREA OF FOCUS: BEYOND ATTAINMENT – PRIORITIZATION FOR LOCAL HEALTH IMPACTS**

Dr. McKay explained that the District seeks to review its prioritization of efforts based on public health impact, and asked the Council to consider PM as a particular element of focus, as the impacts of PM are serious, and it is a complicated mechanism about which there is much to

learn. Chair Hayes added that PM is the driver of risk for criteria pollutants, and, through diesel particulate, the driver of health risks from toxics as well.

## **7. INTRODUCTION TO THE OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT (OEHHA) IN ANTICIPATION OF FUTURE DISCUSSION REGARDING PARTICULATE MATTER HEALTH EFFECTS**

Dr. McKay introduced Dr. Melanie Marty, who, prior to retiring, was OEHHA's Deputy Director for Scientific Affairs. Dr. Marty, gave the presentation *Introduction to the OEHHA in Anticipation of Future Discussion Regarding Particulate Matter Health Effects*, including: OEHHA's role at the California Environmental Protection Agency (CalEPA); and mandates related to air pollution. The presentation was continued by Dr. John Budroe, Chief of the Air Toxicology and Risk Assessment Section of OEHHA, whose slides included: Air Toxics Hot Spots Program and OEHHA's role; non-cancer reference exposure levels; cancer slope factors; and Toxic Air Contaminant Program. The presentation was continued by Dr. Keita Ebisu, Research Scientist of the Air and Climate Epidemiology Section of the OEHHA, whose slides included: characterizing PM dose-response with epidemiology study data; epidemiological studies – PM<sub>2.5</sub> and Health; example: Short-Term PM<sub>2.5</sub> Exposure and Cardiovascular Disease; meta-analysis; PM<sub>2.5</sub> from wildfire and health outcomes; PM<sub>2.5</sub> chemical constituents and sources; where are PM<sub>2.5</sub> chemical constituents coming from; potential sources of PM<sub>2.5</sub> chemical constituents; acute PM<sub>2.5</sub> exposure and atrial fibrillation – exposure timing; and summary.

### Council Comments:

The Council and staff discussed the magnitude of nationwide health impacts caused by PM<sub>2.5</sub>; the fact that the studies referenced in the presentation focus on the correlation between PM<sub>2.5</sub> exposure and risk of respiratory related death, but do not imply causation; whether OEHHA has an inventory of the toxicity levels of various elements (sea salt, sulfates, road dust, etc.), and the Council's desire to understand sources that are not toxic by themselves, but are related to health effects; the historical "split" between criteria pollutants and TACs, and if/how their health effects can be compared; the number of designated TACs that currently exist in California; the issue of generalizing risk from a specific study to a broader population; the cancer slope factor related to the many sources of hexavalent chromium, action taken to regulate it in Southern California, and detection of it in the Bay Area; and the difficulties of putting a dollar value on a human life.

The Council recessed at 12:46 p.m. and resumed at 1:30 p.m.

## **8. COMPLEXITY OF PARTICULATE MATTER AND ITS EFFECTS ON HUMAN HEALTH**

Chair Hayes introduced Vice-Chair Kleinman, who gave the presentation, *Air Pollution and Human Health: Particles are the Heart of the Matter*. Slides included: air pollution contributes to multiple diseases; epidemiological studies link air pollution to cardiovascular disease; ambient pollutants that are associated with adverse cardiovascular effects; the role of PM constituents on health; California air pollution is strongly associated with deaths; inhaled pollutants can induce effects through multiple pathways; controlled studies using models of diseases can be used to identify causal agents and mechanisms; health-related characteristics of ultrafine PM; and chronic PM exposure leads to different effects in susceptible populations.

Council Comments:

The Council discussed where people get the most exposure to ultrafine PM; the inequality of particles; whether organic particles are emitted directly or are emitted as products of secondary formation in the atmosphere through chemical processes; and particles generated by hydrogen, fuel cell, and electric vehicles.

**9. ADVISORY COUNCIL DELIBERATION: BEYOND ATTAINMENT – PRIORITIZATION FOR LOCAL HEALTH IMPACTS**

The Council’s deliberations included identifying actions the District can take to make a noticeable difference after reaching attainment of air quality standards; the suggestion of identifying sub-topics of “beyond attainment”, i.e.: what is the regulatory approach to exposure-based or risk-based regulation, defining what is harmful, and identifying topics in which people interested in researching; the suggestion trying to balance economic tradeoffs, especially regarding money versus human health; the exploration of sources of ultrafine PM, and learning about emerging retrofit technologies to address it; the suggestion that the District needs more detailed information on which populations (for the same amount of exposure) have the worst health effects, to better understand what causes the damage in those populations; and the need to move beyond associations and explore into causality (identification and reduction of causal agents).

**10. ADVISORY COUNCIL TERMS**

Dr. McKay stated that the current 2-year Council term limits expire in December 2017, and that Chair Hayes, Dr. Kleinman, Dr. Borenstein, Dr. Lipman, and Dr. Long have all expressed their desire to continue serving on the Council. He confirmed that Dr. Harley and Ms. Doduc have tendered their resignation, effective immediately, due to schedule conflicts, were they to be reappointed for the upcoming term. Dr. McKay added that Dr. Harley would like to be considered for another appointment to the Council in the future. Chair Hayes acknowledged both Ms. Doduc and Dr. Harley for their contributions and time.

**11. CHAIRPERSON’S REPORT**

Chair Hayes had nothing to report.

**12. PUBLIC COMMENT ON NON-AGENDA MATTERS**

No requests received.

**13. COUNCIL MEMBER COMMENTS / OTHER BUSINESS**

None.

**14. TIME AND PLACE OF NEXT MEETING**

Staff said that the Council would be polled for dates in January or February 2018.

**15. ADJOURNMENT**

The meeting adjourned at 3:10 p.m.

*/S/ Marcy Hiratzka*  
Marcy Hiratzka  
Clerk of the Boards