



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## ADVISORY COUNCIL REGULAR MEETING

MONDAY  
DECEMBER 11, 2017  
10:00 A.M.

1<sup>ST</sup> FLOOR BOARD ROOM  
375 BEALE STREET  
SAN FRANCISCO, CA 94105

### AGENDA

1. **CALL TO ORDER - ROLL CALL – PLEDGE OF ALLEGIANCE**

*The Council Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Council members. The Council Chair shall lead the Pledge of Allegiance.*

Staff/Phone (415) 749-

2. **APPROVAL OF THE MINUTES OF OCTOBER 30, 2017** Clerk of the Boards/5073

*The Advisory Council will consider approving the draft minutes of the Advisory Council Regular Meeting of October 30, 2017.*

3. **PUBLIC COMMENT ON AGENDA MATTERS**

*Pursuant to Government Code Section 54954.3, the public has the opportunity to speak on any agenda item. All agendas for Council meetings are posted at the Air District, 375 Beale Street, San Francisco, California 94105 at least 72 hours before a meeting.*

*This meeting will be webcast. To see the webcast, please visit <http://www.baaqmd.gov/about-the-air-district/advisory-council/agendasreports> at the time of the meeting.*

4. **UPDATE ON ADOPTED REGULATION 11: HAZARDOUS POLLUTANTS, RULE 18: REDUCTION OF RISK FROM AIR TOXIC EMISSIONS AT EXISTING FACILITIES**

J. McKay/4629

[jmckay@baaqmd.gov](mailto:jmckay@baaqmd.gov)

*Staff will provide an update on the Air District's Regulation 11 Rule 18.*

5. **UPDATE FROM THE OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT (OEHHA) ON STUDIES OF SHORT-TERM PM2.5 EXPOSURE**

J. McKay/4629

[jmckay@baaqmd.gov](mailto:jmckay@baaqmd.gov)

*The Council will receive an update from the Office of Environmental Health Hazard Assessment (OEHHA).*

6. **CHAIRPERSON'S REPORT**

*The Chairperson will provide the Advisory Council with a report of recent and upcoming activities.*

7. **REPORT OF THE EXECUTIVE OFFICER/APCO**

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

*Pursuant to Government Code Section 54954.3, an opportunity is provided for the public to speak on any subject within the Council's purview. Speakers are typically limited to three minutes each.*

9. **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.*

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

*At the call of the Chair.*

11. **ADJOURNMENT**

*The Council meeting shall be adjourned by the Chair.*

**CONTACT:**

**MANAGER, EXECUTIVE OPERATIONS**  
**375 BEALE STREET, SAN FRANCISCO, CA 94105**  
**[mmartinez@baaqmd.gov](mailto:mmartinez@baaqmd.gov)**

**(415) 749-5016**  
**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. Please note that all correspondence must be addressed to the “Advisory Council” and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Council meeting. Any correspondence received after that time will be presented to the Council at the following meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- 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 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

**Accessibility and Non-Discrimination Policy**

The Bay Area Air Quality Management District (Air District) does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, or mental or physical disability, or any other attribute or belief protected by law.

It is the Air District’s policy to provide fair and equal access to the benefits of a program or activity administered by Air District. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by the Air District. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint under this policy. This non-discrimination policy also applies to other people or entities affiliated with Air District, including contractors or grantees that the Air District utilizes to provide benefits and services to members of the public.

Auxiliary aids and services including, for example, qualified interpreters and/or listening devices, to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly.

If you believe discrimination has occurred with respect to an Air District program or activity, you may contact the Non-Discrimination Coordinator identified below or visit our website at [www.baaqmd.gov/accessibility](http://www.baaqmd.gov/accessibility) to learn how and where to file a complaint of discrimination.

Questions regarding this Policy should be directed to the Air District’s Non-Discrimination Coordinator, Rex Sanders, at (415) 749-4951 or by email at [rsanders@baaqmd.gov](mailto:rsanders@baaqmd.gov).

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
375 BEALE STREET, SAN FRANCISCO, CALIFORNIA 94105  
FOR QUESTIONS PLEASE CALL (415) 749-5016 or (415) 749-4941**

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

**DECEMBER 2017**

<b><u>TYPE OF MEETING</u></b>	<b><u>DAY</u></b>	<b><u>DATE</u></b>	<b><u>TIME</u></b>	<b><u>ROOM</u></b>
<b>Board of Directors Mobile Source Committee</b> <i>(Meets on the 4<sup>th</sup> Thursday of each Month)</i>	Thursday	7	9:30 a.m.	1st Floor Board Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets on the 4<sup>th</sup> Wednesday of each Month)</i>	Thursday	7	10:30 a.m.	1st Floor Board Room
<b>Advisory Council Meeting</b> <i>(At the Call of the Chair)</i>	Monday	11	10:00 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Executive Committee</b> <i>(Meets on the 3<sup>rd</sup> Monday of each Month)</i>	Thursday	14	9:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Personnel Committee</b> <i>(At the Call of the Chair)</i>	Monday	18	9:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Stationary Source Committee</b> <i>(Meets on the 3<sup>rd</sup> Monday of each Month)</i>	Monday	18	10:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Regular Meeting</b> <i>(Meets on the 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	20	9:45 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets on the 4<sup>th</sup> Wednesday of each Month</i> - CANCELLED AND RESCHEDULED TO THURSDAY, DECEMBER 7, 2017 AT 10:30 A.M.	Wednesday	27	9:30 a.m.	1st Floor, Yerba Buena Room #109
<b>Board of Directors Mobile Source Committee</b> <i>(Meets on the 4<sup>th</sup> Thursday of each Month)</i> - CANCELLED AND RESCHEDULED TO THURSDAY, DECEMBER 7, 2017 AT 9:30 A.M.	Thursday	28	9:30 a.m.	1 <sup>st</sup> Floor Board Room

# JANUARY 2018

<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 on the 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i> - CANCELLED	Wednesday	3	9:45 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Executive Committee</b> <i>(Meets on the 3<sup>rd</sup> Monday of each Month)</i> - CANCELLED	Monday	15	9:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Stationary Source Committee</b> <i>(Meets on the 3<sup>rd</sup> Monday of each Month)</i> - CANCELLED	Monday	15	10:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Regular Mtg. / Retreat</b> <i>(Meets on the 1<sup>st</sup> &amp; 3<sup>rd</sup> Wednesday of each Month)</i>	Wednesday	17	9:45 a.m.	Dougherty Station Community Center 17011 Bollinger Canyon Rd, San Ramon, CA 94582
<b>Board of Directors Climate Protection Committee</b> <i>(Meets on the 3<sup>rd</sup> Thursday of every other Month)</i>	Thursday	18	9:30 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Budget &amp; Finance Committee</b> <i>(Meets on the 4<sup>th</sup> Wednesday of each Month)</i>	Wednesday	24	9:30 a.m.	1st Floor, Yerba Buena Room #109
<b>Board of Directors Mobile Source Committee</b> <i>(Meets on the 4<sup>th</sup> Thursday of each Month)</i>	Thursday	25	9:30 a.m.	1 <sup>st</sup> Floor Board Room

VJ – 11/27/17 - 12:41 p.m.

G/Board/Executive Office/Moncal

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairperson Stan Hayes and Members  
of the Advisory Council

From: Jack P. Broadbent  
Executive Officer/APCO

Date: December 4, 2017

Re: Approval of the Minutes of October 30, 2017

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RECOMMENDED ACTION

Approve the attached draft minutes of the Advisory Council meeting of October 30, 2017.

DISCUSSION

Attached for your review and approval are the draft minutes of the Council meeting of October 30, 2017.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Marcy Hiratzka  
Reviewed by: Maricela Martinez

Attachment 2A: Draft Minutes of the Advisory Council Meeting of October 30, 2017

Draft Minutes – Advisory Council Regular Meeting of October 30, 2017

Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
(415) 749-5073

**DRAFT 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 interaction between staff, the Board, and the Council regarding the proceedings of Rule 12-16. His specific concerns were the fact that Council was not made aware of the correspondence between the California Air Resources Board (CARB) and the District, the change in District management's proposal after the April 3, 2017 Council meeting, and the fact that staff reports did not address the Council's concerns about leakage. 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 that the proposed Rule 12-16 began to change over time, due to CARB's change of opinion. Staff agreed that communication with the Council should be improved. Director Sinks apologized to the Council on behalf of the Board, acknowledged the Council's dedication and time, and said that he would strive to bridge the communication gap 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 Rule 12-15 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.

Marcy Hirtzka  
Clerk of the Boards

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

## Memorandum

To: Chairperson Stan Hayes and Members  
of the Advisory Council

From: Jack P. Broadbent  
Executive Officer/APCO

Date: December 4, 2017

Re: Update on Adopted Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk  
from Air Toxic Emissions at Existing Facilities

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RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Newly adopted Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18 or “Toxic Risk Reduction Rule”) will ensure that emissions of toxic air contaminants (TACs) from existing facilities do not pose an unacceptable health risk to people living and working nearby. The rule will rely upon the most up-to-date assumptions about the risk of compounds and would require affected facilities to take action to reduce risk to a low level.

Ambient toxic risk in the Bay Area has declined significantly in the last quarter century from about 4200 per million to less than 700 per million today. However, there are still many areas in the Air District that are impacted by elevated risk levels from both stationary and mobile sources. Many of these areas are considered Community Air Risk Evaluation (CARE) communities.

DISCUSSION

Rule 11-18 applies to all facilities whose emissions of toxic air contaminants may result in a significant risk to nearby residents and workers. The purpose of Rule 11-18 is to focus on those facilities causing the highest health impacts across the Bay Area and to require these facilities to reduce that health risk.

Rule 11-18 is the next step in the Air District’s efforts to protect public health from toxic air pollution. The rule is expected to substantially reduce health risks posed by various facilities by requiring the implementation of all technically and economically feasible risk reduction measures to significant sources of toxic air contaminants (TACs). The rule affects hundreds of facilities, from large facilities like petroleum refineries to much smaller businesses like some dry cleaners and crematoria. These facilities emit a variety of TACs that can adversely impact public health. These pollutants include compounds such as diesel particulate matter (DPM), benzene, polycyclic aromatic hydrocarbons (PAHs), and 1,3-butadiene.

Many of the facilities likely to be affected are located in Bay Area communities that face a variety of public health challenges. Risk reductions from existing facilities achieved by this rule are expected to provide greater benefit to these communities. In addition, Rule 11-18 will help to address some of the Air District's potential obligations under Assembly Bill 617 Nonvehicular Air Pollution: Criteria Air Pollutants and Toxic Air Contaminants, which was signed by the Governor in July 2017. The intent of AB 617 is "...to reduce emissions of toxic air contaminants and criteria pollutants in communities affected by a high cumulative exposure burden." One requirement under AB 617 is for the Air Resources Board to select communities with high exposure burdens, with the air districts where the communities are located then obligated to prepare community emissions reduction programs for toxics and criteria pollutants.

Under Rule 11-18, Air District staff will conduct the work in identifying and assessing facilities. The Air District will identify sources of TAC emissions whose risk may exceed the risk action levels and conduct HRAs for those sources.

Any facility shown by a final HRA to pose a health risk at or above the risk action level in the rule will be required to take further steps to reduce risk. The risk action levels are tiered, starting at 25 per million upon rule adoption and dropping to 10 per million in 2020, to ensure that high risk facilities are addressed first and can begin risk reduction efforts as soon as possible.

Facilities with risk at or above the action level are required to develop a risk reduction plan to reduce risk below the risk action level of 10 per million within five years, if that timeline is feasible. If a facility can get below the risk action level, but technical or financial considerations make more time necessary, the Air District can approve additional time, but no more than is needed, up to an additional five years. If it is not feasible for a facility to reduce its risk below the required levels, the rule provides a third option that would require the facility to install the best available retrofit control technology for toxics (TBARCT) on all significant sources of toxic emissions, thereby reducing risk to the lowest level feasible.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Victor Douglas  
Reviewed by: Greg Nudd

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairperson Stan Hayes and Members  
of the Advisory Council

From: Jack P. Broadbent  
Executive Officer/APCO

Date: December 4, 2017

Re: Update from the Office of Environmental Health Hazard Assessment (OEHHA) on  
Studies of Short-Term PM2.5 Exposure

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RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Office of Environmental Health Hazard Assessment (OEHHA) has conducted several epidemiological studies on the health effects of particulate matter in California, and is working on a number of studies looking at other widespread criteria air pollutants identified in the Clean Air Act. These studies join other studies done in California, nationally, or internationally that examine the health impacts of air pollution exposure.

Work at OEHHA has focused on a number of areas including:

- 1) criteria air pollutants and meteorological impacts from climate change (e.g., heat exposure) and associated adverse health outcomes, including particulate matter and particle constituents and sources associated with mortality and several morbidity outcomes, and
- 2) the identification of subpopulations most vulnerable to these impacts (e.g., young children, pregnant women, the elderly, socioeconomically disadvantaged populations).

DISCUSSION

OEHHA will provide an overview of studies of short-term PM2.5 exposures, and adverse health outcomes, while focusing on studies that use data from California.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Jeff McKay