



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

BOARD OF DIRECTORS  
STATIONARY SOURCE COMMITTEE

COMMITTEE MEMBERS

JOHN GIOIA - CHAIR  
DAVID CANEPA  
SCOTT HAGGERTY  
KAREN MITCHOFF  
BRAD WAGENKNECHT

ROD SINKS – VICE CHAIRPERSON  
CAROLE GROOM  
NATE MILEY  
JIM SPERING

**MONDAY  
JANUARY 30, 2017  
9:30 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 Committee Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Committee members. The Committee Chair shall lead the Pledge of Allegiance.*

**2. PUBLIC COMMENT PERIOD**

*(Public Comment on Non-Agenda Items Pursuant to Government Code § 54954.3) Members of the public are afforded the opportunity to speak on any agenda item. All agendas for regular meetings are posted at District headquarters, 375 Beale Street, San Francisco, CA, 94105 at least 72 hours in advance of a regular meeting. At the beginning of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Committee's subject matter jurisdiction. Speakers will be limited to three (3) minutes each.*

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

**Staff/Phone (415) 749-**

**3. APPROVAL OF THE MINUTES OF SEPTEMBER 19, 2016**

**Clerk of the Boards/5073**

*The Committee will consider approving the draft minutes of the Stationary Source Committee meeting of September 19, 2016.*

4. **RULE DEVELOPMENT UPDATES**

**J. Roggenkamp/4646**  
[jroggenkamp@baaqmd.gov](mailto:jroggenkamp@baaqmd.gov)

*Staff will provide the Committee with an update on Rules 12-16: Petroleum Refining Facility-Wide Emissions Limits, 11-18: Reduction of Risk from Air Toxic Emissions at Existing Facilities and 13-1: Refinery Carbon Intensity Cap.*

5. **COMMITTEE MEMBER COMMENTS**

*Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)*

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

*Monday, March 20, 2017, Bay Area Air Quality Management District Office, 375 Beale Street, San Francisco, California 94105 at 10:30 a.m.*

7. **ADJOURNMENT**

*The Committee meeting shall be adjourned by the Committee 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 “Members of the Board of Directors” and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Board meeting. Any correspondence received after that time will be presented to the Board 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**

**JANUARY 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 Budget &amp; Finance Committee</b> <i>(Meets on the 4<sup>th</sup> Wednesday of each Month)</i>	Wednesday	25	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	26	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	30	9:30 a.m.	1 <sup>st</sup> Floor Board Room

**FEBRUARY 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 Ad Hoc Building Oversight Committee Meeting</b> <i>(At the Call of the Chair)</i>	Wednesday	1	9:30 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	1	9:45 a.m.	1 <sup>st</sup> Floor Board Room
<b>Advisory Council Meeting</b> <i>(At the Call of the Chair)</i>	Monday	6	10:00 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	15	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) - CANCELLED</i>	Monday	20	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) - CANCELLED</i>	Monday	20	10:30 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	22	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	23	9:30 a.m.	1 <sup>st</sup> Floor Board Room

## MARCH 2017

<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>	Wednesday	1	9:45 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	15	9:45 a.m.	1 <sup>st</sup> Floor Board Room
<b>Board of Directors Climate Protection Committee</b> <i>(Meets on the 3<sup>rd</sup> Thursday of every other Month)</i>	Thursday	16	9:30 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>	Monday	20	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	20	10:30 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	22	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	23	9:30 a.m.	1 <sup>st</sup> Floor Board Room
VJ – 1/23/17 (1:24 p.m.)				G/Board/Executive Office/Moncal

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairperson John Gioia and Members  
of the Stationary Source Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: January 24, 2017

Re: Approval of the Minutes of September 19, 2016

---

RECOMMENDED ACTION

Approve the attached draft minutes of the Stationary Source Committee (Committee) meeting of September 19, 2016.

DISCUSSION

Attached for your review and approval are the draft minutes of the Committee meeting of September 19, 2016.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Marcy Hiratzka  
Reviewed by: Maricela Martinez

Attachment 3A: Draft Minutes of the Committee Meeting of September 19, 2016

## AGENDA: 3A – ATTACHMENT

Draft Minutes – Stationary Source Committee Meeting of September 19, 2016

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

### DRAFT MINUTES

Summary of Board of Directors  
Stationary Source Committee Meeting  
Monday, September 19, 2016

#### 1. CALL TO ORDER – ROLL CALL

Stationary Source Committee (Committee) Chairperson John Gioia called the meeting to order at 10:33 a.m.

Present: Committee Chairperson John Gioia; Vice-Chairperson James Sperling; and Directors John Avalos, Scott Haggerty, David Hudson, and Rod Sinks.

Absent: Directors Carole Groom, Liz Kniss, and Jan Pepper.

Also Present: Board Chairperson Eric Mar.

#### 2. PUBLIC COMMENT ON NON-AGENDA MATTERS

Cupertino resident, Cathy Helgerson, advocated for stronger enforcement at the Stevens Creek Quarry in Sunnyvale, and requested the collaboration between water and air agencies to mitigate dust.

Dr. Raymond Tompkins, Clean Air Health Alliance, addressed the Committee regarding the fugitive radioactive dust from the US naval shipyard in the San Francisco neighborhood of Hunters Point. Dr. Tompkins said that the District has no standards for fugitive radioactive dust but needs to implement them to protect the health of people in the area. Dr. Tompkins also complained of the radioactive dust from the stadium demolition in Candlestick Point, adjacent to Bayview-Hunters Point. Chair Mar requested a staff report on radioactive dust monitoring efforts at Candlestick Point in conjunction with Lennar Urban.

#### 3. APPROVAL OF THE MINUTES OF JUNE 1, 2016

##### Public Comments:

No requests received.

##### Committee Comments:

None.

Committee Action:

Director Hudson made a motion, seconded by Director Haggerty, to approve the Minutes of June 1, 2016; and the motion carried by the following vote of the Committee:

AYES: Avalos, Gioia, Haggerty, Hudson, Mar, Sinks, and Spering.  
NOES: None.  
ABSTAIN: None.  
ABSENT: Groom, Kniss, and Pepper.

**4. UPCOMING CHANGES TO REGULATION 9, RULE 13: CEMENT KILNS**

Jean Roggenkamp, Deputy Executive Officer, introduced Robert Cave, Senior Air Quality Specialist, who gave the staff presentation *Upcoming Changes to Regulation 9, Rule 13: Cement Kilns*, including: overview; regulatory background and purpose; results of rule adoption; technical issues of ammonia standard; ammonia standard solution; proposed rule amendments; and continuing issues of concern.

Public Comments:

Cupertino resident, Cathy Helgerson, disputed points taken from the District's *Regulation 9, Rule 13: Nitrogen Oxides, Particulate Matter, And Toxic Air Contaminants from Portland Cement Manufacturing Preliminary Staff Report*, released in July 2016. Ms. Helgerson said that the Title V Permit should not incorporate Rule 9-13 until federal requirements are adhered to in order to protect the public from further harm.

Committee Comments:

The Committee and staff discussed testing methods to measure condensable PM from refineries; conclusions from District discussions with Lehigh Cement Plant; the adoption schedule for the proposed rules in the presentation; staff's outreach to the Environmental Protection Agency regarding these amendments; and the Committee's appreciation of staff's action to make ammonia adaptive, proactively reach out to stakeholders, and mitigate dust.

Committee Action:

None; receive and file

**5. AMENDMENTS TO REGULATION 2, RULE 5: NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS**

Damian Breen, Deputy Air Pollution Control Officer, introduced Sanjeev Kamboj, Air Quality Engineering Manager, who gave the staff presentation *Amendments to Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants (TAC)*, including: outline; effectiveness of control programs; stationary source programs; Rule 2-5 new source review for TAC; summary of Rule 2-5; proposed Rule 2-5 changes; impacts of Rule 2-5 revisions; California Environmental Quality Act (CEQA) analysis; socioeconomic analysis; public outreach; comments and responses; and next steps.



Public Comments:

Cupertino resident, Cathy Helgerson, disputed Sections 2-5-110 (Exemption, Low Emissions Levels) and 2-5-112 (Limited Exemption, Modified Source with No Increase in Toxicity Weighted Emissions) of *Proposed Amendments to: Air District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants Workshop Report*, which was released in January 2016, saying that exemptions are not needed and that the proposed language contained errors. Ms. Helgerson questioned the source of the cancer statistics in the report and requested that the contaminants pertaining to this rule be listed in the rule's title in detail.

Committee Comments:

The Committee and staff discussed TAC trigger levels; the proposed revised definition of a “project”; the total number of health risk assessments (HRA) currently performed each year; types of facilities that have not been subjected to HRAs previously but would be after Rule 2-5 is amended; tables that were going to be removed from the rule but will remain for transparency purposes; and whether or not synthetic crumb rubber athletic fields are permitted by the District.

Committee Action:

None; receive and file.

**6. UPDATE ON WOOD SMOKE REDUCTION INCENTIVE PROGRAM**

Mr. Breen introduced Karen Schkolnick, Acting Director of the Strategic Incentives Division, who gave the staff presentation *Update on Wood Smoke Reduction Incentive Program*, including: background; Air District's Wood Smoke Reduction Incentive Program; program funding, outreach, launch, timeline, statistics; and next steps.

Public Comments:

Jed Holtzman, 350 Bay Area, thanked the District for providing summary data that 350 Bay Area requested in order to better understand the program, and said that he would have liked to see more of the funding used to replace stoves and fireplaces with electric heat pumps, rather than replacing them with natural gas or propane-fuels devices, which emit greenhouse gases. Mr. Holtzman also noticed that 74% of the applications submitted came from residences in areas that were not identified by the District as “highly-impacted”, despite specific outreach to those areas prior to the program's launch. He wondered if there was an organized effort by a particular organization or social media that generated an influx of applications from areas that did not receive special outreach in only 5 hours of the program launching.

Cupertino resident, Cathy Helgerson, addressed the Committee regarding her belief that this program will have little impact in reducing pollution and that the District should be focusing on regulating the Lehigh Cement Plant, rather than on pollution from vehicles and fireplaces.

Committee Comments:

The Committee and staff discussed the source of the funding for this program and on what programs the funds would have been spent if this program did not exist; the possibility of leading legislative efforts to generate additional funding for this program; the status of the awards process; specialized outreach to areas identified as “high-impact”; the lack of clarification of geographical equity; staff’s forthcoming analyzation of applications, including waitlisted applications; the Committee’s concern that, if funds are added to the program, they should be allocated solely for high-impacted areas, rather than be an equal opportunity for all applicants; the fact that certain high-impacted areas are not low-income areas; how human behavior will not change if the public does not stop blaming stationary sources for pollution, when choices we make also generate pollution; and how the community’s response to the program is good start and makes others sensitive to the change that needs to happen.

Committee Action:

None; receive and file.

**7. COMMITTEE MEMBER COMMENTS**

None.

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

Monday, October 17, 2016, Bay Area Air Quality Management District Office, 375 Beale Street, San Francisco, California 94105 at 10:30 a.m.

**9. ADJOURNMENT**

The meeting adjourned at 12:09 p.m.

Marcy Hiratzka  
Clerk of the Boards

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairperson John Gioia and Members  
of the Stationary Source Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: January 24, 2017

Re: Rule Development Updates

---

RECOMMENDED ACTION

Staff recommends that the Stationary Source Committee discuss Rules 12-16, 11-18, and 13-1 at the Committee meeting on January 30, 2017.

BACKGROUND

On October 15, 2014, the Board of Directors approved Resolution Number 2014-07 directing staff to develop strategies to reduce emissions from petroleum refineries. Specifically, the resolution directed staff to continue development of Regulation 12, Rule 15: Petroleum Refining Emissions Tracking (“Rule 12-15”) to track and monitor refinery emissions; to develop Regulation 12, Rule 16 (“Rule 12-16”) to set emissions thresholds and mitigate potential emissions increases; and to develop additional rules to reduce emissions from refineries by 20% by 2020, or as much as feasible.

Staff worked with interested stakeholders and released proposed regulatory language and staff reports for four refinery emission reduction rules, Rule 12-15 and Rule 12-16 in October of 2015. In December of 2015, the Board of Directors adopted three refinery emission reduction rules/rule amendments (Regulation 6, Rule 5: Fluid Catalytic Cracking Units; Regulation 8, Rule 18: Equipment Leaks; and Regulation 11, Rule 10: Cooling Towers). Regulation 12, Rule 15 along with an additional refinery emission reduction measure, Regulation 9, Rule 14, Coke Calcining were adopted by the Board on April 20, 2016. Together, these rules are estimated to reduce criteria pollutants by more than 15%. Staff received a significant number of comments on proposed Rule 12-16, and determined that a different approach was necessary in order to address the concerns of stakeholders, including affected industry and interested community groups. In order to address the localized impacts from toxic air contaminants for stationary sources, staff accelerated development of a new rule, Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (“Rule 11-18”). This rule focuses on reducing health risk from facilities throughout the Bay Area, including refineries, to the lowest achievable levels.

At the July 20, 2016 Board meeting, the Board of Directors directed staff to conduct a full regulatory analysis of two options and evaluate them in one Environmental Impact Report (EIR), to address concerns about the impact of emissions from refineries: Rule 11-18 and the Enforceable Numeric Caps option proposed by CBE and associated organizations renamed to Regulation 12,

Rule 16; Petroleum Refining Facility-wide Emissions Limits (“Rule 12-16”). Staff presented a timeline for this effort culminating in Board consideration of the rules in May 2017.

At the Board of Directors Retreat on January 18, 2017 staff included Regulation 13, Rule 1: Refinery Carbon Intensity Cap on the Regulatory Agenda for 2017. Rule 13-1 would address GHG and associated combustion emissions from refineries, and is the first step in a broader strategy to reduce GHG and other combustion emissions from Bay Area facilities. The Board discussed this proposal and its relationship to 12-16 and 11-18, and asked that it be discussed at the Stationary Source Committee meeting scheduled for January 30, 2017. A Rule 13-1 concept paper is attached.

Rule 12-16 and Rule 11-18 are on track for Board consideration in May 2017. Staff anticipates that Rule 13-1 will be ready for Board consideration in August 2017. A brief description of these three draft rules is provided below.

Regulation 12, Rule 16: Petroleum Refining Facility-Wide Emissions Limits:

At the July 20<sup>th</sup> meeting, the Board of Directors directed staff to develop regulatory language that represents a proposal by environmental advocacy organizations to limit specific emissions from petroleum refining facilities and three support facilities using numeric limits on GHG, particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) at levels consistent with recent operations. Staff have been working closely with CBE to reflect their proposal. Staff has identified a number of legal and technical issues regarding this draft rule and discussed these issues with the organizations. The organizations have indicated that they do not want to make any changes to their proposal in order to address these concerns.

Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities:

In order to address concerns regarding health impacts for communities located near refineries and other facilities, staff is developing a rule that would significantly reduce toxic emissions from sources such as refineries, metal melting facilities, and stationary diesel generators. Rule 11-18 would apply to all facilities whose emissions of toxic air contaminants may result in a significant risk to nearby residents and workers. Rule 11-18 would achieve significant reductions of toxic air contaminants by setting a cap on the allowable risk for facilities across the Bay Area. Air District staff would perform Health Risk Assessments (HRAs) to identify risk levels at facilities with potential to exceed the cap and then require appropriate measures to reduce risk to acceptable levels.

Regulation 13, Rule 1: Refinery Carbon Intensity Cap:

Rule 13-1 would be the first step in the Air District’s strategy to reduce combustion emissions across the region. Combustion of fossil fuels results in emissions of GHG, NO<sub>x</sub>, SO<sub>2</sub> and PM. Rule 13-1 would cap GHG emissions from Bay Area refineries at a level consistent with their current, full-capacity operation. It would also require Bay Area refineries to implement cost-effective efficiency projects. The rule would not interfere with Cap-and-Trade or the gasoline market because it would cap GHG emissions at a level consistent with current maximum production capacity and it would allow for refineries to increase production as long as the carbon intensity of the refinery (CO<sub>2</sub>e emitted per barrel of crude oil processed) does not increase. Rule 13-1 would prevent refineries from switching over to heavier, more sulfurous crude oil, such as

Canadian tar sands crude, because doing so would significantly increase a refinery's carbon intensity.

## DISCUSSION

Staff continues to have significant concerns regarding legal and technical issues with Rule 12-16. The resources necessary to work on Rule 12-16 have delayed other rule development that would address particulate matter, greenhouse gases, permitting, and additional refinery emission reduction rules toward the goal of reducing emissions by 20%.

Staff believes that a better approach to addressing the concerns of the community groups is through Rule 11-18 and Rule 13-1. Rule 11-18 will reduce health risk associated with localized emissions of toxic air contaminants, which are not addressed by Rule 12-16. Regulation 13-1 would reduce emissions of GHG by requiring that efficiency projects be implemented, where feasible, and prevent GHG emissions from significantly increasing in the future by requiring that carbon intensity baselines not be exceeded. It would also address legal and technical issues raised by staff regarding Rule 12-16.

Staff believes that adoption of Rule 11-18 and Rule 13-1, along with the adopted and upcoming refinery emission reduction rules, would meet the goal stated in the Board's Resolution Number 2014-07 of October 2014 by reducing emissions of criteria pollutants, GHG and toxic air contaminants.

## BUDGET CONSIDERATIONS/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Eric Stevenson  
Reviewed by: Jean Roggenkamp

Attachment 4A: Concept Paper – Rule 13-1: Refinery Carbon Intensity Cap

## Concept Paper - Rule 13-1: Refinery Carbon Intensity Cap

Updated: Jan. 23, 2017

### Background and Purpose:

Refineries are the largest stationary sources of combustion emissions in the Air District. When fossil fuels are burned, they generate greenhouse gases (GHG) and criteria pollutants such as particulate matter (PM), nitrogen dioxide (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>). Combustion emissions from refineries will need to be addressed in order to attain and maintain ambient air quality standards and to meet Air District and statewide goals for reducing GHG emissions.

Regulation 13, Rule 1 would serve as the initial step in an effort to limit and reduce combustion emissions in the Bay Area. The goals of the rule are as follows:

1. Require refineries to implement cost-effective energy efficiency measures to reduce combustion emissions.
2. Ensure refinery combustion emissions do not increase on a per-barrel basis, using GHG emissions as an indicator. This would prevent significant increases in combustion emissions due to process and feedstock changes such as making a wholesale switch to heavier and more sulfurous feedstocks (e.g. crude oil from Canadian tar sands).

This would be the first rule in a new Regulation 13. Future rules under Regulation 13 will address other significant sources of combustion emissions, such as cement kilns, using methods specifically designed for those sources.

### Rule Concept:

1. Cap each refinery at a level consistent with full-capacity operation for current equipment configuration and recent crude slate.
2. After one year, the level of the cap would be reduced by an amount consistent with the expected benefits of cost-effective energy efficiency measures that the refineries identified in 2011 energy audits required by the Air Resources Board.
3. Refinery-specific caps would be expressed in the form of carbon dioxide equivalent per barrel of crude oil processed (CO<sub>2</sub>e/barrel). These carbon intensity calculations must account for all emissions that are generated by the refining process including those associated with imported power or purchased hydrogen.
4. The method for calculating the caps are specified in the rule, but not the caps themselves. The carbon intensity will be published by the Air District during implementation and annually as part of a compliance report prepared by the Air District.

## AGENDA 4A - ATTACHMENT

5. The carbon intensity caps can be adjusted upward if necessary to comply with state, federal, or BAAQMD regulatory mandates.
6. Rule would sunset should ARB adopt a rule that is at least as stringent.
7. The adoption resolution would direct staff to re-visit the rule if Bay Area refineries export more than 10% of their finished products for three years in a row. (At that point, we may want to look at an international benchmark for carbon intensity and ensure that there is a net benefit for the environment if petroleum products are manufactured locally.)