



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS
STATIONARY SOURCE COMMITTEE MEETING

COMMITTEE MEMBERS

GAYLE B. UILKEMA - CHAIRPERSON
SUSAN GARNER
CAROL KLATT
JIM SPERING
JOHANNA PARTIN

JOHN GIOIA - VICE CHAIRPERSON
DAVID HUDSON
ERIC MAR
JOHN AVALOS

THURSDAY
MAY 5, 2011
9:30 A.M.

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

AGENDA

1. **CALL TO ORDER - ROLL CALL**
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 Air District headquarters, 939 Ellis Street, San Francisco, CA, 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 Board's authority. Speakers will be limited to three (3) minutes each.
3. **APPROVAL OF MINUTES OF MARCH 3, 2011**
4. **STATUS REPORT ON GREENHOUSE GAS TAILORING RULE**

B. Bateman/4653
bbateman@baaqmd.gov

The Committee will receive an update on the Environmental Protection Agency (EPA) Greenhouse Gas (GHG) "tailoring rule", which establishes permit requirements for certain facilities based on their GHG emissions. The presentation will include the status of implementation of these new requirements in the Bay Area.
5. **STATUS REPORT ON PROPOSED BAY AREA POWER PLANTS**

B. Bateman/4653
bbateman@baaqmd.gov

The Committee will receive an update on several proposed Bay Area power plant projects, including the status of permitting and construction.
6. **ADVANCED THERMAL IMAGING CAMERA TECHNOLOGY UTILIZED IN THE COMPLIANCE ASSURANCE PROGRAM**

K. Wee/4760
kwee@baaqmd.gov

The Committee will receive a presentation on the advanced thermal imaging camera technology used as a screening tool for compliance inspections for fugitive emissions and other applications.
7. **COMMITTEE MEMBER COMMENTS/OTHER BUSINESS**

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. (Government Code §54954.2).

8. **TIME AND PLACE OF NEXT MEETING – THURSDAY, JULY 7, 2011 AT 9:30 A.M. AT 939 ELLIS STREET, SAN FRANCISCO, CA 94109**

9. **ADJOURNMENT**

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

(415) 749-5130

FAX: (415) 928-8560

BAAQMD homepage:

www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- To request special accommodations for those persons with disabilities notification to the Executive Office should be given at least 3 working days prior to the date of the meeting, 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 Air District's headquarters 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 Air District's website (www.baaqmd.gov) at that time.

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

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

APRIL 2011

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|--|------------|-------------|-------------|----------------------------------|
| Board of Directors Budget & Finance Committee <i>(At the Call of the Chair)</i> | Thursday | 28 | 10:00 a.m. | 4 th Floor Conf. Room |

MAY 2011

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|--|------------|-------------|-------------------------------------|----------------------------------|
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Monday | 2 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 4 | 9:45 a.m. | Board Room |
| Board of Directors Stationary Source Committee <i>(At the Call of the Chair)</i> | Thursday | 5 | 9:30 a.m. | Board Room |
| Board of Directors Legislative Committee <i>(At the Call of the Chair)</i> | Monday | 9 | 9:30 a.m. | 4 th Floor Conf. Room |
| Advisory Council Meeting | Wednesday | 11 | 9:00 a.m. | Board Room |
| Board of Directors Climate Protection Committee <i>(At the Call of the Chair)</i> | Monday | 16 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 18 | 9:45 a.m. | Board Room |
| Board of Directors Budget Hearing <i>(At the Call of the Chair)</i> | Wednesday | 18 | Immediately following Board Meeting | Board Room |
| Board of Directors Budget & Finance Committee <i>(At the Call of the Chair)</i> | Wednesday | 25 | 1:00 p.m. | 4 th Floor Conf. Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Thursday | 26 | 9:30 a.m. | 4 th Floor Conf. Room |

JUNE 2011

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|---|------------|-------------|-------------------------------------|----------------------------------|
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 1 | 9:45 a.m. | Board Room |
| Advisory Council Meeting | Wednesday | 8 | 9:00 a.m. | Board Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 15 | 9:45 a.m. | Board Room |
| Board of Directors Budget Hearing <i>(At the Call of the Chair)</i> | Wednesday | 15 | Immediately following Board Meeting | Board Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Thursday | 23 | 9:30 a.m. | 4 th Floor Conf. Room |

JULY 2011

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|---|------------|-------------|-------------|----------------------------------|
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 6 | 9:45 a.m. | Board Room |
| Board of Directors Stationary Source Committee <i>(At the Call of the Chair)</i> | Thursday | 7 | 9:30 a.m. | Board Room |
| Advisory Council Meeting | Wednesday | 13 | 9:00 a.m. | Board Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 20 | 9:45 a.m. | Board Room |
| Board of Directors Mobile Source Committee <i>(Meets 4th Thursday each Month)</i> | Thursday | 28 | 9:30 a.m. | 4 th Floor Conf. Room |

HL – 4/25/11 (4:50 p.m.)
P/Library/Forms/Calendar/Calendar/Moncal

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Uilkema and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 5, 2011

Re: Stationary Source Committee Draft Minutes

RECOMMENDED ACTION

Approve attached draft minutes of the Stationary Source Committee meeting of March 3, 2011.

DISCUSSION

Attached for your review and approval are the draft minutes of the March 3, 2011 Stationary Source Committee meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Kris Perez Krow
Reviewed by: Rex Sanders

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

DRAFT MINUTES

Summary of Board of Directors
Stationary Source Committee Meeting
Thursday, March 3, 2011
9:30 a.m.

CALL TO ORDER: Chairperson Gayle B. Uilkema called the meeting to order at 9:30 a.m.

Roll Call: Chairperson Gayle B. Uilkema; Directors Carol Klatt and Eric Mar

Absent: Vice Chairperson John Gioia; Directors Susan Garner, David Hudson, Jim Spering and Ken Yeager

Also Present: Board Chairperson Tom Bates

Public Comments: None.

3. Approval of Minutes of December 13, 2010

Committee Action: None. Approval deferred due to lack of quorum.

4. Proposed Rule for Low-Use Stationary Agricultural Diesel Engines

Henry Hilken, Director of Planning Rules and Research, provided the Committee with context and background. This proposed rule would provide flexibility to sources that are subject to the California Air Resources Board's (CARB) Air Toxic Control Measure (ATCM) that applies to stationary, diesel engines in the agricultural industry.

Mr. Hilken stated the rule would allow farmers that are affected additional time to comply with the State rule, while achieving additional emission reductions beyond what is required by the ATCM.

Guy Gimlen, Senior Air Quality Engineer, gave the staff presentation. He stated that the proposed regulation is designed to limit diesel particulate matter (PM). Staff conducted significant outreach to the agricultural community, which has increased the number of diesel engines registered with the Air District.

Mr. Gimlen provided an overview of his presentation, including background on what led to this regulatory effort, summary of the draft proposal and why it is needed, comparison of the emission reductions between the current State regulation and the Air District's proposal, summary of extensive outreach efforts by staff, feedback discussed during workshops and the Air District's proposal to address the feedback, and next steps and schedule for the remainder of the rule development process.

Background information included:

- Diesel PM identified as Toxic Air Contaminant in 1998
- CARB ATCM for Stationary Diesel Engines
 - Adopted in 2004
 - Amended in 2006 to include Ag Engines
 - Wind machines & Ag Emergency Generators exempt
- Low-use Ag Engines not fully considered
- ATCM requires replacement of older, dirtier engines by 1/1/2011 and 1/1/2012 – including low-use engines

Mr. Gimlen provided a summary on the Ag engines in the Air District and reported the following:

- Agricultural diesel engines:
 - Range from new to over 50 years old
 - Over half used less than 100 hours/year (low-use)
 - Used primarily for irrigation & frost protection
- ATCM requires Ag diesel engine registration
 - 279 registered engines as of August, 2010
 - 335 registered as of February 1, 2011
 - Continuing outreach to increase registration
- 65 Engines have been replaced early with Air District funding

The new proposed rule allows the following:

- Provides compliance flexibility for low-use engines
- Applies to diesel engines over 50 HP
- Exempts engines used less than 20 hour per year
- Alternative Compliance Plan (ACP) defers replacement of engines used less than 100 hours/year
- Engines may be used up to 100 additional hours during an “Extreme Frost Season”
- Proposal increases recovery of engine’s useful life
- Mirrors equivalent rule in Northern Sonoma County

Mr. Gimlen stated that CARB is supportive of the approach the Air District is taking. Mr. Gimlen also provided a list of emission reductions which shows that the proposal achieves 30-60% greater reductions in the long term. The compliance flexibility potentially allows the engines to be replaced with cleaner burning Tier 4 engines.

Because the proposed rule would delay emission reductions from the ATCM for several years, the Air District is conducting an Environmental Impact Report (EIR) to evaluate the impact on air quality and health effects.

Mr. Gimlen stated extensive outreach included:

- Contact with:
 - County Ag Officials in all 9 Counties
 - Farm Bureaus in all counties (except SF)
 - Trade Associations (Grape Growers, Poultry and Dairymen)
- Distributed flyers to members of four trade organizations
- Presentations at:

- 3 Farm Bureau meetings
 - 4 County Ag Continuing Ed classes
 - Suisun Valley Grape Growers Association
- Booth at Napa Valley Viticultural Fair, with approximately 70 to 80 people visiting the booth
 - 900 Workshop notices, and 9 Workshops in 8 counties, with an estimate of 100 people attending the workshop

Feedback at the workshops included three requests:

- Request for exemption of reliability testing and actual emergency use hours from limits (similar to Reg. 9-8)
 - Plan to incorporate into final draft rule
- Request averaging use hours over three years for 20 and 100 hour per year limits
 - Plan to incorporate into final draft rule
- Request to consider exempting rural and distant geographical areas
 - Do not plan to include

Proposed revisions include:

- Anticipate charging an application fee for the ACP to recover costs of reviewing the plan
- Need to mitigate temporary Nitrogen Oxide (NOx) emissions (foregone NOx reductions)
- Reviewing alignment of eligibility for ACP with CEQA Guidelines

Mr. Gimlen stated that the Air District's proposal included a limit of 200 meters to any nearby sensitive receptors, which include housing, schools or healthcare facilities, as this is consistent with the Northern Sonoma Air Pollution Control District rule. However, the Air District CEQA Guidelines recommend proximity limit of 1,000 feet, which the Air District will reconcile and suggest proposing 1,000 feet as the limit.

Next steps include:

- Draft EIR being prepared
 - 45 day comment period for EIR
- Draft Rule, Staff Report and Socio-Economic Analysis being finalized
 - 30 day comment period for rule
- CARB supports our approach
- Public Hearing anticipated in May

Committee Comments/Questions:

Chair Uilkema thanked staff for the presentation and asked if the self-certification regarding the hours of use is okay with CARB. Mr. Gimlen stated it is monitored certification.

Chair Bates asked Mr. Gimlen to elaborate on the Air District's plan to mitigate temporary NOx emissions. Deputy Air Pollution Control Officer, Jean Roggenkamp, stated these are emission reductions that are foregone and are not increases in emissions. The option to delay engine replacement will result in more emission reductions at the end of the alternate compliance period. Ms. Roggenkamp said the Air District has grant programs that get NOx emission reductions and for the short time period, the Air District is looking to use grant funding to mitigate the temporary foregone reductions.

Chair Bates asked if the Air District can go further with the rule and requirements. Ms. Roggenkamp informed the Committee that the ATCM is a statewide rule and the State may revisit the rule at a later date.

Chair Uilkema suggested that the Committee recommend further review of the rule in three or four years.

Chair Uilkema asked if the application fee for ACP's could be paid online. Mr. Gimlen informed the Committee that diesel engine registration is online and the Air District plans to integrate the application for the ACP.

Public Comments: None.

Committee Action: None; receive and file.

5. Proposed Metal Melting Rule

Mr. Hilken stated this rule is part of the 2010 Clean Air Plan (CAP), which the Board of Directors adopted in the Fall of 2010 and is part of the Air District's overall strategy to reduce ozone precursors, PM emissions and other air pollutants.

Chair Uilkema asked if Mare Island's metal scrapping operation is included. Mr. Hilken stated staff would let her know.

Victor Douglas, Principal Air Quality Specialist, gave the staff a presentation on the Proposed New Rule 12-13: Metal Melting and Processing Facilities. Facilities that conduct melting and recycling would be subject to this rule.

Mr. Douglas continued stating that metal melting and processing facilities consist of the following:

- 25-30 metal melting / heat treating facilities
 - 16 in Community Air Risk Evaluation (CARE) areas
 - 5 with metal throughput > 5000 ton/year
 - 5 with risk > 10 per million
- 100 scrap handlers & recyclers
 - Most collectors / satellite facilities
 - 3 large facilities with shredders

These facilities cause concern for the following reasons:

- Emissions:
 - PM
 - Volatile Organic Compounds (VOCs) (including odorous compounds, such as heavy metals)
 - Toxic compounds
- Close proximity to residents
 - Elevated risks

- Nuisance / complaints

–

Mr. Douglas then presented a flow chart that illustrated the main steps that occur at metal melting and processing facilities.

The process includes:

- Metal Management
- Charging & Metal Melting
- Tapping (Pouring)
- Mold & Core Making
- Casting
- Cooling
- Shake Out

Mr. Douglas provided a brief description of each of the processes and said that in the evaluation process, the Air District continues to work with many stakeholders including potentially affected facilities, community groups, and industry association representatives.

Staff conducted site visits to achieve a greater understanding of the operations. Facilities visited include:

- PSC (3)
- ABI (2)
- A&B Die Casting (1)
- Schnitzer Steel (1)
- CASS (3)
- US Pipe (1)
- USS/POSCO (1)
- Simms Metals (1)

Staff has also conducted technical research:

- District Records
- Community Members
- Literature Searches
- Industry Experts
- Other Regulations

A wide range of Federal, State and Air District regulations may affect metal melting and processing facilities. Current air rules and regulations include:

- **Federal Regulations for Toxics**
 - Major Source Iron and Steel Foundries
 - Secondary Aluminum Production
 - Electric Arc Furnace Steelmaking Facilities
 - Area Source Iron and Steel Foundries
 - Aluminum, Copper, and Other Nonferrous Foundries

- **State Regulation: Non-Ferrous Metal Melting ATCM**

- **Air District Rules**
 - Permits
 - PM
 - Odorous Substances

Despite the wide range of regulations, some areas can use improvement. Some facilities have elevated levels of odorous and toxic compounds and excess PM emissions.

Regulatory concepts include:

- **Applicability**
 - Metal melting / heating facilities
 - Scrap / recycling operations
- **Requirements**
 - Emission limits (PM, VOCs, Odorous substances)
 - Better capture & control
 - Best practices
- **Compliance Plans**
 - Operation, Maintenance & Monitoring
 - Metal Management
 - Odor Management
 -
- **Improved Monitoring and Recordkeeping**
 - PM
 - VOC (including odorous substances)
 - Process & operation records

Mr. Douglas also provided an overview of the emission reductions and costs:

Emission Reductions

- PM (including toxic metals) 80% reduction
- VOC (including odorous substances)
 - Lower odorous / nuisance impacts to community
 - Less toxic compounds (phenols)
- Lower Risks

Costs

- Enclosures: up to \$25,000 per furnace
- Baghouse Upgrades: \$35,000 to \$350,000

Next steps include:

- Workshop (March/April)
- Socioeconomic and Environmental Analyses
- Final Proposal
- Public Hearing (Summer)

Committee Comments/Questions:

Chair Uilkema thanked staff for the presentation.

Director Mar asked Mr. Douglas to explain where the 25-30 facilities are located. Mr. Douglas stated the majority of the facilities are either along the I-80/880 corridor or along Highway 101 along the Peninsula. Some are located in the San Jose area. The four with the highest risks are in the cities of Berkeley, Oakland, San Leandro, and Fremont.

Public Comments:

Melosa Granda – Environmental Law and Justice Clinic at Golden Gate University/West Berkeley Alliance for Clean Air & Safe Jobs, requested the draft metal melting rule be written in a manner that is comprehensible to those that will be most affected, in addition the rule be in multiple languages.

Rosina Roibel – Bay Area Environmental Health Collaborative, expressed concerns about the language of the metal melting rule, the public process and participation.

Chair Bates asked how many workshops are planned. Mr. Hilken informed the Committee that there is no schedule at this time. Chair Bates asked if the Air District is planning to provide information in various languages. Ms. Roggenkamp stated the Air District currently looks at areas where there are a greater number of individuals who speak various languages as their first language and often have an interpreter at the workshop.

Committee Action: None; receive and file.

6. Proposed Amendments to Regulation 9, Rule 7: NO_x and CO from Industrial, Institutional, and Commercial Boilers, Steam Generators and Process Heaters

Mr. Hilken stated that this rule amendment is not part of the CAP. In 2008, the Board of Directors adopted amendments to this regulation and since then staff has discovered minor issues that will be addressed today. Mr. Hilken introduced Julian Elliot, Senior Air Quality Engineer, who gave the staff presentation.

Mr. Elliot stated that this rule regulates almost all of the boilers, steam generators and process heaters that the Air District currently regulates. Mr. Elliot stated there is a much smaller subset of devices at petroleum refineries, which are subject to a different rule and a much smaller population of devices at power plants, also subject to a different rule.

Mr. Elliot provided the Committee background on the 2008 amendments which include:

- Updated NO_x limits for new and existing heaters already subject to rule (>10 MM BTU/hour); which were fewer than 500 devices (required to have permits)
- Added NO_x limits for devices rated 1 to <10 MM BTU/hour (estimated 2,600 smaller devices)
- Added efficiency standards to mitigate GHG impacts
- Created operator registration and manufacturer pre-certification programs for natural gas-fired devices rated >2 to <10 MM BTU/hour
- Manufacturers of devices rated >2 to <10 MM BTU/hour have not pre-certified any devices to allow their sale
- NO_x standards equivalent to new Air District standards have recently gone into effect in other parts of California

- Staff has undertaken an extensive inspection and outreach program to evaluate compliance with rule and to ensure that rule is understood by operators and manufacturers.

Mr. Elliot stated the goal of the proposed rule amendments is to make it easier for manufacturers to certify their boilers by allowing more methods to establish certification and simplifying the certification application process.

In addition, Mr. Elliott said the proposed amendments would extend the deadlines.

| NOx Limits & Manufacturer Pre-Certification Requirement | Current Effective Date | Proposed Effective Date |
|--|-------------------------------|--------------------------------|
| >2 to 5 MM BTU/hour | 1/1/2011 | 1/1/2013 |
| >5 to <10 MM BTU/hour | 1/1/2012 | |

Staff does not expect a compliance problem with larger devices so no changes are proposed for the compliance date for larger devices.

Staff outreach efforts include:

- Participated in manufacturer training sessions, meetings with municipal engineering staff, and other forums to explain new requirements.
- Mailed compliance advisories to heater operators, manufacturers, industry groups and others and will request comments on the draft rule from this same group.
- Undertaken an extensive compliance assistance and outreach program to evaluate compliance with rule requirements and to ensure that these requirements are understood by operators and manufacturers.

Mr. Elliott concluded his presentation by informing the Committee of the rule development process:

- Draft amendments under review
- Post Request for Comments on Draft Rule
- Complete Staff Report, CEQA Negative Declaration Addendum
- Public Hearing expected May 2011

Committee Comments/Questions:

Chair Uilkema asked if industry is in compliance elsewhere, why are they not complying with the Air District's standards. Mr. Elliott said it may be due to the economy.

Chair Uilkema asked about the costs associated with compliance. Mr. Elliott said that operators are required to register and the cost per registration is less than \$500 for a facility and an additional estimated cost of \$50 for each additional device at the facility, which is a one-time fee.

Chair Uilkema requested that staff provide the Committee with an update in about six to eight months to monitor the progress of the program.

Public Comments: None.

Committee Action: None; receive and file.

7. Committee Member Comments/Other Business:

Chair Uilkema requested the Committee mark their calendars for tentative dates which include May 5, 2011 and July 7, 2011 as possible meeting dates. Possible topics for discussion on May 5, 2011 include Lehigh and FLIR Camera and July 7, 2011 topic may be CASS and Bayview Hunters Point.

8. Time and Place of Next Meeting: 9:30 a.m., May 5, 2011, 939 Ellis Street, San Francisco, CA 94109.

9. Adjournment: Meeting adjourned at 10:45 a.m.

Vanessa Johnson
Executive Secretary II

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Uilkema and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 25, 2011

Re: Status Report on Greenhouse Gas Tailoring Rule

RECOMMENDED ACTION

None; receive and file

BACKGROUND

Section 202(a)(1) of the Federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set emissions standards for any air pollutants from motor vehicles which, in EPA's judgment, causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare. In 2003, EPA made the determination that it lacked the authority under the CAA to regulate Greenhouse Gases (GHGs) for climate change purposes. This determination was litigated, and in 2005 the U.S. Court of Appeals upheld EPA's decision. The case was later heard by the U.S. Supreme Court (*Massachusetts v. EPA* 549 U.S. 497 (2007)), and in April 2007 the Supreme Court found that GHGs meet the CAA definition of "air pollutant" subject to an EPA determination that GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.

On December 15, 2009, EPA published their "cause or contribute" and "endangerment" findings for GHGs. This action did not immediately result in GHGs becoming "regulated air pollutants" under the CAA because EPA had previously taken the position that an air pollutant becomes a "regulated air pollutant" on the date that the first adopted EPA rule requires actual control of the pollutant. On April 1, 2010, EPA and the Department of Transportation's National Highway Safety Administration issued the first national rule setting GHG emission standards for 2012 to 2016 model year cars and light duty trucks. The requirements of this rule took effect on January 2, 2011, which is the earliest date that 2012 model year vehicles meeting the standards can be sold in the United States. GHGs therefore officially became "regulated air pollutants" under the CAA on January 2, 2011.

The CAA contains permit requirements for facilities that are "major sources" of regulated air pollutants. There are two permit programs that apply: (1) the Prevention of Significant Deterioration (PSD) program, which requires preconstruction permit review for new major sources and major modifications to existing major sources, including the requirement for use of the Best Available Control Technology (BACT), and (2) the Title V program, which requires detailed operating permits for new and existing "major sources" which specify all applicable air emissions standards and compliance requirements. The CAA defines a "major source" as a facility that has the potential to emit any regulated air pollutant of more than 100 tons per year

(although, for certain types of facilities subject to PSD permit requirements, this applicability threshold is 250 tons per year, rather than 100 tons per year).

Based on the CAA's statutory 100/250 ton per year emissions thresholds for major sources, a very large number of facilities would become subject to CAA permit requirements based on emissions of GHGs. This is because carbon dioxide, the most prevalent GHG, is emitted in much larger quantities than other "conventional" air pollutants. For example, EPA estimated that nationally: (1) more than 40,000 new and modified facilities would be subject to PSD permitting per year based on emissions of GHGs, as compared with 280 PSD permits per year currently based on emissions of other regulated air pollutants, and (2) more than 6 million additional facilities would be subject to Title V permitting based on emissions of GHGs, compared to 11,000 currently based on emissions of other regulated air pollutants. Facilities like schools, hospitals, small farms, and restaurants often have GHG emissions above the CAA 100/250 ton per year thresholds and would become subject to PSD and Title V permit requirements. EPA concluded that these increases in PSD and Title V permits would result in significant administrative burdens that exceed the current capacities of these permit programs, and create significant economic burdens on affected facilities, to an extent that Congress could never have intended. Relying on the legal doctrines of "absurd results" and "administrative necessity", EPA therefore developed an approach to "tailor" the major source thresholds for GHGs to more appropriate levels. The GHG "tailoring rule" was proposed by EPA on September 30, 2009, and was adopted on May 13, 2010.

The EPA tailoring rule indicates that a facility that has a potential to emit GHGs of more than 100,000 tons per year, based on carbon dioxide equivalent emissions (CO₂e), is a major source of GHGs. The rule also indicates that an existing major source that would modify and increase emissions of GHGs by more than 75,000 tons per year CO₂e would be a "major modification" subject to PSD permit requirements. Based on the tailoring rule, EPA estimates that nationally: (1) about 550 facilities will need to obtain Title V permits for the first time due to their GHG emissions, and (2) approximately 900 additional PSD permits per year will be required. The primary industries affected would be power plants, refineries, cement manufacturing facilities, and solid waste landfills, which together account for 70 percent of GHG emissions from stationary source facilities nationally.

In response to a petition for reconsideration filed by the National Alliance of Forest Owners, EPA issued a proposal on March 20, 2011 to defer for a period of three years the PSD and Title V permitting requirements of the tailoring rule for emissions of biogenic carbon dioxide. Biogenic carbon dioxide is emitted from biomass combustion or oxidation from solid waste landfills, waste-to-energy projects, fermentation processes, combustion of renewable fuels, ethanol manufacturing, biodiesel production, and other alternative energy production that uses biomass such as crops or trees. Biogenic carbon dioxide is often considered to be "carbon neutral" because those emissions are naturally offset when the biomass removes an equivalent amount of carbon dioxide from the atmosphere via photosynthesis. EPA has not yet taken final action on this proposal.

EPA established a three step phase-in for the tailoring rule requirements as follows:

- Step 1: which is effective January 2, 2011 for facilities currently subject to PSD or Title V permit programs based on emissions other than GHGs.

- Step 2: which is effective July 1, 2011 for facilities not currently subject to PSD or Title V permit programs, but which exceed tailoring rule GHG emission thresholds.
- Step 3: which is effective no sooner than April 30, 2016, based on an EPA rule to be adopted by the end of 2015, for certain smaller facilities if EPA determines that successful streamlining will adequately reduce burdens associated with permitting these facilities. EPA has indicated that Step 3, if established, will not require permitting for sources with GHG emissions below 50,000 tons per year CO₂e.

Since the adoption of the tailoring rule, EPA has taken actions to: (1) require all state/local air permitting agencies that do not have the legal authority to permit GHGs to receive such authority, or be on a path to have such authority, with EPA serving as the permitting authority in the interim, (2) ensure that existing state/local programs will not inappropriately draw smaller sources not covered by the tailoring rule into PSD and Title V permit programs based on the statutory CAA definition of major source. EPA has also issued guidance to assist permit writers and permit applicants on permit requirements for GHG emissions including how to determine the BACT.

EPA has also recently taken actions that would establish GHG emissions standards under the CAA's New Source Performance Standards (NSPS) program. On December 23, 2010, EPA announced that it had settled litigation with states and environmental groups that sought to compel EPA to establish NSPS for GHG emissions from fossil fuel power plants and petroleum refineries. Under the terms of these settlements, EPA will promulgate proposed NSPS for fossil fuel power plants by July 26, 2011, and final standards by May 26, 2012. Proposed standards for petroleum refineries will be promulgated by December 10, 2011, and final standards by November 10, 2012.

Both settlement agreements commit EPA to issue standards for new and modified facilities. The power plant settlement also commits EPA to issue standards for existing facilities (whether or not the facilities are modified), although these standards will be implemented under a somewhat different procedure and schedule. Under Section 111(d) of the CAA, EPA may issue "guidelines" to the states requiring them to adopt and submit to EPA for approval standards for existing facilities that conform to the EPA guidelines. EPA regulations provide that states must submit such standards to EPA for approval nine months after EPA promulgates standards for new and modified facilities (or nine months after May 26, 2012, per the settlement agreement). Once the state standards are then approved by EPA and become effective, existing facilities must be given a reasonable amount of time to comply with the standards.

DISCUSSION

The Air District is the designated air permitting agency in the Bay Area, and the EPA has delegated the responsibilities for issuing both PSD and Title V permit programs to the Air District. Following adoption of the GHG tailoring rule, staff determined that existing Air District permit rules provide sufficient authority to implement the tailoring rule requirements without inappropriately drawing in smaller sources of GHGs not covered by the tailoring rule. Staff believes that some rule amendments are needed, however, to increase the clarity of these requirements, and the process of drafting these amendments has begun. In the meantime, guidance materials are being used to inform facilities and permit applicants about these new requirements.

In accordance with tailoring rule Step 1 phase-in, Air District staff has begun incorporating applicable GHG requirements into Title V permits for facilities currently subject to this program. The primary requirement involves GHG emissions reporting. The only PSD permit application that the Air District has evaluated subsequent to adoption of the tailoring rule (for the proposed Russell City Energy Center in Hayward) was completed with the PSD permit issued prior to the January 2, 2011 effective date of Step 1 (the District nonetheless completed a GHG BACT determination for this project, and the applicant accepted enforceable conditions on GHG emissions on a voluntary basis).

With regard to tailoring rule Step 2 phase-in, Air District staff completed an evaluation of Bay Area facilities that might be subject to Title V permit requirements for the first time due to their GHG emissions. Five facilities were identified in this category, and all five are petroleum coke-fired power plants located in Contra Costa County that are owned/operated by GWF Power Systems, L.C. An additional 38 facilities that don't have existing Title V permits were identified that may have the potential to emit GHGs above the 100,000 ton per year GHG threshold, although current actual emissions are below this level. These 38 facilities need to do one of the following: (1) obtain a Title V permit, (2) obtain a Synthetic Minor Operating Permit (SMOP), which would establish enforceable conditions that limit the facility's potential to emit GHGs to below the 100,000 ton per year threshold, or (3) make a potential to emit demonstration that the facility's GHG emissions could not exceed the 100,000 ton per year threshold. On December 2, 2010, the Air District notified the affected Bay Area facilities of the tailoring rule requirements, and indicated that required permit applications are due by July 1, 2011. Eight of the 38 facilities have since provided information to the Air District to substantiate that their potential to emit GHGs is below the applicability thresholds (i.e., Option 3 above). Most of the 30 remaining facilities are expected to apply for SMOPs, which are due by July 1, 2011.

With regard to tailoring rule Step 2 phase-in for PSD permits, staff expects an additional 3 or 4 projects per year, on average, to trigger these requirements due to GHG emissions. The Air District has recently received a PSD permit application for a waste-to-energy facility that appears to be the first project that will require a GHG BACT determination under the tailoring rule (it is possible that this requirement could be deferred, however, under the upcoming EPA rule regarding biogenic carbon dioxide). A second permit application for a large power plant (Willow Pass Generating Station in Pittsburg) that would be subject to these requirements has been received, but the application has been put "on-hold" by the applicant. Several other proposed Bay Area power plants previously reviewed by the Air District will need to obtain all necessary regulatory approvals and begin construction by July 1, 2011, to avoid PSD permit requirements under the tailoring rule. All of these projects have indicated that they are on schedule to meet this goal.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian Bateman
Reviewed by: Jeffrey McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Uilkema and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 25, 2011

Re: Status Report on Proposed Bay Area Power Plants

RECOMMENDED ACTION

None; receive and file

BACKGROUND

Air District staff completes preconstruction permit reviews for a variety of proposed Bay Area power plant projects. These projects range in size from small distributed generation facilities to large central power plants. Proposed thermal power plants with an output of 50 megawatts (MW) or greater must be licensed by the California Energy Commission (CEC), and the Air District provides a Determination of Compliance (DOC) to the CEC on these projects so that applicable air quality requirements can be subsumed into the CEC license. Some projects also require federal preconstruction air quality permits under the Clean Air Act's Prevention of Significant Deterioration (PSD) program. The US Environmental Protection Agency (EPA) has delegated their authority to issue federal PSD permits to the Air District for projects in the Bay Area.

Power plant projects are subject to stringent New Source Review requirements that include the use of the Best Available Control Technology (BACT) to minimize air pollutant emissions. BACT requirements become more stringent over time due to advances in air pollution control technology, and new power plants are therefore much cleaner than older existing power plants. This is true even though older Bay Area power plants have become much cleaner over time due to the adoption of rules that require retrofit emission controls. Additional permit requirements for proposed power plant projects include emission offsets, air quality impact analysis (for criteria air pollutants), and health risk screening (for toxic air contaminants).

The vast majority of Bay Area power plants exclusively use natural gas, a fuel that results in relatively low air emissions compared to the use of liquid or solid fuels (e.g., fuel oil or coal). The primary pollutants emitted from natural gas-fired power plants are nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂). NO_x and CO are criteria air pollutants that are formed in the combustion process -- NO_x from the combination of nitrogen and oxygen in the combustion air, and CO from incomplete combustion of fuel. NO_x and CO emissions from natural gas-fired power plants can be controlled with the use of add-on control devices that use catalysts to create chemical reactions to reduce emissions. These catalyst-based control technologies have improved significantly over the years, and are highly effective in reducing NO_x and CO emissions.

CO₂ is a greenhouse gas (GHG) generated from the complete combustion of carbon containing fuel, and it is emitted in much larger quantities than NO_x and CO. Effective add-on control devices for reducing CO₂ emissions from power plants are generally unavailable. CO₂ emissions from fossil-fueled power plants can be minimized with the use of natural gas (which results in lower CO₂ emissions than other fossil fuels), and with equipment designs that convert the energy in fuel to electricity in an efficient manner.

The CEC, in their role as lead agency under their CEQA-equivalent review process, has begun to review GHG emissions from new power plant projects for consistency with California's stringent GHG goals and policies. This review has been in the context of the operation of the entire electricity system of which the proposed plant is an integrated part. Because the system is integrated, and because electricity is produced and consumed instantaneously, any change in output from one generation source is likely to affect the output from all generators. The CEC has noted that the electricity produced from a new plant will most likely displace the output from older, less energy efficient, fossil-fueled plants, thereby reducing the GHG emissions that would otherwise occur. The CEC also indicates that, even as more renewable generation is introduced into the system to meet GHG emission reduction goals, gas-fired power plants will be necessary to provide intermittent generation support, extreme load and system emergencies support, as well as meeting local capacity requirements. At this time, gas-fired plants are better able to provide such services than are most renewables, because they can be dispatched when they are needed.

DISCUSSION

Staff last provided the Stationary Source Committee with an update on proposed new power plants at their meeting on February 24, 2010. At the committee meeting on May 5, 2011, staff will provide an update on the status of six proposed power plants as follows: Russell City Energy Center, Los Esteros Critical Energy Facility, Marsh Landing Generating Station, Mariposa Energy Project, Oakley Generating Station, and Willow Pass Generating Station. Additional details on these plants follow.

Russell City Energy Center (RCEC)

RCEC is a proposed 600-MW natural gas fired combined-cycle power plant to be located at 3862 Depot Road in Hayward. The RCEC includes two gas turbines, two heat recovery boilers, a fire pump engine, and a cooling tower. The initial project, proposed by an affiliate of Calpine Corporation, was licensed by the CEC in 2002. The project thereafter changed location and an amendment to the license was required. On June 19, 2007, the Air District issued a Final Determination of Compliance (FDOC) for the amended RCEC, concluding that the project, with appropriate permit conditions, could comply with all applicable air quality requirements. On September 26, 2007, the CEC approved the amended RCEC and granted a power plant license. The Air District subsequently issued an Authority to Construct (ATC) and federal PSD permit for the amended RCEC on November 1, 2007. An appeal of the PSD permit resulted in a remand by EPA's Environmental Appeals Board (EAB) that required the Air District to provide additional opportunities for public comment. In response to this remand, the Air District conducted more extensive public noticing, held additional comment periods, and held two public hearings in Hayward on the PSD permit. The Air District received numerous comments on the PSD permit, and revised its proposal based on some of these comments. Permit issuance was further delayed pending the completion of a required endangered species consultation by the U.S. Fish and Wildlife Service. The Air District approved the PSD permit for the RCEC on

February 3, 2010, upon completion of the endangered species consultation. The PSD permit issued for this project was appealed again to the EAB and, on November 18, 2010, the EAB dismissed the appeal in favor of the Air District's permit issuance. Due to delays resulting from the two PSD permit appeals, the ATC for RCEC needed to be renewed for an additional term. On August 18, 2010, the CEC issued an amendment to their license for RCEC that incorporates conditions for updated BACT requirements that were needed for the ATC renewal. The Air District subsequently renewed the ATC for RCEC on November 18, 2010. This action was appealed to the Air District's Hearing Board and, on March 3, 2011, the Hearing Board dismissed the appeal. Construction of RCEC has begun with site grading now complete, and excavation of foundations and pile driving underway.

Los Esteros Critical Energy Facility (LECEF)

The LECEF, located at 800 Thomas Foon Chew Way in San Jose, is a simple-cycle gas turbine facility that became fully operational in March 2003. The LECEF currently consists of four natural gas fired turbines with a combined nominal output of 180-MW, a fire pump diesel engine, and a cooling tower. The simple-cycle configuration was planned as the first stage of a phased development leading to conversion to a combined-cycle power plant. The Air District issued LECEF an ATC on August 22, 2007, for the project to convert the plant to a combined-cycle configuration. This conversion would increase the nominal output to 320-MW, and requires the addition of four heat recovery steam generators, one steam turbine generator and one six-cell cooling tower. On June 5, 2009, the applicant, a Calpine affiliate, submitted a request to renew the ATC for the conversion project for an additional two year term. Based on input received from the Air District regarding updated BACT requirements resulting from this ATC renewal request, the CEC issued an amended license to the facility on February 2, 2011. The Air District subsequently issued a renewed ATC for the conversion project on February 16, 2011. An appeal of the ATC has been filed with the Air District's Hearing Board, and a pro forma hearing on this matter was scheduled for April 21, 2011. The CEC is expected to provide a "start of construction" approval for the LECEF conversion project by the end of April, with the start of construction activities at the site planned for May 2011.

Marsh Landing Generating Station (MLGS)

MLGS is a proposed 760-MW natural gas fired power plant that is to be located adjacent to the existing Contra Costa Power Plant in unincorporated Antioch. The applicant for MLGS is GenOn Marsh Landing, LLC (formerly an affiliate of Mirant Corporation). MLGS consists of four simple-cycle gas turbines; two natural gas fired preheaters, and associated equipment. The construction of MLGS is intended to allow for the shut-down of the two remaining utility boilers at the Contra Costa Power Plant, with a capacity of 674-MW, which are owned by GenOn Energy, Inc. The Air District issued a PDOC for the MLGS on March 29, 2010, and an FDOC on June 25, 2010. The CEC issued a license for the MLGS on August 25, 2010. The Air District subsequently issued an ATC for the project on August 31, 2010. An appeal of the ATC was filed with the Air District's Hearing Board, but this appeal was later withdrawn. Work at the project site began in January 2011, with more extensive construction (e.g., foundation work) expected to be underway in May 2011.

The Mariposa Energy Project (MEP)

MEP is a proposed 200-MW natural gas fired power plant to be located in northeastern Alameda County, approximately 7 miles northwest of Tracy, 7 miles east of Livermore, and 6 miles south of Byron. The MEP is a simple-cycle plant consisting of four gas turbines and associated

equipment. The applicant, Mariposa Energy, LLC, started the permit process in 2009. The Air District issued a PDOC for the MEP on August 18, 2010, and an FDOC on November 24, 2010. On April 13, 2011, a CEC siting committee recommended the approval of MEP, and began a 30-day public comment period. The CEC committee will consider comments before bringing the proposed decision to the full Energy Commission for consideration.

Oakley Generating Station (OGS)

OGS is a proposed 624-MW natural gas fired power plant to be located at 6000 Bridgehead Road in the City of Oakley. The OGS is a combined-cycle plant that includes two gas turbines with heat recovery boilers, one steam turbine, and an auxiliary boiler. The applicant, Contra Costa Generating Station, LLC (wholly owned by Radback Energy, Inc.) started the permit process in 2009. The Air District issued a PDOC for the OGS on October 29, 2010, and an FDOC on January 21, 2011. On April 12, 2011, a CEC siting committee recommended the approval of OGS, and began a 30-day public comment period. The CEC committee will consider comments before bringing the proposed decision to the full Energy Commission for consideration.

Willow Pass Generating Station (WPGS)

WPGS is a proposed 550-MW natural gas fired power plant to be located in the City of Pittsburg adjacent to the existing Pittsburg Power Plant. The WPGS is a combined-cycle plant that includes two gas turbines with heat recovery boilers and steam turbines. The applicant (an affiliate of GenOn Energy, Inc.) started the permit process in 2008, but subsequently put the project “on-hold”. The applicant has indicated their intent to reactivate the permit application at some point, but the timeframe for action has not been specified.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian Bateman
Reviewed by: Jeffrey McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Uilkema and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 25, 2011

Re: Advanced Thermal Imaging Camera Technology Utilized in the Compliance Assurance Program

RECOMMENDED ACTION

None; receive and file

BACKGROUND

The Air District has been utilizing Forward Looking Infrared (FLIR) camera technology as a screening tool for compliance activities. The FLIR camera can detect volatile organic compound leaks and provides thermal imaging of otherwise invisible plumes.

DISCUSSION

The Air District has been using the FLIR camera for inspections of industrial facilities, incident responses for accidental releases of air pollution, and research and development. Staff will present the basic science of FLIR technology and how it has been utilized in the Compliance Assurance Program.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Richard Lew
Reviewed by: Kelly Wee