BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BOARD OF DIRECTORS
STATIONARY SOURCE COMMITTEE MEETING

COMMITTEE MEMBERS

MARK DeSAULNIER –CHAIRPERSON
ROBERTA COOPER
SCOTT HAGGERTY
JOHN SILVA
SHELIA YOUNG

JERRY HILL - VICE CHAIRPERSON
ERIN GARNER
JULIA MILLER
GAYLE UILKEMA

MONDAY
JANUARY 24, 2005
9:30 A.M.

7th FLOOR BOARD ROOM

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 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 five (5) minutes each.*

3. **APPROVAL OF MINUTES OF NOVEMBER 22, 2004**

4. **STATUS REPORT ON THE DISTRICT'S FLARE CONTROL RULE DEVELOPMENT**

G. Kendall/4932
gkendall@baaqmd.gov

Staff will provide a status report on the development of a flare control rule.

5. **STATUS REPORT ON THE DISTRICT'S AIR TOXICS NEW SOURCE REVIEW (NSR) PROGRAM RULE DEVELOPMENT PROJECT**

B. Bateman/4653
bbateman@baaqmd.gov

Staff will provide a summary of the Air Toxics New Source Review program rule development project to the Committee.

6. **STATUS REPORT ON THE DISTRICT'S COMMUNITY AIR RISK EVALUATION (CARE) PROGRAM**

B. Bateman/4653
bbateman@baaqmd.gov

Staff will provide a status report on the District's Community Air Risk Evaluation (CARE) Program.

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. (Gov't Code § 54954.2)

8. **TIME AND PLACE OF NEXT MEETING –MARCH 28, 2005**

9. **ADJOURNMENT**

AGENDA NO. 3

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
(415) 771-6000

DRAFT MINUTES

Summary of Board of Directors
Stationary Source Committee Meeting
9:30 a.m., Monday, November 22, 2004

1. **Call to Order – Roll Call:** Chairperson Mark DeSaulnier called the meeting to order at 9:53 a.m.

   Present: Mark DeSaulnier, Chairperson; Roberta Cooper, Jerry Hill, Julia Miller, Mark Ross, John Silva, Gayle Uilkema, Shelia Young.

   Absent: Marland Townsend.

   Also Present: Scott Haggerty (10:03 a.m.).

2. **Public Comment Period:** There were none.

3. **Approval of Minutes of September 27, 2004:** Director Young moved approval of the minutes; seconded by Director Miller; carried unanimously without objection.

4. **Report on District's Flare Monitoring Program:** *Staff provided a report on the implementation of Regulation 12, Rule 11: Flare Monitoring at Petroleum Refineries, flare emissions information, and flare control rule development progress.*

   Alex Ezersky, Principal Air Quality Specialist, presented the report and reviewed the background on the development of the Flare Monitoring Rule. Mr. Ezersky summarized some of the requirements of the Rule; reviewed the video monitoring provision; and the alternative text-based web posting on the Air District's web site. Mr. Ezersky discussed flare emissions, including their characterization, makeup and frequency. Mr. Ezersky stated that a reevaluation of the emissions from the District's initial assessment indicates a daily average of eight tons instead of 22 tons.

   Mr. Ezersky reviewed a graph indicting the total organic emission trends from December 2003 through July 2004. Staff has been evaluating the data submitted by the refineries. The new ultrasonic meters were required to be installed by December 1, 2003. The daily average of organics is about 0.69 tons per day for this time period. This reduction in emissions is due to installation of new compressors, added recovery capacity, improved compressor reliability, and enhanced monitoring and management practices.

   Director Scott Haggerty arrived at 10:03 a.m.

Mr. Ezersky discussed the evaluation of flare operations and stated that staff is continuing to meet with all interested parties to evaluate and propose enhancements to the flare monitoring rule. Some of the areas being considered include flow monitoring, composition, investigation and notification. The Technical Working Group continues to discuss the issues and develop new control strategies.

In summary, Mr. Ezersky stated the flare monitoring rule has been implemented, there is an increased understanding of flare operations, information is available on the District's web site, emissions have been significantly reduced, and control strategy development continues.

Speakers:

Dennis Bolt
Western States Petroleum Association
Concord, CA 94518

Greg Karras
Communities for a Better Environment
Oakland, CA 94612

In response to a comment from Director Uilkema, Jack Broadbent, Executive Officer/APCO, stated that during the rule making process there would be a number of meetings where the Air District will receive input from the public. Director Silva requested that the meetings be advertised in Benicia.

Committee Action: None. This report provided for information only.

5. Rule Development Efforts for 2005: *Staff provided a report and a proposed schedule on expected rule development efforts in 2005.*

Dan Belik, Rule Development Manager, presented the report and reviewed the expected rule development schedule for New Source Review rules, Ozone Plan rules, Ozone Further Study Measures and Particulate Matter measures. Mr. Belik noted that the measures to reduce Particulate Matter will go hand-in-hand with the Air District's Community Air Risk Evaluation (CARE) Program.

Speaker: Greg Karras
Communities for a Better Environment
Oakland, CA 94612

Committee Action: None. This report provided for information only.

6. Committee Member Comments/Other Business: There were none.

7. Time and Place of Next Meeting: 9:30 a.m., Monday, Janaury 24, 2005, 939 Ellis Street, San Francisco, California 94109

8. Adjournment: The meeting adjourned at 10:30 a.m.

Mary Romaidis
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Inter-Office Memorandum

To: Chairperson DeSaulnier and Members
of the Stationary Source Committee

From: Gary Kendall,
Acting Director of Planning & Research

Date: January 18, 2005

Re: Status Report on the Development of the Refinery Flare Control Rule

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

On November 24, 2004, staff reported to the Stationary Source Committee on the implementation of Regulation 12, Rule 11: Flare Monitoring at Petroleum Refineries. The report summarized the implementation of Regulation 12, Rule 11, provided information about flare reports on the District web site, gave a report on flare emissions and emissions trends, and reported the progress on flare control rule development efforts.

DISCUSSION

Staff will present an update on the refinery flare control rule development efforts, including:

- Workgroup meetings,
- Regulatory approach and concepts,
- Annual Summary of Flare Monitoring Data,
- Elements of the proposed rule,
- Continuing public process, and
- Schedule

Respectfully submitted,

Gary Kendall
Acting Director of Planning & Research

FORWARDED BY: _____

Prepared by: Alex Ezersky and Dan Belik
Reviewed by: Jean Roggenkamp

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Inter-Office Memorandum

To: Chairperson DeSaulnier and Members of the Stationary Source Committee

From: Brian Bateman, Director of Engineering

Date: January 14, 2005

Re: Status Report on the District's Air Toxics New Source Review Program Rule Development Project.

RECOMMENDED ACTION

Receive and file staff summary of the Air Toxics New Source Review (NSR) program rule development project, and provide input to Staff as deemed appropriate.

BACKGROUND

1. Air Toxics Program

The District has had, since 1987, a program to describe, control, and where possible eliminate public exposure to toxic air contaminants (TACs). TACs are air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a potential hazard to human health. The air toxics program was established as a separate and complementary program to the traditional criteria pollutant programs, which focus on attaining and maintaining ambient air quality standards (e.g., ozone).

The air toxics program includes three individual regulatory programs directed at stationary sources of TACs located at industrial and commercial facilities. Two of these programs apply to sources at existing facilities, and the third is the Air Toxics NSR program, which focuses on proposed projects involving new and modified sources. This report describes the existing Air Toxics NSR program, and changes to the program that District staff intend to make through a rule development process.

2. Existing Air Toxics NSR Program

The goal of the District's Air Toxics NSR program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on preconstruction permit review. The program is also intended to reduce existing health risks by imposing updated control requirements when older, more highly polluting, sources are modified or replaced.

The Air Toxics NSR program was established in 1987 at the direction of the District's Board, and has been implemented based on policies and procedures established by the Air Pollution Control Officer (APCO) after holding workshops and considering public input. The Air Toxics NSR program is a local program; there are no specific State or federal mandates requiring such a program. In California, most of the 35 air districts currently

have an Air Toxics NSR program – these programs are all based on the same general framework, although specific program requirements may vary between districts.

The Air Toxics NSR program is a health risk-based program, meaning that the program requirements are based on the results of a health risk assessment (HRA). An HRA is a scientific analysis of the measure of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic substances. The Air Toxics NSR program uses an HRA methodology that was specifically developed for air pollution control programs in California by agencies including Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA). This methodology is documented in State HRA guideline documents, which have been updated several times since their original publication in 1987.

The District's Risk Evaluation Procedure (REP) identifies the procedures that staff follow to assess the significance of TAC emissions from new and modified sources. The REP specifies that all permit applications for new and modified sources must be screened for emissions of TACs. If any TAC is emitted in amounts that exceed specified de minimus levels, a site-specific HRA is completed by District staff using computer-modeled estimates of atmospheric dispersion. Estimates of public exposure, and cancer and non-cancer health risk, are made for the maximally exposed residential and off-site worker receptor locations.

The District's Risk Management Policy (RMP) specifies criteria that the APCO has established for the approval of permits for new and modified sources of TACs based on the results of an HRA. Under the RMP, sources must use the Best Available Control Technology for Toxics (TBACT) to minimize emissions if the project would increase an individual's lifetime cancer risk by more than 1 in a million. If TBACT is used, permits may be issued if the maximum cancer risk from the project is 10 in a million or less. The RMP also limits TAC emissions based on non-cancer health risks by specifying that a project may not increase an individual's non-cancer risk by more than a Hazard Index of 1.0. [A Hazard Index is calculated by dividing the estimated exposure of a TAC with the TAC's Reference Exposure Level (REL). The REL is the exposure level below which no adverse non-cancer effects are expected even in sensitive subpopulations.]

The APCO has also established alternative RMPs for two specific source categories based on risk management considerations: (1) diesel-fueled engines, and (2) perchloroethylene (Perc) dry cleaners. The criteria for diesel-fueled engines are essentially the same as those previously described except that, for emergency standby engines, health risks are calculated for all engine operations except for emergency use. This provision was established so that the District would not need to limit standby engine operation in the case of an emergency.

The APCO has established a specific RMP for dry cleaners that allows permits to be issued above 10 in a million cancer risk (but within the range established in State and federal risk management guidelines). The dry cleaner RMP was established after OEHHA increased their cancer potency value for Perc by a factor of ten in 1991. Following this action, the District determined that: (1) the use of this revised toxicity value would result in maximum cancer risks for most new and modified Perc dry cleaners that would exceed the project risk levels established in the RMP (i.e., greater than 10 in a million); (2) non-Perc

alternative dry cleaning technologies were either not adequately advanced for the District to require instead of Perc, or were slated to be phased-out as stratospheric ozone depleting compounds (e.g., CFCs); and (3) although a number of reasonable risk reduction measures were available to reduce the risk from Perc dry cleaners, in many cases they would not be sufficient to reduce the risk below the 10 in a million criterion. In consideration of these factors, the District established an RMP for Perc dry cleaners that would allow permits to be issued for maximum cancer risks up to 100 in a million if TBACT and all reasonable risk reduction measures are used.

Prior to the year 2000, the District completed HRAs for an average of about 175 permit applications per year. This number increased to 255 in 2000, and to over 400 in each of the years 2001 through 2004 (the peak year was 2002, in which 602 HRAs were completed). The large increase in the number of HRAs completed since the year 2000 is due primarily to the elimination of permit exemptions for certain sources, particularly engines that are used to supply backup power in the event of an emergency.

The District has made significant improvements in recent years with respect to the speed and level of refinement with which HRAs can be completed. Most of these improvements have to do with the use of more advanced computer tools and digital data and maps that are used to complete the air dispersion modeling and land-use analysis portions of the analysis. These tools include digital topographic maps, aerial photos, terrain elevations, parcel maps, and real estate property databases.

A wide variety of different types of sources have TAC emissions and may be subject to HRA requirements. Diesel engines are currently the most common type of source evaluated in the Air Toxics NSR program, accounting for over 60 percent of the HRAs completed. Other source categories for which significant numbers of HRAs are completed are, in order of decreasing numbers, gasoline dispensing facilities, various gas-fired combustion sources, soil-vapor extraction systems, and dry cleaners. Other common, but less numerous, sources evaluated include surface coating operations, organic liquid storage tanks, coffee roasters, crematories, and furniture strippers.

District staff work with permit applicants to help them meet the criteria for permit approval specified in the RMP. If, after exhausting all reasonably available levels of refinement, the results of an HRA indicate that the project will not meet the requirements of the RMP as proposed, District staff will identify options under which compliance can be achieved. The applicant may then consider these options, and is given the opportunity to amend their application, or submit a new permit application, with changes in the project necessary to reduce health risks to levels specified in the RMP. In relatively rare instances, the APCO will deny a permit for a proposed project because it has not met the health risk requirements of the RMP. In the vast majority of cases, however, viable permitting options can be identified where the use of emissions control technology and/or other risk reduction measures will be successful in reducing the health risks to acceptable levels.

3. Air Toxics NSR Rule Development Project

In 2003, the District proposed to codify the policies and procedures that make up the Air Toxics NSR program by adopting a new District rule (Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants), and a new part to its Manual of Procedures. Amendments to several other District rules were also proposed in order to maintain

consistency with Regulation 2, Rule 5. The goals of this rule development project are to: (1) update and enhance program requirements primarily to increase conformity with State risk assessment and risk management guidelines; (2) improve the legal defensibility of the District's permitting decisions; and (3) increase the clarity and public visibility of program requirements.

The most significant changes in the Air Toxics NSR program included in the proposed rulemaking are: (1) add the consideration of acute health risks in HRAs; (2) add a TBACT requirement for non-cancer health risks at a Hazard Index of 0.2; (3) use updated toxicity values and exposure assessment procedures; (4) remove existing exemptions from project risk limits for dry cleaners due to advances in non-Perc technologies; and (5) clarify and expand requirements for discretionary risk management actions. Due to increases in the quantity and complexity of HRAs that will result from these changes, the District has also proposed to increase permit fees for applications that require an HRA by $250 in order to fund the additional anticipated staff resources.

The District held a series of workshops in 2003 to discuss the Air Toxics NSR rule proposal with interested parties. Workshops were held at the District Office, and at community locations in Richmond, Oakland, San Francisco, and East Palo Alto. The most extensive comments submitted were from the Golden Gate University School of Law Environmental Law and Justice Clinic (ELJC) on behalf of the Environmental Justice Air Quality Coalition, Bayview Hunters Point Community Advocates, and Our Children's Earth Foundation. District staff subsequently met on several occasions with ELJC and their clients, as well as with industry representatives that had commented on the proposal, in order to clarify and resolve issues.

One of the primary concerns expressed by ELJC is that the Air Toxics NSR program is based on an incremental approach that does not address cumulative air pollution exposure. ELJC contends that the incremental risks from additional TAC sources may create unacceptable health burdens in affected communities when added to existing health risks from air pollution in an area.

The District's proposal does not include cumulative risk considerations for two reasons: (1) the needed policies, tools, and databases are currently not available for that purpose; and (2) at this time, there is no evidence that emissions from new and modified sources that meet the proposed project risk limits would cause, or contribute significantly to, adverse cumulative health effects. In order to better address the issue of cumulative health risks, the District has recently established the Community Air Risk Evaluation (CARE) program. The CARE program plan includes a pilot cumulative risk assessment project that will be used to better evaluate the need for, and the resources required to, incorporate cumulative risk considerations into the Air Toxics NSR program at a future date. The CARE program will also lead to the development of measures to reduce TAC emissions from sources that are identified to have significant contributions to cumulative health risks in the most heavily impacted areas.

Another concern raised by ELJC is that the risk limits used in the Air Toxics NSR program are not stringent enough. Based on these comments, the District is considering options to the discretionary risk management provisions in the proposed rule that allow the APCO to

make case-by-case exemptions from project risk limits (e.g., allowing cancer risks up to 100 in a million) based on risk management considerations.

The District believes that more stringent general risk limits (e.g., limiting project cancer risk to 1 in a million, as ELJC has recommended) would place unreasonable burdens on permitted sources. The District's risk limits were chosen to provide a balanced consideration of technological feasibility, economic reasonableness of risk reduction methods, uncertainties and variability in health risk assessments, and protection of public health. Based on the District's experience, it would be virtually impossible for a wide variety of sources that the District routinely permits to meet the risk levels that ELJC has suggested, despite the use of TBACT and all other reasonable risk reduction measures. This includes almost all retail gasoline dispensing facilities, Perc dry cleaners, diesel back-up generators, crematories, furniture refinishing operations, and many natural gas-fired combustion sources. It should be noted that this problem would not be limited to sources in residential areas, as the maximum risk for these sources typically results from exposures to nearby off-site workers. The problem would become even more pronounced when the exposure assessment assumptions in the recently updated OEHHA risk assessment guidelines are used (conformity with these guidelines is part of the District's rule proposal), as calculated cancer risks for off-site workers using the updated guidelines will increase by 39 percent from the assumptions currently used.

4. Looking Ahead

District staff are currently finalizing a revised rule proposal that addresses the public comments received to date. A decision has also been made to prepare a full Environmental Impact Report (EIR) for the rule development project, rather than a Negative Declaration. The preparation of the EIR will require that the rule development schedule be extended. Staff expects that the rule package will be ready for consideration for adoption by the Board late in the second quarter of this year.

RECOMMENDATION

No Committee action is needed at this time. Staff will be providing the Committee with a summary of the final regulatory proposal most likely at the Committee meeting in May.

Respectfully submitted,

Brian Bateman, Director
Engineering Division

FORWARDED: _____

Prepared by: Brian Bateman
Reviewed by: Peter Hess

AGENDA: 6

BAY AREA AIR QUALITY MANGEMENT DISTRICT
Inter Office Memorandum

To: Chairperson DeSaulnier and Members of the Stationary Source Committee

From: Brian Bateman, Director of Engineering Division

Date: January 18, 2005

Re: Report on District's Community Air Risk Evaluation (CARE) Program

RECOMMENDED ACTION:

Informational report. Receive and file.

BACKGROUND:

The District has initiated a Community Air Risk Evaluation (CARE) program to evaluate and reduce health risks associated with toxic air pollutants in the Bay Area. Staff will provide the committee with an update on developments in this program.

DISCUSSION:

The CARE program will address a variety of toxic air pollutants with an emphasis on diesel particulate matter (PM), which is thought to be the major source of airborne cancer risk in California. The District has made the following progress on CARE program objectives:

(1) CARE Advisory Committee – Invitations to participate on the Advisory Committee have been sent. Together, the prospective Committee members represent a diverse and highly qualified group. Included on the proposed list are community representatives with experience working on air quality and/or health issues, representatives of various sectors of the regulated community, representatives of academic institutions in fields relevant to the CARE program, as well as public health experts. The list of invitees will be presented to the Stationary Source Committee at the meeting on January 24, 2005.

(2) Emission Density Maps - Staff is in the process of developing emission inventories that will be mapped on a 2 km x 2 km grid of the Bay Area using geographic information system (GIS) software. The area source inventory has been completed. Work is set to start soon on the on-road motor vehicle emission inventory. These two emission inventories, plus the District's point source inventory, will all be entered as data into the GIS software. The software was purchased and installed for two staff members this month. These staff also attended GIS training.

(3) Monitoring Support for Emission Inventory – District laboratory staff have been using the new Thermal Optical Carbon Analyzer since September to determine the ratio of organic carbon to elemental carbon on the particulate matter filters from the District's monitors.

Filters collected from 1999 through most of 2004 were previously analyzed, and the results provided to the District by the Desert Research Institute.

(4) Analysis and Modeling Support for Emission Inventory – The District statistician is performing an initial analysis of the carbon data and emissions data. The preliminary Report is expected by the end of January. There is an ongoing process to hire a modeler who will also work on the CARE program.

(5) Risk Evaluation for a Pilot Project Area – The pilot area will be selected after staff create and evaluate the gridded emission maps and underlying data. In order to eventually conduct the risk assessment, staff will audit the accuracy of District records in the pilot project neighborhood, and obtain additional data using global positioning system (GPS) technology. The GPS verified data will include street location, physical parameters of key buildings (including any building with the potential to impact downwash), facility boundary lines, source release parameters (e.g. stack heights) as well as the location of significant receptors including schools, child and elder care facilities, and high density residential blocks. The GPS equipment was purchased this month. Two temporary staff will be hired to take the measurements and input the data. The hiring process is underway.

The remaining program objectives, Evaluate Risk Reduction Opportunities and Implement a Risk Reduction Plan, await the completion of the technical study and evaluation.

Respectfully submitted,

Brian Bateman
Director of Engineering

Forwarded: _____

Prepared by: Janet Stromberg
Reviewed by: Peter Hess