California Air Resources Board

PUBLIC MEETING AGENDA

May 22-23, 2003
9:00 a.m. / 8:30 a.m.

03-4-1 Public Meeting to Consider a Health Update

03-4-3 Public Meeting to Consider a Research Proposal

03-4-4 Public Meeting to Consider Proposed Grants for Developing New Air Monitoring Instruments

03-4-5 Public Hearing to Consider Amendments to the Transport Mitigation Regulations

03-4-6 Public Meeting to Provide the Board with a Report on Environmental Justice Related Data Needs

03-4-7 Public Meeting to Consider Findings on AB 2637 Vehicle Exemptions from the Basic Smog Check Program

Includes AcrobatTM ReaderTM

PC and Mac Compatible

California Environmental Protection Agency

ELECTRONIC BOARD BOOK

California Environmental Protection Agency

Air Resources Board

PUBLIC MEETING AGENDA

LOCATION:
California Environmental Protection Agency
Air Resources Board
Central Valley Auditorium, Second Floor
1001 I Street
Sacramento, CA 95814

This facility is accessible by public transit. For transit information, call: (916) 321-BUSS, website www.sacrt.com (This facility is accessible to persons with disabilities.)

May 22-23, 2003
9:00 a.m. / 8:30 a.m.

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03-4-3	**Public Meeting to Consider a Research Proposal**	**3-10**
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The Board Book is comprised of a number of individual documents, many of which are individually numbered. The Board Book itself is numbered in the top right and left hand corners. These numbers are reflected in the Table of Contents above.

CONTACT CLERK OF THE BOARD, 1001 I Street, 23rd Floor, Sacramento, CA 95814 **(916) 322-5594**
FAX: (916) 322-3928
ARB Homepage: www.arb.ca.gov

To submit written comments on an agenda item in advance of the meeting.
To request special accommodations for those persons with disabilities (at least 7 days prior to the meeting date please).
For persons with a hearing or speech impairment, please use our telephone device for the deaf
TDD: (916) 324-9531 or (800) 700-8326.

SMOKING NOT PERMITTED AT MEETINGS OF THE CALIFORNIA AIR RESOURCES BOARD

California Environmental Protection Agency

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May 22-23, 2003
9:00 a.m. / 8:30 a.m.

03-4-1 **Public Meeting to Consider a Health Update**

Staff will present the Board with several studies showing that reduced air pollution leads to lower hospital admissions and death rates.

03-4-2 **Public Meeting to Consider an Appointment to the Research Screening Committee**

Staff will recommend an appointment to the Board's Research Screening Committee. The Committee reviews and recommends air pollution research projects to the Board.

03-4-3 **Public Meeting to Consider a Research Proposal**

Staff will present the following research proposal for Board approval:

Proposal No. 2528-229, entitled "Environmental Health Conditions in Portable Classrooms," submitted by the Research Triangle Institute, for a total amount not to exceed $100,000.

03-4-4 **Public Meeting to Consider Proposed Grants for Developing New Air Monitoring Instruments**

Staff will provide the Board with information regarding the development of new air monitoring instruments. The ultimate goal is commercial availability of inexpensive, easily-used instruments that can be deployed widely to assess local air quality. Staff is using the ICAT grant mechanism to facilitate this effort.

Staff from Research Division, Monitoring and Laboratory Division, CEC, USEPA, and academia have reviewed 13 proposals for projects to develop and demonstrate new instruments. The staff of the ARB has selected two of the proposals to recommend to the Board for new grants.

Half of the funds for grants will be provided by the California Energy Commission, via a contract with ARB.

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SMOKING NOT PERMITTED AT MEETINGS OF THE CALIFORNIA AIR RESOURCES BOARD

03-4-5 Public Hearing to Consider Amendments to the Transport Mitigation Regulations

Staff is proposing amendments to the existing Ozone Transport Mitigation regulations. The major changes are to require upwind districts to adopt "all feasible measures" for ozone precursors regardless of the district's attainment status and to have "no net increase" thresholds for their permitting program be as stringent as those of downwind districts.

03-4-6 Public Meeting to Provide the Board With a Report on Environmental Justice Related Data Needs

Staff will present an informational report on questions raised at the January 31, 2003 board meeting on the Environmental Justice Status Report Item. The Board raised several questions related to gaps in ARB's ability to assess cumulative impacts of exposure to multiple pollutants and the range of pollutant exposures that may occur in California. Staff will respond to the questions raised and provide an update on technical methodologies being developed by staff to answer these important questions.

03-4-7 Public Meeting to Consider Findings on AB 2637 Vehicle Exemptions from the Basic Smog Check Program

The Board will consider whether additional vehicles should be exempted from the Basic Smog Check Program in severe federal ozone nonattainment areas.

OPEN SESSION TO PROVIDE AN OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD ON SUBJECT MATTERS WITHIN THE JURISDICTION OF THE BOARD

Although no formal Board action may be taken, the Board is allowing an opportunity to interested members of the public to address the Board on items of interest that are within the Board's jurisdiction, but that do not specifically appear on the agenda. Each person will be allowed a maximum of five minutes to ensure that everyone has a chance to speak.

THOSE ITEMS ABOVE WHICH ARE NOT COMPLETED ON MAY 22 WILL BE HEARD BEGINNING AT 8:30 A.M. ON MAY 23.

THE AGENDA ITEMS LISTED ABOVE MAY BE CONSIDERED IN A DIFFERENT ORDER AT THE BOARD MEETING.

SUMMARY OF BOARD ITEM

ITEM # 03-4-1: Public Meeting to Consider a Health Update – Effect of Air Pollution Control on Hospital Admissions and Mortality from Lung and Heart Diseases

STAFF RECOMMENDATION: Informational Item

DISCUSSION: The ARB staff provides the Board with regular updates on recent research findings on the health effects of air pollution. This month, staff will summarize several studies showing that reduced air pollution leads to lower hospital admissions and death rates.

SUMMARY AND IMPACTS: Over the past decade, a number of epidemiological studies have reported a significant association between exposure to air pollution and adverse health effects. Staff will briefly summarize several recent studies on the effect of improvements in air quality on illness and death rates due to lung and heart diseases. These studies come from Europe and Asia as well as the United States. A study from Dublin, Ireland, is particularly noteworthy in that a substantial decrease in particulate matter levels led to a 16% and 10% reduction in death rate due to lung and heart diseases, respectively. These reductions equated to over 300 fewer deaths per year in Dublin. Other studies showed that reduced levels of ozone, sulfur dioxide or particulate matter also led to health benefits.

State of California

AIR RESOURCES BOARD

Research Resolution

Research Division

May 22-23, 2003

INTRODUCTION

Contained herein for Board review is one resolution and its accompanying summary from the Extramural Research Program recommended to the Board by the Research Screening Committee.

Item 1 is a research proposal from the Research Triangle Institute, entitled "CEC Augmentation to Environmental Health Conditions in Portable Classrooms". The principal investigator will be Dr. Roy Whitmore.
Resolution No. 03-10.

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 03-10

May 22-23, 2003

Agenda Item No.: 03-4-2

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2528-229, entitled "CEC Augmentation to Environmental Health Conditions in Portable Classrooms", has been submitted by Research Triangle Institute;

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

> Proposal Number 2528-229 entitled "CEC Augmentation to Environmental Health Conditions in Portable Classrooms," submitted by Research Triangle Institute, for a total amount not to exceed $100,000.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

> Proposal Number 2528-229 entitled "CEC Augmentation to Environmental Health Conditions in Portable Classrooms," submitted by Research Triangle Institute, for a total amount not to exceed $100,000.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the research effort proposed herein, and as described in Attachment A, in an amount not to exceed $100,000.

ATTACHMENT A

"CEC Augmentation to Environmental Health Conditions in Portable Classrooms"

Background
ARB is currently funding the Research Triangle Institute (RTI) to conduct the field work of the California Portable Classrooms Study in order to examine environmental health conditions in K-12 portable classrooms in California. The Governor and the Legislature directed ARB and the Department of Health Services (DHS) to jointly conduct this study and prepare a report that includes recommendations for preventing indoor environmental quality problems identified in the study. As warranted, the report shall include recommendations to improve the design and construction of buildings, including ventilation specifications; emissions limits for building materials and furnishings; and other relevant factors (HSC 39619.6).

The Portable Classrooms Study has yielded a large, comprehensive database on indoor environmental quality and related building characteristics in portable and traditional classrooms in California's K-12 schools. The initial results from the study indicate that a substantial percentage of the classrooms have problems with ventilation systems, noise, thermal comfort, lighting, and other factors related to energy use. A great deal of useful data on these factors, such as the specifics of ventilation systems, window and door usage, and lighting systems, were collected. However, detailed analyses of some of these data were not funded in the initial study. Additional analyses of these data on energy-related building factors are needed to understand their relationships to potential improvements in classroom indoor environmental quality.

The California Energy Commission (CEC) plans to fund these additional analyses. The CEC will need the study results next year as it begins to revise the state building energy efficiency standards, including those for mechanical and natural ventilation in schools. ARB is also working with the Division of the State Architect (DSA), the Office of Public School Construction (OPSC), and other state agencies to improve classroom indoor environmental quality through better design, operation, and maintenance specifications for school buildings. The results of the additional analyses proposed by RTI will be very valuable to these efforts as well.

Objectives
The objectives of this study are to conduct additional analyses of the Portable Classrooms Study data that will:
1) Provide key statistical information on energy- and comfort-related characteristics of portable and traditional classrooms in a statewide, representative sample of public K-12 classrooms.
2) Explore the relationships among major energy-related building factors and indoor environmental quality.

Methods
The investigators will statistically analyze the pertinent data from the Portable Classrooms Study, such as that on heating, ventilating and air-conditioning systems, natural ventilation, and lighting systems. Correlation and regression analyses will be conducted using data weighted to represent the statewide population of schools and classrooms. The investigators will provide basic statistical results for up to 100 building factors that were not analyzed fully in the main study, such as the amount of outdoor air supplied by ventilation systems, contamination of air filters and air conditioner drain pans, and moisture levels in walls, floors, and ceilings. For a subset of these factors, the investigator will explore and quantify the statistical relationships with indoor environmental quality indicators such as measured levels of air pollutants, humidity, temperature, and noise.

Expected Results
The contractor will provide summary statistics for energy-related building factors that were not fully analyzed previously, and quantify and highlight the association of some of those factors with indoor environmental quality problems in classrooms. The contractor will consult with the ARB and CEC staff in selecting the factors for analysis. ARB will use the results to better understand the nature of classroom indoor environmental quality problems, and to refine ARB recommendations to various stakeholders, especially the DSA and OPSC, who are planning to revise the specifications for portable classroom construction. The CEC will use the results to help revise ventilation design standards for school buildings.

Significance to the Board
Poor indoor environmental quality in schools has been linked to reduced student performance and to increased health risks such as asthma and exposure to toxic substances. Because energy conservation efforts and maintenance budget cuts sometimes result in reduced building ventilation and poor indoor air quality, ARB needs detailed information on the factors affecting building ventilation and its relationship to indoor environmental quality in schools. The additional analyses proposed here will help refine ARB's recommendations for classroom design, operation, and maintenance to CEC, DSA, OPSC, school districts, manufacturers, and other decision makers, and may identify actions needed by the Board on indoor and outdoor pollutants.

Contractor:
Research Triangle Institute

Contract Period:
13 months

Principal Investigator (PI):
Roy Whitmore, Ph.D.

Contract Amount:
$100,000

Cofunding:
The California Energy Commission has agreed to fund this project through an interagency agreement; ARB would oversee the study.

Basis for Indirect Cost Rate:
The contractor is using rates approved in a recent federal audit.

Past Experience with this Principal Investigator:
Dr. Whitmore is currently a co-principal investigator for the ARB-funded study of indoor environmental quality in portable classrooms, for which he has submitted a draft final report to ARB. He has previously participated in other major field studies of indoor air quality funded or co-funded by ARB, including field studies of indoor and personal exposure to volatile organic compounds, particulate matter, and polycyclic aromatic hydrocarbons.

Prior Research Division Funding to the Research Triangle Institute:

Year	2002	2001	2000
Funding	$0	$0	$673,879

BUDGET SUMMARY

Research Triangle Institute

CEC Augmentation to Environmental Health Conditions in Portable Classrooms

DIRECT COSTS AND BENEFITS			
1.	Labor and Employee Fringe Benefits	$47,319	
2.	Subcontractors	$ 0	
3.	Equipment	$ 0	
4.	Travel and Subsistence	$ 0	
5.	Electronic Data Processing	$ 0	
6.	Reproduction/Publication	$ 0	
7.	Mail and Phone	$ 200	
8.	Supplies	$ 360	
9.	Analyses	$ 0	
10.	Miscellaneous	$ 0	
	Total Direct Costs		$ 47,879
INDIRECT COSTS			
1.	Overhead	$24,911	
2.	General and Administrative Expenses	$18,108	
3.	Other Indirect Costs	$ 11	
4.	Fee or Profit	$ 9,091	
	Total Indirect Costs		$ 52,121
TOTAL PROJECT COSTS			**$100,000**

SUMMARY OF BOARD ITEM

ITEM # 03-4-4: Public Meeting to Consider Proposed Grants for Developing New Air Monitoring Instruments

STAFF RECOMMENDATION: Approve grants totaling $435,000 for two projects.

DISCUSSION: The Air Resources Board (ARB) is pursuing the development of new air monitoring instruments via the Innovative Clean Air Technologies (ICAT) grant program. Our ultimate goal is commercial availability of inexpensive, easily-used instruments that can be deployed widely to assess local air quality. The purpose of the ICAT program is to co-fund projects that will end with practical demonstrations of new instruments.

ICAT will fund grantees' projects up to 50 percent. Half of the funds for grants will be provided by the California Energy Commission (CEC), via a contract with ARB.

The Research Division issued a general call for abstracts of proposals for projects to develop and demonstrate new air monitoring instruments. We received 67 abstracts in response. After reviewing the abstracts, we invited full proposals from 19 applicants, of whom 13 responded.

Staff from the Research Division, Monitoring and Laboratory Division, CEC, U.S. Environmental Protection Agency, and academia reviewed the 13 proposals. We have selected three of the proposals to recommend to the Board for new grants. They are:

- University of Southern California; "A Simple, Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM10, PM2.5 or Ultrafine Particle Concentrations"; $144,000

- Berkeley Sensor and Actuator Center (UCB with LBNL); "Development of a Low-Cost Particulate Matter Monitor"; $291,000

SUMMARY AND IMPACTS: The staff expects these projects to hasten the commercial availability of simple, portable, easily

deployed new monitoring instruments. Together, the instruments will apply to ambient and indoor concentrations of PM, diesel PM, ozone, NOx, and gaseous toxic air contaminants. We anticipate each instrument to be substantially cheaper to buy and operate than its current alternative technologies. They will facilitate the characterization of exposures on a much finer spatial scale than is now practical.

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 03-11
May 22, 2003

Agenda Item No.: 03-4-4

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code Sections 39700 through 39705;

WHEREAS, a proposal number 03-17, entitled "A Simple Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM_{10}, $PM_{2.5}$ or Ultrafine Particle Concentrations", has been submitted by the University of Southern California in response to the 2003 Innovative Clean Air Technologies (ICAT) Program solicitation;

WHEREAS, the California Energy Commission will provide half the funds for grants made under the 2003 Innovative Clean Air Technologies (ICAT) Program;

WHEREAS, the proposal has been independently reviewed for technical and business merit by highly qualified individuals; and

WHEREAS, the Research Division staff and the Executive Officer and Deputy Executive Officers have reviewed and recommend for funding:

> Proposal Number 03-17, entitled "A Simple Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM_{10}, $PM_{2.5}$ or Ultrafine Particle Concentrations", submitted by the University of Southern California, for a total amount not to exceed $143,830.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39703, hereby approves the following:

> Proposal Number 03-17, entitled "A Simple Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM_{10}, $PM_{2.5}$ or Ultrafine Particle Concentrations", submitted by the University of Southern California, for a total amount not to exceed $143,830

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and agreements for the efforts proposed herein, and as described in Attachment A, in an amount not to exceed $143,830.

ATTACHMENT A

Innovative Clean Air Technologies (ICAT) Grant Proposal:

"A Simple Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM_{10}, $PM_{2.5}$ or Ultrafine Particle Concentrations"

Background

The instruments now available for monitoring the ambient concentration of $PM_{2.5}$ are not practical for widespread deployment by untrained persons or organizations of modest means. The weaknesses of the existing instruments include price (typically over $10,000), the need for laboratory analyses of samples, the need for pre-sampling preparation, and poor portability. Thus, it is generally impractical to directly determine exposures to PM distant from the fixed-site air monitors run by the ARB and other regulatory agencies. Local concentrations of PM can only be estimated by modeling applied to estimates of source strengths and meteorological data obtained from distant stations.

Objective

The principle of operation of the proposed device is based upon the well-characterized measurement of beta rays across a filter medium that is collecting particulate matter. The extinction coefficient, to an excellent approximation, is dependent only upon mass; it is significantly independent of chemical composition and particle size. Beta attenuation devices have a long track record of producing highly accurate, highly reliable measurements. The objective of this project is to design a low-cost BAM to measure PM_{10}, $PM_{2.5}$ and ultrafine PM levels in a wide range of environments.

Methods

The principle methods to be used in carrying out the project are:

1. Manufacture a prototype unit;
2. Perform comprehensive testing of the prototype unit via inter-comparison with existing continuous and time-integrated sampling techniques, including FRM methods;
3. Evaluate and demonstrate the unit's performance with respect to accuracy, repeatability, etc., under a wide range of sampling conditions including indoor environments, outdoor environments, stack sampling, temperature fluctuations, wind speed, and particle chemical compositions;
4. Offer the unit for sale on a commercial basis.

Expected Results

Upon completion of this project a prototype unit will be fully tested and ready for commercial availability. The results of the testing of the unit will be published in a

leading peer-reviewed scientific journal, thus providing wide visibility and scientific legitimacy for the final product. The potential users for the proposed device would be governmental entities engaged in ambient particulate monitoring for enforcement and compliance purposes. In addition, governmental or research institutions involved in health studies involving the impact of fine particles would be prime candidates for using this device.

Significance to the Board

Completion of the grant project will greatly promote the commercial availability of a new instrument for measuring the ambient concentration of particulate matter. A new instrument will make it more practical for persons and organizations concerned with local exposures of particulate matter to monitor air quality themselves.

By making and managing the recommended grant, the Board will fulfill in part contract R01-356 with the California Energy Commission.

Applicant: University of Southern California

Project Period: June 1, 2003 through May 31, 2005

Principal Investigator: Phillip M. Fine **ICAT Funding:** $143,830

Co-funding : $149,849

Past Experience with This Principal Investigator: None. However, the extent of review of the ICAT proposal provides an adequate basis for recommending a grant. The application was reviewed externally by academic engineers and scientists, other agencies, and academic business reviewers and internally by the Research Division and Monitoring and Laboratory Division. In addition, staff has previously entered into contracts with other PIs at the University of Southern California with satisfactory results.

Prior ICAT Funding to University of Southern California

Year	2002	2001	2000
Funding	0	0	0

BUDGET SUMMARY

University of Southern California

"A Simple Low-Cost Beta Attenuation Monitor (BAM) for Continuous Measurement of PM_{10}, $PM_{2.5}$ or Ultrafine Particle Concentrations"

Direct Costs and Benefits	ICAT	Total
1. Labor	$ 38,218	$ 82,109
2. Employee Fringe Benefits	$ 12,612	$ 17,885
3. Subcontractors	$ 49,000	$ 49,000
4. Equipment	$ 0	$ 0
5. Travel and Subsistence	$ 2,872	$ 2,872
6. Materials and Supplies	$ 12,325	$ 52,325
7. Other Direct Costs	$ 1,150	$ 1,150
Total	$116,177	$205,341
Indirect Costs		
1. Overhead	$ 27,653	$ 88,338
2. Other Indirect Costs	$ 0	$ 0
Total	$ 27,653	$ 88,338
Total Project Costs	**$143,830**	**$293,679**

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 03-12
May 22, 2003

Agenda Item No.:03-4-4

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code Sections 39700 through 39705;

WHEREAS, a proposal, number 03-57, entitled "Development of a Low-Cost Particulate Matter Monitor", has been submitted by the University of California, Berkeley, in response to the 2003 Innovative Clean Air Technologies (ICAT) Program solicitation;

WHEREAS, the California Energy Commission will provide half the funds for grants made under the 2003 Innovative Clean Air Technologies (ICAT) Program;

WHEREAS, the proposal has been independently reviewed for technical and business merit by highly qualified individuals; and

WHEREAS, the Research Division staff and the Executive Officer and Deputy Executive Officers have reviewed and recommend for funding:

> Proposal number 03-57, entitled "Development of a Low-Cost Particulate Matter Monitor", submitted by the University of California, Berkeley, for a total amount not to exceed $291,000.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39703, hereby approves the following:

- Proposal number 03-57, entitled "Development of a Low-Cost Particulate Matter Monitor", submitted by the University of California, Berkeley, for a total amount not to exceed $291,000.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and agreements for the efforts proposed herein, and as described in Attachment A, in an amount not to exceed $291,000.

ATTACHMENT A

Innovative Clean Air Technologies (ICAT) Grant Proposal:

Development of a Low-Cost Particulate Matter Monitor

Background

The instruments now available for monitoring the ambient concentration of $PM_{2.5}$ are not practical for widespread deployment by untrained persons and organizations of modest means. The weaknesses of the existing instruments include price (typically over $10,000), the need for laboratory analyses of samples, the need for pre-sampling preparation, and poor portability. Thus, it is generally impractical to directly determine exposures to PM distant from the fixed-site air monitors run by the ARB and other regulatory agencies. Local concentrations of directly emitted PM must be estimated by modeling applied to estimates of source strengths, using meteorological data obtained from distant stations.

Objective

The grant work will be to improve a prototype PM monitoring instrument that combines miniature piezo-electric resonators with infrared/UV absorption and to demonstrate its ability to measure the mass of fine PM and the combustion-generated fraction. This device should operate unattended for substantial periods and produce data without pre- or post-sampling laboratory work. It should be very portable, fairly inexpensive, and usable by relatively untrained personnel. It should be suitable for community organizations and power-plant siting proponents to make their own measurements of local $PM_{2.5}$ concentrations.

Methods

UCB and its partner, Lawrence Berkeley National Laboratory, will design, fabricate, and evaluate alternative methods for placing multiple micro-resonators on single disposable chips. The chosen technology will be integrated into a thermophoretic deposition channel with a UV/IR optics, electronic signal processing, and a size-selective flow inlet. The device will be optimized for signal-to-noise in laboratory simulations of PM-laden ambient air. The response of the optimized device to combustion-generated PM will be calibrated against integrated gravimetric samples and real-time instruments such as a quartz crystal microbalance and an optical counter. Finally, the device will be compared to the FRM method for $PM_{2.5}$ in ambient monitoring.

Expected Results

At the end of the project, the device should be ready for initiating commercialization work.

Significance to the Board

Completion of the grant project will greatly promote the eventual commercial availability of a new instrument for measuring the ambient concentration of fine PM and its combustion-generated fraction. A new instrument will make it more practical for persons and organizations concerned with local PM exposures to monitor air quality themselves.

By making and managing the recommended grant, the Board will fulfill in part contract R01-356 with the California Energy Commission.

Applicant: University of California, with participation by the Berkeley Sensor and Actuator Center and Lawrence Berkeley National Laboratory

Project Period: June 1, 2003, to May 31, 2005

Principal Investigator: Richard M. White, Ph.D.

ICAT Funding: $291,000

Co-funding : UC Berkeley -- $63,000

LBNL -- $40,625

Tobacco-Related Disease Research Program - $222,337

Past Experience with This Principal Investigator

None. However, the extent of review of the ICAT proposal provides an adequate basis for recommending a grant. The application was reviewed externally by academic engineers and scientists, other agencies, and academic business reviewers and internally by the Research Division and Monitoring and Laboratory Division.

Prior ICAT Funding to UC Berkeley

Year	2002	2001	2000
Funding	0	0	0

BUDGET SUMMARY

University of California, Berkeley

Development of a Low-Cost Particulate Matter Monitor

Direct Costs and Benefits	**ICAT**	**Total**
1. Labor	$ 82,137	$139,065
2. Employee Fringe Benefits	$ 5,669	$ 13,966
3. Subcontractors	$144,000	$144,000
4. Equipment	$ 0	$ 0
5. Travel and Subsistence	$ 108	$ 108
6. Materials and Supplies	$ 14,759	$ 14,759
7. Other Direct Costs	$ 29,612	$251,949
Total	$276,285	$563,847
Indirect Costs		
1. Overhead	$ 14,715	$ 53,115
2. Other Indirect Costs	$ 0	$ 0
Total	$ 14,715	$ 53,115
Total Project Costs	**$291,000**	**$616,962**

SUMMARY OF BOARD ITEM

ITEM # 03-4-5: Public Hearing to Consider Amendments to the Ozone Transport Mitigation Regulations

STAFF RECOMMENDATION: The staff recommends that the Air Resources Board (ARB or Board) approve the proposed amendments to the ozone transport mitigation regulations, and direct the Executive Officer to adopt them after considering further public comment.

DISCUSSION: The goal of the California Clean Air Act is attainment of health-based air quality standards as expeditiously as possible. For ozone, one of California's most persistent air quality problems, the Act recognizes that upwind air pollution control districts are responsible for mitigating the impact of the pollutants that they generate and transport to downwind air districts.

State law provides for the establishment of mitigation requirements by the ARB to be implemented by the air districts. The ARB first adopted transport mitigation regulations in 1990, which specify the emission control requirements applicable to upwind districts, i.e., those districts located in areas that have been identified by ARB as the originators of transported emissions. Upwind districts have been implementing the primary mitigation requirement—application of Best Available Retrofit Control Technology (BARCT) for existing stationary sources—over the last decade, but more is needed.

In 2001, the Board directed staff to propose amendments to strengthen the mitigation regulations. As a result, ARB staff evaluated several strategies, two of which were developed into regulatory proposals. The ARB staff is proposing to add two new requirements to the ozone transport mitigation regulations. The first requirement is that upwind districts adopt all feasible measures, as defined in the regulation, for all source categories of ozone-forming pollutants as expeditiously as

possible, regardless of their attainment status. The second requirement is that upwind districts have equally stringent stationary source permitting programs as the downwind districts that are affected by transported pollution. Both of these requirements will be implemented via a cooperative effort between upwind and downwind districts in the context of the triennial updates of their attainment plans.

SUMMARY AND IMPACTS:

The implementation of all feasible measures has been the primary mechanism by which districts have complied with the attainment planning requirements of the California Clean Air Act. However, the focus to date has been on attaining the ambient ozone standard in their own district. The addition of the "all feasible measures" requirement to the transport mitigation regulations is intended to ensure that upwind districts take into account the needs of the downwind districts when prioritizing rules for adoption, and that they continue to adopt rules to mitigate transported emissions even as they approach or attain the ozone standard in their own district. The regulation permits exceptions to this requirement if an upwind district demonstrates that there is no need for the measure; that an alternate approach is equally as effective; or that the most recent transport assessment demonstrates that their transport impact on the downwind district is inconsequential.

The implementation of the permitting requirement is intended to ensure that upwind and downwind districts take comparable actions to reduce emissions from new and modified stationary sources to the extent this is reasonable. Staff's proposed provision would require upwind districts to have "no net increase" review and mitigation thresholds that are at least as stringent as their downwind neighbors.

To implement the expeditious adoption of all feasible measures for transport mitigation purposes, staff is proposing that the districts utilize the triennial plan review process that is

already required by the California Clean Air Act, but to include consultation with the downwind districts. The ARB will review district efforts to ensure the transport requirements are complied with. The proposed process is not anticipated to impose additional costs on local and State agencies, since the districts are already required to submit to ARB a triennial plan update summarizing progress in developing, adopting, and implementing control measures. Therefore, both the ARB and the districts can absorb the costs within their existing budgets.

The ARB is committed to evaluating the impacts of regulations proposed by the districts on all communities, including communities of color and low-income communities which currently may experience higher exposures to air pollutants. It is a priority of the ARB to ensure that full protection is afforded to all Californians. The proposed amendments to the transport mitigation regulations are designed to reduce transported ozone and ozone precursor emissions, resulting in reduced emissions, and associated improvements in air quality and lower potential health risks.

In addition, based on available information, the staff has determined that no significant adverse environmental impacts will occur if the Board adopts the proposed amendments to the ozone transport mitigation regulations. The intent of the proposed regulatory action is to improve air quality and protect public health by reducing the public's exposure to potentially harmful transported ozone and ozone precursor emissions, providing a beneficial effect on the environment.

TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE OZONE TRANSPORT MITIGATION REGULATIONS

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider adoption of amendments to the ozone transport mitigation regulation.

DATE: May 22, 2003

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Central Valley Auditorium, Second Floor
1001 I Street
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., May 22, 2003 and may continue at 8:30 a.m., May 23, 2003. This item may not be considered until May 23, 2003. Please consult the agenda for the meeting, which will be available at least 10 days before May 22, 2003, to determine the day on which this item will be considered.

If you have special accommodation or language needs, please contact ARB's Clerk of the Board at (916) 322-5594, or sdorias@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected: Proposed amendments to title 17, California Code of Regulations (CCR), sections 70600 and 70601.

Background

The goal of the California Clean Air Act (CCAA or Act) is to attain health-based air quality standards by the earliest practical date. The Act requires that each air pollution or air quality management district (district) not attaining the State standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide develop and implement an air quality plan designed to achieve those standards. For ozone, one of California's most persistent and serious air quality problems, the Act specifically recognizes that districts need to mitigate the impact of pollutants that they generate and transport downwind.

The movement of air pollutants from one air basin to another is referred to as "transport." The Act, in Health and Safety Code section 39610, directs the Board to

identify transport couples, to assess the relative contribution of upwind emissions on downwind ozone concentrations to the extent permitted by available data, and to establish mitigation requirements.

In 1990, ARB adopted both the transport identification regulation and the transport mitigation regulations. The transport identification regulation, which is set forth in title 17, CCR, section 70500, lists each "transport couple" identified by the Board. The transport couple includes the upwind air basin or planning area and the downwind receptor area. The transport mitigation regulations, set forth in title 17, CCR, sections 70600 and 70601, establish the emission control requirements applicable to districts located in the upwind areas identified in section 70500(c).

The current mitigation regulations contains two key provisions. First, the application of best available retrofit control technology (BARCT) must be utilized on existing stationary sources. At a minimum, BARCT was to be applied to those sources that represented 75% of the 1987 actual reactive hydrocarbon and oxides of nitrogen emissions inventory for permitted stationary sources by January 1, 1994. This provision has been fully implemented. The second requirement is that upwind districts include sufficient measures in their ozone attainment plan to mitigate their impact on specified downwind areas. The second requirement is a long-term goal that relies on the availability of modeled attainment demonstrations for the State ozone standard.

The original mitigation regulations also included a requirement that accelerated the implementation of the "no net increase" permitting requirements for new and expanding stationary sources already required under the CCAA. However, changes made to the Act in 1992 amended the original "no net increase" permitting requirements that applied to all new and expanding stationary sources for all but extreme ozone nonattainment areas. In its place, moderate, serious, and severe ozone nonattainment areas were allowed to permit incrementally smaller stationary sources without mitigating, or fully offsetting, their air quality impacts. The "no net increase" permitting requirements were subsequently removed from the mitigation regulations in 1993 to be consistent with the changes made to the CCAA.

In 2001, the Board raised questions about the continuing effectiveness of current mitigation requirements, which have remained unchanged since 1993. The Board directed staff to develop regulatory proposals to strengthen the transport mitigation requirements. One issue raised by the Board is that some upwind districts have less stringent "no net increase" permitting requirements under the Act than their downwind neighbors. There is a need for upwind and downwind districts to take equivalent actions to mitigate new emission increases. Second, district compliance with mitigation requirements is presently reviewed every three years as part of the triennial review of attainment plans. There is a need to provide a more timely and structured review process that ensures that upwind districts are doing all they can to reduce emissions to achieve State standards in both upwind and downwind areas. Finally, the ARB staff has determined that the near-term, minimum BARCT

requirements mentioned above have been fully implemented for a number of years and the regulations should be updated to reflect this.

Proposed Amendments

Based upon staff review of the ozone transport mitigation regulations and the consideration of air district and public input on strategies considered, the ARB staff is proposing the following amendments to the ozone transport mitigation regulations: (1) require that upwind districts have the same "no net increase" permitting thresholds as their downwind districts; (2) add requirements to ensure that upwind districts are adopting and implementing "all feasible measures" as expeditiously as possible; (3) delete outdated BARCT requirements; and (4) expand the existing provision that allows a limitation on the application of BARCT to include "all feasible measures" and take into account updated transport assessments. These changes would amend sections 70600 and 70601, title 17, CCR and are summarized below.

New Source Review Permitting Requirements

ARB staff is proposing to require equal New Source Review (NSR) "no net increase" thresholds for sources in upwind and downwind areas. The goal of the NSR permitting program is to maintain air quality progress while accommodating economic growth and expansion. This is achieved by offsetting growth in emission increases from new and expanding stationary sources with emission reductions not otherwise required by law, and is known as the concept of "no net increase."

In several cases, upwind areas have less stringent permitting requirements under the Act than their downwind neighbors. Currently, a district's "no net increase" threshold (i.e., the quantity of emissions that makes a source subject to it) is specified by the Act, based on its nonattainment classification for the State ozone standard. Areas classified as moderate have a "potential to emit" threshold of 25 tons per year, areas classified as serious have a threshold of 15 tons per year, and areas classified as severe have a threshold of 10 tons per year. Areas classified as extreme, which includes only the South Coast Air Basin, have no threshold; that is, all sources are subject to the "no net increase" requirement.

The ARB staff proposal that "no net increase" thresholds for upwind districts be as stringent as those that exist for their downwind districts would help ensure that both upwind and downwind neighbors are taking comparable actions to mitigate emissions from new and expanding stationary sources.

The proposed amendments would affect the Bay Area Air Quality Management District (BAAQMD) and the five districts located in the Broader Sacramento Area. They would be required to amend their "no net increase" thresholds from 15 tons per year to 10 tons per year by December 31, 2004. This will result in these districts achieving the same "no net increase" threshold levels as their downwind neighbor, the San Joaquin Valley Air Pollution Control District.

ARB staff is not proposing that districts upwind of the South Coast be included in this permitting requirement because of South Coast's classification of extreme. As noted, there is no threshold for an extreme area due to the severity of its air quality problem. The unique status of this downwind area, combined with the localized nature of the transport impacts from the upwind areas of Santa Barbara and Ventura, make the applicability of this concept inappropriate in this case.

No changes are proposed to the thresholds for applying best available control technology (BACT), which are also part of the NSR programs.

All Feasible Measures

ARB staff is also proposing to add language requiring the implementation of "all feasible measures" as expeditiously as practicable. Under the CCAA, districts that are not attaining the State ozone standard are required to include every feasible measure in the triennial update to each district's ozone attainment plan. Also, districts have broad responsibility under the CCAA to reduce their emissions in both the upwind and downwind areas. Health and Safety Code section 40912 requires districts responsible for transport to provide for the attainment and maintenance of the State ozone standard in both the upwind and downwind district.

The goal of this proposed change is to provide for a more timely review process that, in combination with the requirements of the CCAA, ensures that upwind districts are responsible for reducing their emissions to achieve the State ozone standard in the downwind districts. The proposed amendments would: (1) add a requirement to the transport mitigation regulations that districts adopt all feasible measures as expeditiously as practical, (2) add an annual review, a consultation and public comment forum, and a reporting process for the implementation of "all feasible measures" between three-year planning cycles, (3) add a definition of "all feasible measures" and "ozone precursors," (4) expand the limitation procedure currently provided for BARCT adoption to allow the same alternative compliance path for "all feasible measures," and (5) add an additional option to the alternative compliance path that allows districts to demonstrate in their attainment plan that their transport impact is inconsequential.

Best Available Retrofit Technology

ARB staff is proposing to delete outdated language concerning BARCT requirements. The current mitigation regulation contains requirements for the application of BARCT to permitted stationary sources that represent 75% of the 1987 actual reactive hydrocarbon and nitrogen oxides emissions inventory for permitted stationary sources by 1994. The purpose of this requirement was to accelerate the application of BARCT to permitted stationary sources. This requirement has been fully implemented for a number of years, and is now obsolete. No other changes are proposed to the existing requirement for BARCT on existing stationary sources.

COMPARABLE FEDERAL REGULATION

There are no comparable federal regulations for the adoption of "all feasible measures" in upwind, intrastate transport areas. Although there are comparable federal regulations for NSR programs, more health-protective programs for NSR are required under the CCAA in Health and Safety Code sections 40918-40920 than under the federal Clean Air Act and United States Environmental Protection Agency's (U.S. EPA) implementing regulations. State requirements have more stringent permitting thresholds and technology requirements than federal NSR requirements and have been incorporated into the federally required State Implementation Plan (SIP) approved by the U.S. EPA. The stringent State NSR provision, therefore, replaces federal NSR requirements. The proposed transport mitigation requirements affect existing State NSR requirements to enable the ARB and the districts to comply with CCAA transport requirements.

AVAILABILITY OF DOCUMENTS AND CONTACT PERSONS

The ARB staff has prepared a Staff Report for the proposed regulatory action. This "Initial Statement of Reasons" (ISOR), includes a summary of the potential environmental and economic impacts of the proposal, environmental justice considerations, and supporting technical documentation. The staff report is entitled: "Initial Statement of Reasons for Rulemaking, Proposed 2003 Amendments to Ozone Transport Mitigation Regulations."

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strike-out format to allow for comparison with the existing regulations, may be obtained from the ARB's Public Information Office, Environmental Services Center, 1001 "I" Street, First Floor, Sacramento, California 95814, (916) 322-2990, at least 45 days prior to our scheduled hearing (May 22, 2003).

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the web site listed below.

Inquires concerning the substance of the proposed regulations may be directed to the designated agency contact persons: Merrin Bueto, Air Pollution Specialist, at (916) 322-6013 or via email at mbueto@arb.ca.gov, or Gayle Sweigert, Manager, Air Quality Analysis Section, Planning and Technical Support Division, (916) 322-6923 or via email at gsweiger@arb.ca.gov.

Further, the agency representative and designated back-up contact persons to whom non-substantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Amy Whiting, Regulations Coordinator,

(916) 322-6533. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. The material is available for inspection upon request to the contact persons.

If you are a person with disability and desire to obtain this document in an alternative format, please contact the Air Resources Board ADA Coordinator at (916) 323-4916, or TDD (916) 324-9531, or (800) 700-8326 for TDD calls from outside the Sacramento area.

This notice, the ISOR, and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at http://www.arb.ca.gov/regact/trans03/trans03.htm.

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred in reasonable compliance with the proposed regulations are presented below.

The Executive Officer has determined that the proposed regulatory action will not create costs or savings, as defined in Government Code section 11346.5(a)(6), to any State agency or in federal funding to the State, costs or mandate to any local agency or school district whether or not reimbursable by the State pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other non-discretionary savings to state or local agencies except as noted below.

The proposed requirements for an annual review, consultative and public comment period, and reporting requirements for the adoption of all feasible measures are not anticipated to impose significant additional costs on local and state agencies, since both local and state agencies can absorb the costs within the existing budget. If the proposed amendments will impose a mandate upon, and create costs to, the air districts responsible for transport, reimbursements from the state to the districts are not required pursuant to Government Code sections 17500 et seq., and section 6 of article XIIIB of the California Constitution because the districts have the authority to levy fees sufficient to pay for the mandated program upon permitted stationary sources which emit the pollutants (Health and Safety Code section 42311).

Although the proposed regulatory action will not result in a significant increase in costs to the State, future regulations may be necessary to achieve or maintain the proposed standards. When the districts propose to adopt such regulations, any associated costs will be examined in accordance with statutory requirements and justified by the benefit to human health, public welfare, or the environment.

The Executive Officer has also determined that the proposed regulatory action for NSR requirements may affect businesses wanting to expand in the Bay Area and Broader Sacramento area. These businesses may potentially be subject to stricter thresholds if

they chose to modify their operations; however, any costs associated with the stricter thresholds are anticipated to be minimal.

Furthermore, the Executive Officer's initial assessment is that the proposed regulatory action will not adversely affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within California, or the expansion of businesses currently doing business within California. Although the NSR requirements may impose stricter thresholds, there is no indication that these businesses will be unable to operate. A full assessment of the economic impact of the proposed regulatory action can be found in the Staff Report (ISOR).

The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses. However, it may affect the ability of some California businesses to compete with businesses in other states, or on representative private persons due to the costs associated with the districts' adoption and implementation of "all feasible measures."

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. Because the adoption of "all feasible measures," does not mandate the implementation of specific technologies and districts have flexibility in their individual rulemaking, the ARB has determined that there are no cost impacts that a representative private person or business would necessarily incur until a district adopts and implements a "new" feasible measure. At that time, the districts must conduct a socio-economic impact analysis and determine the impacts on business. Only those businesses located within the areas of origin of transported air pollutants, as identified in section 70500(c), may be affected by the incorporation of "all feasible measures." Additionally, upwind districts are already required under the CCAA to implement and adopt "all feasible measures."

California business should be able to absorb any costs of the proposed regulatory action without significant adverse impacts on their profitability. Some businesses would potentially experience a greater reduction in their profitability than others; however, the impact should remain absorbable.

Finally, the Executive Officer has also determined that the proposed regulatory action may affect small business.

Before taking final action on the proposed regulatory action, the Board must determine that no alternative considered by the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by email before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received no later than 12:00 noon, May 21, 2003, and addressed to the following:

Postal Mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to trans03@listserv.arb.ca.gov and received at the ARB no later that 12:00 noon, May 21, 2003.

Facsimile submissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB no later than 12:00 noon, May 21, 2003.

The Board requests, but does not require, 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring any suggestions for modification of the proposed regulatory action to the attention of staff in advance of the hearing.

STATUTORY AUTHORITY

This regulatory action is proposed under that authority granted in sections 39600, 39601 and 39610(b) of the Health and Safety Code. This action is proposed to implement, interpret and make specific sections 39610, 40912, 40913, 40921 and 41503 of the Health and Safety Code.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code. Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with nonsubstantive or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications related to "all feasible measures," BARCT, and stationary source permitting programs if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action.

In the event that such modifications are made, the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted. The public may request a copy of the modified regulatory text from the Board's Public Information Office, Environmental Services Center, 1001 "I" Street, First Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Catherine Witherspoon
Executive Officer

Date: March 25, 2003

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web site at www.arb.ca.gov.

California Environmental Protection Agency

Air Resources Board

Staff Report

Initial Statement of Reasons for the Proposed Amendments to the Ozone Transport Mitigation Regulations

Release Date:
April 4, 2003

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

STAFF REPORT: INITIAL STATEMENT OF REASONS FOR RULEMAKING

AMENDMENTS TO THE OZONE TRANSPORT MITIGATION REGULATIONS

Date of Release: April 4, 2003
Scheduled for Consideration: May 22, 2003

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

PROPOSED AMENDMENTS TO THE OZONE TRANSPORT MITIGATION REGULATIONS

Staff Report

Prepared by:

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Executive Summary

Transport mitigation has a role in California's efforts to achieve health-based State ambient air quality standards. For ozone, one of California's most persistent air quality problems, the California Clean Air Act (CCAA or Act) specifically recognizes that local air pollution control districts need to mitigate the impact of pollutants that they generate and transport downwind. The Air Resources Board (ARB or Board) has the responsibility to assess the relative transport contribution of air districts and to establish mitigation requirements. State law also directs the ARB to take specific actions to reduce air pollutant emissions from mobile sources, fuels, and consumer products. These statewide measures reduce emissions in all air districts in California.

ARB first adopted transport mitigation requirements for air districts in 1990 based on an analysis of transport relationships between districts. The regulations identified transport couples consisting of an upwind area (source of transported emissions) and a corresponding downwind area (receptor of transported emissions). As required by State law, ARB also determined whether the contribution of transported pollutants was overwhelming, significant, inconsequential, or a combination thereof. The impact of transport on most downwind areas was found to be a combination. Also, some districts were found to be both receptors and sources of transport pollutants. The 1990 regulations established mitigation requirements for upwind areas found to have either overwhelming or significant impacts on downwind areas.

Districts have been implementing the primary mitigation requirement – application of BARCT (Best Available Retrofit Control Technology) for the last decade. However, when ARB updated the transport assessment in 2001, the Board directed staff to pursue the possibility of strengthening the mitigation regulation. As a result, ARB staff is proposing amendments to the regulation. Regarding BARCT, staff is proposing to retain the fundamental requirement that upwind districts apply BARCT while deleting an outdated requirement for early compliance that districts have long since met. In terms of new mitigation requirements, staff is proposing two changes.

First, is a new requirement that upwind districts adopt all feasible measures for the ozone-forming pollutants, independent of the upwind district's attainment status. To support expeditious adoption of all feasible measures, staff is proposing an annual review process for upwind districts that includes public review and ARB concurrence. The goal is to ensure that upwind districts adopt and implement all feasible measures in a timely way. Exceptions to this requirement could be made if the upwind district is able to make a specific demonstration showing there is no need for the measure or that an alternative approach is equally effective. Also, if an updated assessment transport shows a district's transport impact is inconsequential, BARCT and all feasible measures requirements would not apply.

Second, is a new requirement intended to equalize permitting programs in upwind and downwind areas. The staff is proposing that "no net increase" thresholds for new source review permitting programs in upwind areas be as stringent as those in downwind districts.

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I. INTRODUCTION

The goal of the California Clean Air Act (CCAA or Act; Stats.1988, Ch.1568) is attainment of health-based State ambient air quality standards (State standards) by the earliest practical date. For ozone, one of California's most persistent air quality problems, the Act specifically recognizes that the local air pollution control districts (districts) need to mitigate the impact of pollutants that they generate and transport downwind. The Air Resources Board (ARB or Board) has the responsibility to assess the relative transport contribution of districts and to establish mitigation requirements.

Specifically, State law (Section 39610 of the California Health and Safety Code (H&SC)) directs ARB to take the following actions:

- identify district transport couples
- assess the relative contribution of upwind emissions on downwind ozone concentrations
- establish mitigation requirements commensurate with the level of contribution
- review the transport analysis at least once every three years

ARB first adopted transport identification and mitigation regulations in 1990 based on an analysis of transport relationships between districts. The regulations identified transport couples consisting of an upwind area (source of transported emissions) and a corresponding a downwind area (receptor of transported emissions). As required by State law, ARB also determined whether the contribution of transported pollutants was overwhelming, significant, inconsequential, or a combination thereof. ARB made the determinations based on day-specific transport analyses.

The impact of transport on most downwind areas has been been characterized as a combination of overwhelming, significant, and insignificant impacts. The 1990 transport regulations established mitigation requirements for districts found to have either overwhelming or significant impacts on downwind areas. ARB has reviewed, and as necessary, updated the transport analyses several times. In 1993, ARB amended the mitigation requirements to align them with the minimum permitting requirements of State law.

At its April 26, 2001 Board hearing, ARB adopted amendments to the identification portion of the transport regulations. No changes were proposed to the mitigation portion of the regulations at that time. As part of the Board's discussion, the possibility of strengthening the mitigation requirements was raised. The Board then directed ARB staff to initiate a review of the transport mitigation requirements and return with recommendations.

One question the Board raised is whether upwind districts rules are as stringent as those of their downwind neighbors. Another issue is whether upwind areas will continue to meet their mitigation responsibilities, once they have reached California's ozone standard within their own jurisdiction. Currently, nonattainment upwind districts are

implementing "all feasible measures" to attain the State ozone standard in their own districts in lieu of complying with a five percent annual reduction in emissions of ozone precursors (H&SC Section 40914). This is reflected in the air quality plans adopted by air districts and approved by ARB. However, there is currently no mechanism that would require upwind districts to pursue all feasible measures to mitigate transport impacts as they approach or attain the ozone standard in their own districts.

Since the Board's direction to revisit the transport mitigation regulations, the ARB staff held an initial workshop, briefed the Board on possible mitigation concepts, and held several additional public workshops. This effort has resulted in the development of the proposed regulatory amendments.

The purpose of this Staff Report is to present the proposed amendments to the transport mitigation regulations and the rationale for these amendments. The Staff Report includes background information on transport mitigation and ozone air quality planning efforts, a discussion of the current regulations, the need for amendments, the impact of the proposed amendments, and the public workshops that were part of the regulatory development process.

II. AIR QUALITY PLANNING AND TRANSPORT MITIGATION

This section provides information on the role of the transport mitigation regulations as they relate to: ozone planning efforts, regional air quality strategies, and modeling tools used to assess transport impacts. The transport mitigation regulation is just one piece of a much broader effort to achieve State air quality standards in California.

Each district not attaining the State or federal ozone standards must develop and implement air quality attainment plans designed to achieve those standards. These plans include the projected air quality benefits of actions to be taken by local, state, and federal agencies. The transport mitigation regulations identify independent and specific actions that upwind districts must take to mitigate transport their impacts. These actions should be reflected in the downwind district's attainment strategy. The significance of the mitigation requirements in terms of downwind air quality will depend on the severity of the ozone problem in the downwind district and the relative role of the transport.

Role of the Transport Mitigation Regulations

Some parts of the State, primarily rural or less populated areas, are overwhelmed by transport. In these areas, there are relatively few local emissions and poor ozone air quality is largely the result of transport. Attainment in such areas relies primarily on emission reductions from the upwind areas, with the downwind district focused mostly on addressing emissions growth. If the relative contribution of local emissions changes significantly over time, the triennial assessment process required by the Act in H&SC sections 40924 and 40925 provides a mechanism to adjust the finding of overwhelming transport.

However, the situation is different in the major urban areas of California which continue to violate the State ozone standard. This includes the San Francisco Bay Area, San Joaquin Valley, Broader Sacramento Area, and the South Coast Air Basin (Los Angeles and Orange counties, and portions of Riverside and San Bernardino counties). These areas are all capable of producing violations of the State ozone standard on days when transport is inconsequential. To attain the State ozone standard, these districts need to take further actions to reduce emissions in their own districts, while their upwind neighbors take necessary mitigation actions.

State Ozone Planning Efforts

Air quality control in California is a shared responsibility among local, State, and federal agencies. ARB adopts statewide measures to reduce emissions from motor vehicles and fuels, off-road equipment, and consumer products. Districts are primarily responsible for stationary sources. Only the federal government can regulate preempted mobile sources and national transportation sources, including ships, trains, and aircraft. Measures adopted at the State, local, and federal levels have resulted in, and will continue to provide, dramatic reductions in ozone precursors throughout the State, including both upwind and downwind areas.

Districts designated nonattainment for the State ozone standard are required under the CCAA to develop an air quality plan designed to attain the standard as expeditiously as possible (see H&SC section 40910 et seq.). There are specific requirements that must be included in the attainment plan. This includes the adoption of emission control measures for existing stationary sources, as well as those applicable to new or expanding stationary sources.

In addition, as specified in section 40918(a) et seq. of the H&SC, districts with a moderate, serious, severe, or extreme nonattainment classification shall require the use of reasonably available transportation control measures sufficient to substantially reduce the rate of increase in passenger vehicle trips and miles traveled per trip if the district contains an area with a population of 50,000 or more. These districts shall also include in their attainment plans provisions to develop area-wide source and indirect source control programs.

Each district's attainment plan incorporates district measures, along with State, national, and other local strategies into one cohesive plan. The attainment plans are reviewed and revised every three years to incorporate the latest information and assess the effectiveness of the implemented control strategy. If a district cannot demonstrate a 5% annual emission reduction in ozone precursors required by H&SC section 40914, then the district may commit instead to adopt all feasible measures. No district has been able to achieve the 5% annual emission reduction, and all have elected to pursue an all feasible measure strategy. Districts prioritize their rule adoption schedules, based on consideration of effectiveness, technological feasibility, social, and economic considerations.

The ARB provides technical assistance to districts in developing their attainment plans. This includes providing air quality indicators to evaluate progress in attaining the State ozone standard and providing technical guidance to districts, including information related to the adoption of new control strategies. For example, in 1999, the Board approved a guidance document for this purpose – *"Identification of Performance Standards for Existing Stationary Sources: A Resource Document"*. Also, information from ARB's transport assessments and modeling activities improves our understanding of ozone air quality problems.

Federal Ozone Planning Efforts

Some of the downwind areas that are significantly impacted by transport exceed both State and federal ozone air quality standards. In these cases, achieving federal as well as State air standards in the downwind area is a shared responsibility. Federal law does not establish specific transport mitigation requirements for transport within state boundaries. Where intrastate transport is an issue, states must devise an appropriate mechanism to ensure that federal standards are achieved in both upwind and downwind areas.

In California, the establishment of mitigation requirements for upwind districts is done through the mechanism provided in State law—ARB's transport mitigation regulations. Emission reductions achieved via this mechanism will be reflected in upcoming federal ozone attainments plans (State Implementation Plans (SIPs)) for downwind areas. SIPs are the plans required by federal law that lay out a region's strategy for attaining the federal air quality standards. As these new attainment plans are developed, air quality modeling will be used to help understand the relative transport contribution as well as to take into account the air quality benefits of actions taken by upwind areas.

Regional Planning Efforts

Information from air quality modeling studies, as well as that provided by regional transportation models, will provide information that can help local agencies develop effective regional air quality strategies. Districts have a history of forming effective partnerships with local government agencies. This may include working on the development of regional strategies such as "smart growth," and other mechanisms to incorporate air quality considerations into land use and transportation decisions.

While land use related strategies can help meet our clean air objectives, such decisions are made by local agencies other than the air districts that are subject to ARB's mitigation requirements. ARB supports and encourages districts' efforts to pursue regional land use and transportation strategies that reduce emissions. ARB also supports and participates in State-level efforts to improve local land use, such as the Office of Planning and Research's development of guidelines for sustainable development and environmental justice elements of general plans. Such longer-term strategies will help address new federal air quality planning requirements that will be implemented into the next decade.

Future Transport Assessments

Over time our ability to assess transport impacts is expected to improve as a result of recent air quality studies that cover both upwind and downwind areas. These are the Central California Ozone Study (CCOS), which covers most of northern and central California, and the 1997 Southern California Ozone Study (SCOS). These studies will be very valuable in updating transport assessments and preparing future clean air plans.

The ARB is partnering with the districts, the United States Environmental Protection Agency and industry in the CCOS. One goal of the CCOS project is to develop modeled attainment demonstrations required for federal ozone air quality plans. The modeling, which will provide information in phases, will also be useful to further refine our understanding of transport relationships in California during selected ozone episodes. ARB staff is working with all the stakeholders to identify approaches for better assessing transport impacts using the study results. These analyses will be included in the 2003-4 SIP development process for districts in the CCOS domain – including the San Francisco Bay Area, San Joaquin Valley, and Sacramento region. A

number of CCOS projects are being fast-tracked in order to provide results that can be used in developing attainment demonstrations for these districts. As a part of these analyses, the impact of upwind control strategies on downwind ozone formation will be evaluated.

The vast size of the region studied by CCOS will significantly improve our ability to understand transport phenomena. Previous air quality studies, with their smaller geographical domains, were useful for modeling local impacts for federal plans in one region, but did not contain enough data to reasonably predict downwind air quality impacts. The CCOS modeling activities will also provide ozone transport data under various weather patterns. Current central California modeling capability is based on a single high ozone episode captured during an earlier study. In the future, three CCOS episodes will be simulated in support of attainment demonstrations throughout the region, thus providing information on how transport can vary within the ozone season. Longer term CCOS projects will provide additional new tools and methodologies for assessing the impacts of transport in future SIPs for new federal 8-hour ozone and PM2.5 standards.

To assess transport relationships in southern California, results of SCOS will be used. This was a study of ozone formation and movement covering all of Southern California, including San Luis Obispo and Kern counties. It also includes the California-Mexico border area, covering an overall area of approximately 55,000 square miles.

Like its CCOS counterpart, SCOS data are being used to gain a better understanding of how ozone is formed and how it moves from one area to another. This information is the basis of the South Coast Air Quality Management District's 2003 Draft Air Quality Management Plan. SCOS provides new data not available from previous southern California air quality studies. It includes extensive meteorology and air quality measurements at altitudes above the levels monitored by traditional ground-based instruments. As a result, it provides a more powerful data set for evaluating pollution transport in southern California.

III. CURRENT TRANSPORT REGULATIONS

The current regulations relating to transport are found in title 17 of the California Code of Regulations, sections 70500, 70600, and 70601 (see Appendix D). Section 70500 identifies transport couples, and is updated periodically to incorporate new information. A transport couple consists of an "upwind area" or the area of the origin of pollutants, and the "downwind" receptor area. Sections 70600 and 70601 establish mitigation requirements for the upwind districts identified in section 70500.

Table 1 indicates the couples identified in the transport identification regulation. The upwind and downwind areas identified in the regulation are defined as air basins or ozone nonattainment planning regions. The number of districts located within each identified air basin or planning area varies from region to region, and can include either one or multiple districts.

Table 1. Downwind Areas Impacted By Upwind Emissions

	Downwind Areas Impacted											
Upwind Area	**Mountain Counties**	**San Joaquin Valley**	**Bay Area**	**Broader Sacramento**	**Upper Sacramento**	**North Central Coast**	**North Coast**	**South Central Coast**	**Great Basin Valleys**	**South Coast**	**San Diego**	**Mojave Desert**
Broader Sacramento	X	X	X		X							
Bay Area	X	X		X		X	X	X				
San Joaquin Valley	X			X		X		X	X			X
South Central Coast										X		
South Coast								X			X	X

Note: Only the Santa Barbara and Ventura counties portion of the South Central Coast Air Basin are subject to the mitigation requirements

The transport mitigation regulations set forth the mitigation requirements for upwind areas. The overarching requirement is for these districts to include "sufficient measures" in their ozone attainment plan to mitigate the impact of their emissions of ozone precursors on downwind areas. This relies on modeled attainment demonstrations for the State ozone standard, which are not yet available. Due to the technical difficulties in determining what constitutes "sufficient measures" in the absence of a modeled attainment demonstration, the regulations set forth specific requirements designed to mitigate upwind emissions.

One requirement is the application of Best Available Retrofit Control Technology (BARCT, defined in H&SC section 40406) on existing stationary sources. This provision

further specifies that BARCT must be applied to those sources that represented seventy-five percent of the 1987 actual reactive hydrocarbon (ROG) and oxides of nitrogen (NOx) emissions inventory for permitted stationary sources by January 1, 1994. This was intended to accelerate the implementation of BARCT earlier than the CCAA required. All upwind districts have complied with this seventy-five percent requirement.

Section 70601 of the current mitigation regulations provides a procedure to limit the application of BARCT. The limitation procedure only applies within the context of transport mitigation and cannot be used to waive any other applicable BARCT requirements of the CCAA. This provision allows upwind districts to demonstrate, as part of its attainment plan, that BARCT mitigation requirements for one or more sources are unnecessary for expeditious attainment of the ozone standard in the upwind and downwind districts. The demonstration for the limitation of BARCT must be included in the ozone attainment plan and approved by ARB. To date, no district has invoked section 70601 as part of its plan.

There are three options provided in the limitation procedure. The upwind district must demonstrate that either: (1) emissions from the source, because of its location, do not contribute to ozone violations in any downwind area, or (2) that reductions from the source are not needed to attain the State ozone standard in any downwind area. The third option would potentially allow a district that is implementing an alternative emission reduction strategy to comply with CCAA requirements to continue to do so. However, the upwind district must demonstrate that the alternative emission reduction approach will be as effective and expeditious for attainment of the ozone standard in the downwind area as the implementation of the BARCT mitigation requirements. An alternative emission reduction strategy could be utilized when a district implements a control strategy that places greater emphasis on NOx or ROG reductions, rather than a combined approach of implementing all feasible measures for both ozone precursors.

IV. PROPOSED REGULATORY AMENDMENTS

After conducting an extensive public process and evaluating the current mitigation requirements, ARB staff is proposing five changes to the ozone transport mitigation regulations for the Board's consideration. The changes are summarized below and discussed in the following sections. The proposed regulatory language is set forth in Appendix A.

Amend title 17 California Code of Regulations section 70600 to:

- Add requirements for the expeditious adoption of all feasible measures and provide an annual review process.
- Require upwind districts to have the same "no net increase" thresholds for reviewing new and modified stationary sources as the downwind districts.
- Delete the dates and percentages for BARCT requirements that have been complied with by the upwind districts.

Amend title 17 California Code of Regulations section 70601 to:

- Extend to the all feasible measures requirement the limitation procedure that exists for the BARCT requirements.
- Add an additional option to the limitation procedure for BARCT and all feasible measures that allows an upwind district, as part of its attainment plan, to demonstrate that the most recent transport assessment shows that the district's transport impact is inconsequential.

A. All Feasible Measures

Section 40914 requires each district that is nonattainment for the State ozone standard to develop and implement an ozone attainment plan. This plan is to include measures that will achieve at least a five-percent annual reduction in district-wide emissions for ozone precursors (see Appendix B for relevant sections of the H&SC). If the district cannot achieve the five- percent reduction, and the ARB concurs, the attainment plan may be approved if it includes all feasible measures. The goal is to achieve and maintain the State ozone standard by the earliest practical date.

To date, districts have not been able to achieve a five percent annual emission reduction, and have been including all feasible measures in their attainment plans. The implementation of all feasible measures has been the primary mechanism through which districts have achieved the local emission reductions needed to maintain steady progress towards attaining the ozone standard in their own district. Districts prioritize the adoption of rules, based on technical feasibility, economic considerations, and air quality benefits for their district.

The focus of all feasible measures under the Act is on attaining the standard within each district. It does not address the issue of emission reductions needed to mitigate transport impacts or establish a process by which the upwind and downwind districts work together to address emissions under their respective jurisdictions. Some downwind districts have indicated that a mechanism is needed to ensure continued implementation of all feasible measures as upwind districts get close to attaining the ozone standard. Some downwind districts are also concerned that upwind districts may have less stringent rules or lack rules for similar source categories. This creates a perception of inequality, and does not appear to support the concept of a shared responsibility.

Staff's recommendations are intended to establish a framework by which upwind and downwind districts work together to ensure the implementation of the most effective measures to mitigate transport as expeditiously as possible. The proposed amendments add a requirement for upwind districts to implement all feasible measures for transport purposes in addition to their own attainment goals, and to institute a more timely implementation process than currently required under State law. Staff is also proposing definitions to clarify the intent and scope of the "all feasible measures" requirements. These amendments are discussed in greater detail below.

Requirements

Staff proposes to incorporate into the transport mitigation regulations a requirement that all feasible measures must be adopted by the upwind district as expeditiously as practicable. The expeditious adoption of all feasible measures is the approach that the districts are taking to comply with the CCAA. However, adding this requirement to the transport mitigation regulations achieves three objectives. First, it ensures that upwind districts continue to adopt all feasible measures regardless of their ozone attainment status as long as they continue to have a significant or overwhelming transport impact. Second, it will result in upwind districts taking into account the needs of the downwind districts when prioritizing their rule adoption schedule. Finally, it will support the concept of shared responsibility for air pollution by ensuring that the upwind and downwind districts work together to mitigate emissions under their jurisdiction.

Implementation Process

The proposed amendments include implementation requirements that provide for a more frequent review process than the current 3-year cycle of plan updates. The implementation process includes an annual review, a consultation and public comment forum, and a reporting process for the implementation of all feasible measures between three-year planning cycles.

Upwind districts would be required to make a finding annually, in consultation with downwind districts, as to whether or not their attainment plan continues to include all feasible measures. Once an initial finding is made, the finding would be available for a 30-day public comment period in order to provide a forum for districts downwind, as well

as concerned industry and citizens, to comment on the upwind district's finding. After the consideration of public comments, the district would make a final finding and submit it concurrently with the annual progress report required by H&SC section 40924 to the ARB. The ARB would approve the finding or notify the district in writing that additional measures are needed. If the ARB determines that the district needs to adopt additional measures, the district would have 180 days in which to amend the rulemaking calendar, as appropriate. H&SC section 40923 requires the publication of the rulemaking calendar.

The requirement for district consultation is to encourage the pooling of district resources and expertise in evaluating whether a new measure adopted by one district is feasible and appropriate for other districts. This type of evaluation may not be straightforward and can require highly technical and resource-intensive analysis involving such factors as emission limits, exemptions, and applicability (cut-off) levels. This level of expertise often rests with the staff in districts where these sources are located.

Definitions

The proposed amendments include a definition of all feasible measures and ozone precursors. The definition of all feasible measures incorporates the definition used in practice by districts and the ARB since the early 1990s. This definition supports the concept that all feasible measures for transport mitigation will continue to be developed and adopted consistent with current implementation of the concept under the California Clean Air Act. That is, in identifying all feasible measures, the districts will continue to take into consideration the same factors they have used in the past when prioritizing rules for adoption.

The proposed definition is:

> "All Feasible Measures" means air pollution control measures, including but not limited to emissions standards and limitations, applicable to all air pollution sources under a district's authority that achieve the maximum possible degree of reduction of emissions of ozone precursors, taking into account technological, social, environmental, economic, and energy factors.

All feasible measures represent a broader concept than BARCT, which addresses the concept of retrofit of existing equipment. However, there are many other emission sources under a districts' jurisdiction. In sections 40000 and 39002 of the H&SC, the Legislature declares that local and regional authorities, including districts, have the primary responsibility to reduce emissions from sources other than vehicular sources. This broad term includes equipment as well as a variety of operations from both large and small stationary sources. This includes facilities that are permitted, as well as emissions that result from smaller, non-permitted facilities and operations that may emit air pollutants. For example, under California law, the districts have the primary legal authority to adopt control measures designed to reduce emissions from architectural and other types of coatings. The intent in proposing the terminology "all air pollution

sources under a districts' authority" is to place emphasis on district evaluation of source categories for feasibility, not every source within a particular category.

Examples of rule categories that could be encompassed by the concept of all feasible measures includes reductions in emissions from coatings (architectural, auto refinishing, graphic arts, etc). Other potential strategies include fleet rules that apply to on-road and off-road vehicle fleets maintained by local business and government agencies. As an example, both the South Coast and Sacramento districts have adopted local fleet rules. Another example is operational limits to reduce emissions, such as restrictions on engine idling.

The definition of "ozone precursors" is added to the regulation to clarify that the scope of all feasible measures includes both oxides of nitrogen (NO_x) and reactive organic gases (ROG) as ozone precursors. However, the limitation procedure in section 70601 of the transport mitigation regulations would allow a district that would like to place greater emphasis on ROG or NOx in their control strategy to continue to do so as long as they can demonstrate that it is as effective in mitigating transport impacts as that achieved with the implementation of BARCT and all feasible measures for both ozone precursors.

B. New Source Review "No Net Increase" Thresholds

New Source Review (NSR) is a program designed to minimize and mitigate emissions of nonattainment pollutants and their precursors from newly constructed or modified stationary sources. This discussion is focused on State NSR requirements for ozone precursors, since most areas of California attain the ambient air quality standards for all the other criteria pollutants except PM_{10}. State law currently does not outline NSR requirements for PM_{10}.

The primary objective of the State NSR program is to maintain air quality progress while accommodating economic growth and expansion. NSR has two main requirements: (1) the application of state-of-the art emission controls, called Best Available Control Technology (BACT), and (2) to mitigate the remaining emissions so that there is "no net increase" in emissions. Mitigation is typically accomplished by supplying emission reduction credits, or offsets. Specific BACT and offset requirements are contained in each district's rules and are implemented through the permit process. District rules typically consolidate State and federal NSR requirements while also taking local needs into account.

NSR applies to a stationary source based on a facility or equipment size threshold, as determined by the source's potential to emit, and the nonattainment status of the area in which the source is located. State law specifies different size thresholds for triggering BACT and "no net increase" requirements. Under California law (H&SC sections 40918 through 40920.5), BACT requirements are triggered by any new or modified stationary source that emits or has the potential to emit 10 or more pounds per day of NO_x or VOC

when the source is located in a ozone nonattainment area classified as "serious," "severe," or "extreme."

The BACT threshold for sources located in "moderate" ozone nonattainment areas is 25 pounds per day. Districts can adopt rules with more stringent BACT thresholds, for example South Coast Air Quality Management District has a "0" pounds per day BACT threshold, even through they are only required to have a 10 pounds per day threshold. Because the application of BACT is intended to result in the application of the most effective technology to equipment, it has the potential to achieve emission reductions beyond that established in State law.

"No net increase" thresholds for ozone precursors range from a threshold of any increase above zero (i.e., all sources are subject) in "extreme" nonattainment areas to a threshold of 25 tons per year in "moderate" nonattainment areas.

Table 2 shows for all the upwind areas, their current State ozone classification for all the required areas, and the required NSR and BACT thresholds under the CCAA. The South Coast has opted for a zero threshold for BACT.

Table 2. State Ozone Classification and CCAA Required NSR and BACT Thresholds

Upwind Area	State Ozone Classification	"No Net Increase" Threshold (TPY)	BACT Thresholds (lbs./day)
Santa Barbara	Moderate	25	25
Broader Sacramento*	Serious	15	10
Bay Area	Serious	15	10
San Joaquin Valley	Severe	10	10
Ventura	Severe	10	10
South Coast	Extreme	0	10

Note: The Feather River Air Quality Management District, a portion of which is located in the Broader Sacramento Area, has a moderate classification, and is subject to thresholds for moderate areas.

In several cases, upwind areas have less stringent NSR requirements under State law than their downwind neighbors. For example, the Broader Sacramento Area and the Bay Area are upwind contributors to the San Joaquin Valley. To the extent there is a benefit, upwind districts should take comparable actions to mitigate their emission impacts. ARB staff is proposing the "no net increase" thresholds for upwind districts to be as stringent as the threshold for their downwind districts. Requiring upwind districts to have the same "no net increase" thresholds as their downwind neighbors would help ensure that both upwind and downwind neighbors are taking comparable actions to mitigate emissions from new and modified stationary sources, regardless of an area's State ozone classification.

This proposal would affect six districts in Northern California and would require the Bay Area Air Quality Management District (BAAQMD) and four of the five districts located in the Broader Sacramento Area to amend their NSR rules to lower their "no net increase"

thresholds from 15 tons per year to 10 tons per year by December 31, 2004. The Feather River Air Quality Management District, also partially located in the Broader Sacramento Area, would need to lower its "no net increase" threshold from 25 tons per year to 10 tons per year. This would result in these districts achieving equivalent "no net increase" threshold levels as their downwind neighbor, the San Joaquin Valley Air Pollution Control District. Table 3 indicates the specific districts that would be affected by the proposed "no net increase" requirement. As an option, the Feather River Air Quality Management District can limit the 10 tons per year threshold to just the portion of the district within the Broader Sacramento Area.

Table 3. Districts Affected by the Proposed "No Net Increase" Requirement

District Name
Bay Area Air Quality Management District
El Dorado County Air Quality Management District
Feather River Air Quality Management District
Placer County Air Pollution Control District
Sacramento Metropolitan Air Quality Management District
Yolo-Solano County Air Quality Management District

Specifically, staff proposes adding language to section 70600 to require the Broader Sacramento Area and the San Francisco Bay Area Basin to implement by December 31, 2004, a NSR permitting program with a "no net increase" threshold of 10 tons per year.

ARB staff is not proposing that districts upwind of the South Coast be included in this provision because of South Coast's classification of extreme under State law. As noted in Table 2, there is no offset threshold for an extreme area due to the severity of its air quality problem. The unique status of this downwind area, combined with the localized nature of the transport impacts from the upwind areas of Santa Barbara and Ventura, make the applicability of this concept inappropriate in this case. Moreover, the NSR rules of the Ventura County Air Pollution Control District already mandate lower offset triggers than required under State law. That District's "no net increase" offset requirement is triggered by sources with a potential to emit 5 tons per year.

C. Outdated BARCT Requirements

The current mitigation regulations contains a requirement for the application of BARCT to permitted stationary sources that represent seventy-five percent of the 1987 actual reactive hydrocarbon and nitrogen oxides emissions inventory for permitted stationary sources by January 1,1994. The purpose of this requirement was to accelerate the application of BARCT on permitted stationary sources. This requirement has been fully implemented for a number of years and is now obsolete. Therefore, ARB staff proposes delete the language pertaining to the seventy-five percent reduction by January 1, 1994 from the regulations. However, no changes are proposed to the existing overall requirement for BARCT on existing stationary sources.

D. Limitation Procedure for All Feasible Measures

Title 17, California Code of Regulations, section 70601 currently provides three options for a district to demonstrate, through its attainment plan, why one or more sources under its jurisdiction should be excluded from the BARCT mitigation requirements. These options were discussed earlier under "Current Transport Mitigation Requirements."

Staff is proposing to incorporate all feasible measures into the exemption process set forth in section 70601. Similar to the BARCT exclusion, a district may demonstrate why one or mores sources should be excluded from the all feasible measures mitigation requirements.

E. Additional Limitation Procedure

Staff is also proposing to add an additional option to section 70601. This option would allow a district to opt out of implementing any new BARCT and all feasible measures for the purpose of transport mitigation if one of the specified criteria discussed above can be demonstrated, however, existing measures would need to be maintained and the exemption would not apply to any CCAA requirements for BARCT or all feasible measures except for transport. This option would allow a demonstration by the district that the most recent transport assessment shows that the district's transport impact to any downwind areas is inconsequential. As with the other options, this demonstration would have to be included in the district's ozone attainment plan and approved by ARB, and does not have any affect on requirements that the district is subject to under State or federal law.

V. ALTERNATIVES TO PROPOSED REGULATORY ACTION

Staff considered two alternatives to those proposed. The alternatives considered were: (1) no changes to the current mitigation regulations, and (2) more stringent New Source Review "BACT" threshold levels applicable to all districts. The alternatives are discussed below.

Before taking final action on the proposed regulatory action, the Board must reasonably determine that no alternative considered by the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected businesses than the proposed action.

A. No Action

The staff believes that because the transport mitigation regulations have not been amended in a number of years, it has become outdated. The staff believes that the amendments, as currently proposed, more accurately reflect the current economic and technical capabilities in California and are more appropriate than any other alternatives, including the no action alternative.

B. Lower New Source Review "BACT" Thresholds

Lowering the BACT thresholds to zero would provide greater reductions of new stationary source emissions; however, it will impact businesses. Districts identified as serious, severe, and extreme for the State ozone classification currently have a BACT threshold of 10 pounds per day. Lowering those thresholds to zero or near-zero could significantly affect the creation and expansion of businesses in the impacted upwind districts and could cost significantly more than staff's proposal. Business competitiveness would also be impacted, because businesses may choose to locate in districts or other states that have less stringent rules.

VI. PUBLIC PROCESS

Since the Board's direction, in April 2001, to revisit the transport mitigation regulations, and as part of the rule development process, ARB staff has held three public workshops, as well as plus a number of meetings with individual districts and stakeholders. In June 2001, ARB staff held the first public workshop to discuss broad concepts under consideration, subsequently, these concepts were presented to the Board in July 2001, and made available in a Status Report. At that meeting, the Board directed staff to develop amendments to the transport mitigation regulations for the Board's consideration. The ARB staff developed two of the concepts discussed at the July 2001 Board meeting, all feasible measures and New Source Review requirements, into regulatory proposals. On January 28, 2003, ARB staff held a scoping workshop to discuss further development of these concepts and held a follow-up workshop on March 13, 2003 to discuss specific regulatory language.

The main comments received during the rule development process that have already been incorporated into the staff's proposed amendments are briefly listed below:

- Add a definition of all feasible measures. The current regulation has aligned the definition, as requested, with the current process the districts use in prioritizing rules for adoption.

- Identify a procedure to incorporate updated transport assessments that show that transport impact is inconsequential. This was included as a new option in section 70601.

- Remove the implementation process that would require an annual update of the attainment plan. The ARB staff's original proposal included amending the district's attainment plan every year if a finding was made that it did not continue to provide for the adoption of all feasible measures. The staff agreed that updating the plan every year was unnecessary; therefore, the staff retained the annual review process but aligned it with annual requirements that are already in place under State law. Included in these requirements are the publication of an annual rulemaking calendar and annual progress report on the districts' plan implementation, which will minimize districts' resources.

- Emphasize the need for upwind districts to reduce both ozone precursors. This was accommodated by including a definition of ozone precursors in the regulation.

Below is a summary of the main comments that were raised during the development of the regulations and were not incorporated into the regulatory proposals. Along with the above comments, these are comments that were received prior to the release of the Staff Report and the commencement of the 45-day comment period on the proposed amendments.

1. Need for Annual Review and Reporting Requirements

Several districts commented that an annual review and reporting process was not necessary.

The ARB staff believes that an annual requirement to review the measures in a district's attainment plan is an important improvement to the mitigation regulation. Currently, the districts review and update their attainment plans every three years to ensure that they contain all feasible measures. This 3-year process does not ensure that a new measure that becomes available between plan updates will be considered expeditiously. It is important that districts work together to identify and adopt all feasible measures and that this be done in a timely manner. The Act already requires an annual process that includes publication of a rulemaking calendar and submittal of an annual report to the Board on plan implementation. Therefore, the requirements for an annual review of all feasible measures should not add substantial additional burden on the districts. In fact, it should spread out the amount of work that is currently required every three years to evaluate potential new measures.

2. Timing

Several workshop participants suggested delaying the public hearing until additional information is available on transport, including modeling information from CCOS.

A delay is unnecessary because we have substantial documentation of transport impacts and technical information supporting the rationale of the proposed amendments. Furthermore, it is unnecessary to delay the achievement of the expected public health benefits associated with these amendments. With current funding and project timelines, CCOS is not expected to provide insight that would enable districts to meet their long-term requirements to identify the scope of sufficient measures needed to attain the State ozone standard in the downwind regions in the next several years. However, CCOS is expected to refine our understanding of transport during specific ozone episodes, which can help districts select and prioritize near-term control strategies and ensure that steady progress towards the State ozone standard is maintained. The information from CCOS, which is expected to be available in phases, can be most effectively incorporated into the implementation phase of the all feasible measures consultation and evaluation process.

3. Mitigation Requirements for Particulate Matter

Several districts have asked that ARB incorporate mitigation of particulate matter into the proposed amendments to the ozone transport mitigation regulations.

ARB staff agrees that there is a need to understand and ultimately address the transport of particulate matter. However, the Legislature directed ARB and districts to take specific actions related to the transport of ozone and ozone precursors. Additionally, the scientific and technical basis for ARB to develop particulate matter mitigation

regulations is emerging. Therefore, the ability to conduct in-depth transport assessments of particulate matter is limited. The ARB staff will closely follow this work and address PM transport, as appropriate, as the science becomes available. However, in the future, aerosol models currently under development have the potential to provide a wealth of information related to particulate matter source impacts, including evaluation of transport impacts on observed particulate matter concentrations.

4. Transportation and Land Use Mitigation Requirements

Several districts have asked ARB to consider incorporating specific requirements for transportation and land use into the mitigation regulations.

State law directs ARB to establish mitigation requirements applicable to upwind districts and to exercise its oversight role in ensuring that districts are meeting their responsibilities to mitigate their transport impacts. ARB does not have direct authority over local transportation and land use planning agencies, and is not the proper agency to direct such activities.

However, local transportation and planning agencies can support air quality through their project planning decisions and by working collaboratively with districts to implement a wide variety of strategies designed to meet local conditions and needs. California districts have a history of forming effective partnerships with local government to ensure that air quality concerns are incorporated into local transportation and land use decisions. Because the most effective strategies are based on local conditions that vary significantly from one region to another, and often involve a partnership with local agencies with different areas of responsibilities, there is no consistent approach that would work for all areas of the State. Therefore, it is not appropriate to include specific transportation or land use requirements as part of the mitigation regulations.

5. ARB Mitigation Requirements

A number of districts requested that the emission control responsibilities of the ARB be included in the mitigation requirements.

State law gives ARB an oversight role in ensuring that districts mitigate the transport impact of emissions under their jurisdiction. Independent of this regulation, State law clearly directs ARB to achieve the maximum emission reductions possible from mobile sources (Section 43018(a) of the H&SC). This covers on-road and off-road mobile sources, fuels, and fuel dispensing operations. Similarly, section 41712 directs the ARB to adopt regulations to obtain the maximum feasible emission reductions in volatile organic compounds emitted by consumer products, to the extent that these reductions are necessary to attain State and federal air quality standards, are technologically and commercially feasible, and will not result in the elimination of a product form. ARB meets these overarching obligations through the adoption of statewide control measures that are incorporated in individual districts' attainment plans for State and federal standards.

6. New Evaluation of Transport Couples

Several workshop participants requested that ARB revisit all of the transport couples to incorporate the latest information.

ARB will do the next triennial review of the transport assessments next year. Based on the results of the last triennial review, it may not be necessary to review every transport couple. However, ARB staff will solicit public input on priorities for the next transport review to ensure that the latest information is incorporated.

VII. ECONOMIC IMPACTS

Staff believes that the proposed amendments may cause limited adverse impacts in California employment, business status, or competitiveness.

A. Legal Requirement

Sections 11346.3 and 11346.54 of the Government Code requires State agencies proposing to adopt or amend any administrative regulation to assess the potential for adverse economic impact on California business enterprises and individuals. The assessment shall include consideration of the impact of the proposed regulatory amendments on California jobs, business expansion, elimination or creation; and the ability of California businesses to compete in other states.

State agencies are also required to estimate the cost or savings to any State or local agency and school district in accordance with instructions adopted by the Department of Finance. This estimate is to include non-discretionary costs or savings to local agencies and the costs or savings in federal funding to the State.

B. Affected Businesses

Some businesses within areas identified as being upwind, may be impacted by the proposed amendment to require timely implementation of all feasible measures. Staff is unable to determine the number and type of businesses that may be impacted by this proposal because it is dependent upon each district's rulemaking and determination of what rules are "feasible."

The proposed amendment to require upwind districts to have the same NSR "no net increase" thresholds as their downwind neighbor would potentially apply to new businesses or expanding businesses that emit or have the potential to emit between 10 to 15 tons per day of ozone precursor emissions that are located in the San Francisco Bay Area Air Basin, the Yolo-Solano Air Quality Management District, the Placer, and El Dorado districts. In addition, it would affect new or expanding business located in the Sutter County portion of the Feather River Air Quality Management District that has the potential to emit between 10 to 25 tons per day of ozone precursor emissions. Only those businesses located in the areas identified above would potentially be affected.

Based on evaluations of district permitting activities for the past several years, ARB staff determined that on average, approximately 30-35 businesses a year may be impacted. Most or many of these businesses are anticipated to be small businesses.

C. Potential Impact on Businesses

The proposal to require expeditious adoption of all feasible measures for upwind districts would potentially only impact businesses located within upwind areas identified

in section 70500(c) of title 17, California Code of Regulations. The proposal in and of itself does not mandate the implementation of specific technologies, because districts have flexibility in their individual rulemaking; therefore, the incorporation of all feasible measures into the regulation does not directly impose any costs. Districts must conduct a cost effectiveness analysis and determine the impacts on local business of the specific rules they propose. It is ultimately the district that adopts new measures that may impose costs on specific industries.

Based on evaluations of district permitting activities over the past several years, the ARB estimates the costs for the proposal of revising the "no net increase" thresholds to range from $400,000 to $800,000 per year, or roughly $11,000 to $23,000 per affected business. To develop these estimates, ARB staff looked at the average cost of offsets. The cost of offsets average $17,000-$19,000 per ton for ROG and $15,000 to $23,000 per ton for NOx. However, all costs are speculative since prices of emission credits are market driven and businesses may have options to reduce emissions below trigger levels to avoid costs. Additionally, the total cost is based on permitting activities during the past several years; future activity regarding new and modified sources may differ somewhat.

In addition, actual costs may be lower than the estimated $11,000 to $23,000 per business per year. The Bay Area AQMD maintains a Small Facility Bank which currently provides offsets to businesses that have the potential to emit between 15 and 50 tons of oxides of nitrogen or reactive hydrocarbons. The Bay Area AQMD staff indicated that if the "no net increase" thresholds were lowered to 10 tons per year, they might consider modifying its Small Facility Bank provisions to provide for the additional offsets needed. Therefore, the businesses in the San Francisco Bay Area may not be subject to increased costs. In addition, businesses have several options to reduce emissions below trigger levels so as not to incur any additional costs. Options include, but are not limited to, use of emission control technology or limiting operating conditions to keep emissions below "no net increase" thresholds.

California business should be able to absorb any costs of the proposed regulatory action without significant adverse impacts on their profitability. Some businesses would potentially experience a greater reduction in their profitability than others; however, the impact should remain absorbable.

D. Potential Impact on Business Competitiveness

Businesses competitiveness may be impacted by the proposed amendment to require timely implementation of all feasible measures. Although all feasible measures is already required under the California Clean Air Act, the proposal provides for more timely implementation and a formal review process. Businesses in California may incur costs due to early implementation of existing requirements that other states will not be subject to, since other states are not required to implement all feasible measures.

E. Potential Impact on Employment

The proposed amendments are not expected to affect the creation or elimination of jobs within the State of California, because the districts are already required under State law to adopt all feasible measures and have a New Source Review permitting program. Therefore, the proposed mitigation requirements should not impact employment in California.

F. Potential Impact on Business Creation, Elimination, or Expansion

The proposed amendments will not adversely affect the creation of new businesses or elimination of existing businesses within California. Small business operating in the San Francisco Bay Area and the Broader Sacramento Area may be impacted if they want to expand their operations. If the Board adopts the proposal to require upwind districts to have at least as stringent "no net increase" thresholds as the downwind districts, this would result in the Bay Area Air Quality Management District and the five districts within the Broader Sacramento Area lowering the "no net increase" thresholds from 15 tons per year to 10 tons per year (except for the Feather River District which would need to lower their threshold from 25 to 10 tons per year). As a result, newer expanding stationary sources operating within these districts would need to offset emissions if their potential to emit exceeds the new threshold of 10 tons per year. These businesses have flexibility, however, to avoid additional costs.

G. Potential Cost to Local and State Agencies

The proposed amendments are not expected to impose additional fiscal impacts on local or state agencies. This is because requirements for all feasible measures, NSR, and annual reporting requirements are already required under State law. These amendments accelerate the implementation of measures already required under the H&SC by providing specificity and scope regarding the implementation of all feasible measures that are already required of districts. In addition, districts are already required to submit an annual progress report to ARB and to publish an annual regulatory calendar. The proposed implementation process is intended to work within the framework of these existing requirements. The proposed consultation requirements for all feasible measures are also not anticipated to impose additional costs to the districts. Therefore, both agencies can absorb the costs within their existing budget.

If the proposed amendments will impose a mandate upon, and create costs to, the districts responsible for transport, reimbursements from the State to the districts are not required pursuant to Government Code sections 17500 et. seq., and section 6 of article XIIIB of the California Constitution because the districts have the authority to levy fees sufficient to pay for the mandated program upon permitted stationary sources which emit the pollutants (H&SC section 42311).

VIII. ENVIRONMENTAL IMPACTS AND ENVIRONMENTAL JUSTICE

The intent of the proposed regulatory action is to improve air quality and protect the public health by reducing the public's exposure to potentially harmful transported ozone and ozone precursor emissions. Based on available information, the staff determined that no significant adverse impact on public health or the environment if the Board adopts the proposed amendments to the ozone transport mitigation regulations.

The California Environmental Quality Act (CEQA) and ARB policy require an analysis to determine the potential adverse environmental impacts of proposed regulations. Since the ARB's program involving the adoption of regulations has been certified by the Secretary of Resources (see Public Resources Code section 21080.5), the CEQA environmental analysis is included in this Initial Statement of Reasons for rulemaking in lieu of preparing an environmental impact report or negative declaration. In addition, prior to adopting the regulations, the ARB will respond in writing to all significant environmental issues raised by the public during the public review period or at the Board hearing. These responses will be contained in the Final Statement of Reasons.

A. Air Quality Benefits

Currently, all upwind areas are nonattainment for the State ozone standard and are subject to the all feasible measures requirement under the CCAA. However, in the future, upwind districts may forego adoption of feasible new measures as they attain or approach attainment of the State standard. Therefore, including the all feasible measures requirement in the ozone transport mitigation regulations may benefit public health and welfare if upwind districts adopt measures that they would not otherwise have adopted or adopt them earlier. The proposed amendments for all feasible measures are expected to result in new emission reductions, especially from the expected acceleration of rule adoption earlier than would have been achieved without the proposed amendments.

Emission reductions are anticipated with the "no net increase" thresholds proposal. In general, the emission benefits are associated with any offsets that are required due to the differential between the 15 tons per year and the 10 ton per year threshold. The benefits are uncertain because they are based on an impacted facilities potential-to-emit. To the extent that impacted facilities are near 15 tons per year, greater emission reductions will occur than those facilities that are just over the new 10 ton per year threshold. To provide a general estimate of possible emission reductions, we asked the BAAQMD and the SMAQMD to look at their permitting actions over the last several years and estimate the additional offsets required.

Based on these evaluations of permitting activities, the BAAQMD estimates emission impacts of 0.05 tons per day of oxides of nitrogen and 0.09 tons per day of reactive hydrocarbons. SMAQMD's estimated maximum potential impacts of 0.20 tons per day of oxides of nitrogen and 0.30 tons per day of reactive hydrocarbons. The BAAQMD number is lower because the potential-to-emit from their facilities was closer to the

10 ton per year level than the facilities in the SMAQMD and would therefore not result in as many offsets required.

The emission reduction benefit of requiring upwind districts to have at least as stringent thresholds as the downwind districts may be relatively small compared to other district rules; however, it ensures that upwind and downwind districts are taking comparable actions to reduce emissions from sources under their jurisdiction.

As mentioned in the Introduction, H&SC section 39610 tasks ARB to identify air basins that contribute to a violation of the State ambient air quality standard for ozone in another air basin and establish mitigation requirements commensurate with the level of contribution. Currently, State law does not include mitigation requirements for other pollutants, including particulate matter. However, the proposed regulations - both the NSR and all feasible requirements - will reduce upwind emissions of NOx as an ozone precursor. NOx is a precursor in the formation of particulate matter (PM), which is similar to ozone and is a serious public health concern. By providing reductions in NOx, the proposed transport mitigation regulations are expected to support efforts to achieve PM standards in California. Additionally, ARB scientists are currently developing PM modeling tools as part of the California Regional Particulate Air Quality Study (CRPAQS). These tools will provide a greater understanding of the formation and movement of PM and the likelihood and potential magnitude of PM transport among regions.

B. Other Environmental Impacts

The proposed amendments do not propose specific technologies to be implemented and adopted by the upwind districts, therefore, staff has not determined any other environmental impacts associated with the amendments. Environmental impacts would need to be evaluated on a case-by-case basis as new control measures are adopted.

C. Environmental Justice

The ARB is committed to evaluating community impacts of proposed regulations, including environmental justice concerns. Because some communities experience higher exposures to air pollutants, it is a priority of the ARB to ensure that full protection is afforded to all Californians. The proposed amendments to the transport mitigation regulations is designed to reduce transported ozone and ozone precursor emissions, resulting in reduced emissions for all communities throughout the State, with associated improvements in air quality and lower potential health risks.

IX. REFERENCES

Air Resources Board (1990). Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California. Staff report prepared by the Technical Support Division, June 1990.

Air Resources Board (1993). Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations in California. Staff report prepared by the Technical Support Division, June 1993.

Air Resources Board (1999). Identification of Performance Standards for Existing Stationary Sources: A Resource Document. Staff Report prepared by the Stationary Source Division, April 1999.

Air Resources Board (2001). Assessments of the Impacts of Transported Pollutants on Ozone Concentrations in California. Staff report prepared by the Planning and Technical Support Division, March 2001.

Air Resources Board (2001). Status Report on Ozone Transport Mitigation. Staff report prepared by the Planning and Technical Support Division, July 2001.

APPENDIX A

PROPOSED AMENDMENTS TO THE OZONE TRANSPORT MITIGATION REGULATIONS

PROPOSED AMENDMENTS TO THE OZONE TRANSPORT MITIGATION REGULATIONS

The staff proposes to amend subchapter 1.5, article 6, section 70600 and 70601, title 17, California Code of Regulations, to read as follows (proposed additions are underlined, proposed deletions are struck out):

ARTICLE 6. Transport Mitigation

70600. Emission Control Requirements

(a) Definitions

For the purpose of sections 70600 and 70601, the following definitions shall apply:

(1) All Feasible Measures means air pollution control measures, including but not limited to emissions standards and limitations, applicable to all air pollution sources under a district's authority that achieve the maximum possible degree of reduction of emissions of ozone precursors, taking into account technological, social, environmental, economic, and energy factors.

(2) "Ozone precursors" mean oxides of nitrogen and reactive organic gases.

(b) Specific Requirements

Districts within the areas of origin of transported air pollutants, as identified in section 70500(c), shall include sufficient emission control measures in their attainment plans for ozone adopted pursuant to Chapter 10 of the Health and Safety Code, Part 3, Division 26, beginning with section 40910, to mitigate the impact of pollution sources within their jurisdictions on ozone concentrations in downwind areas. At a minimum, the attainment plans for districts within the air basins or areas specified below shall conform to the following requirements:

~~(a)~~(1) Broader Sacramento Area (as defined in section 70500(b)(3)) shall:

(A) require the adoption and implementation of all feasible measures as expeditiously as practicable.

~~(1)~~(B) *require the adoption and implementation of best available retrofit* control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. ~~At a minimum, the plan shall provide for the adoption of rules that represent best available~~

~~retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.~~

(C) require the implementation, by December 31, 2004, of a stationary source permitting program designed to achieve no net increase in the emissions of ozone precursors from new or modified stationary sources that emit or have the potential to emit 10 tons or greater per year of an ozone precursor.

~~(2)~~(D) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the Upper Sacramento Valley and that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

~~(A)~~(i) are likely to produce a violation of the state ozone standard in the Upper Sacramento Valley or that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border; and

~~(B)~~(ii) are dominated by overwhelming pollutant transport from the Broader Sacramento Area; and

~~(c)~~(iii) are not measurably affected by emissions of ozone precursors from sources located within the Upper Sacramento Valley or that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border.

~~(b)~~(2) San Francisco Bay Area Air Basin shall:

(A) require the adoption and implementation of all feasible measures as expeditiously as practicable.

~~(1)~~(B) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. ~~At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively~~

~~amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.~~

(C) require the implementation, by December 31, 2004, of a stationary source permitting program designed to achieve no net increase in the emissions of ozone precursors from new or modified stationary sources that emit or have the potential to emit 10 tons or greater per year of an ozone precursor.

~~(2)~~(D) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the North Central Coast Air Basin, that portion of Solano County within the Broader Sacramento Area, that portion of Sonoma County within the North Coast Air Basin, and that portion of Stanislaus County west of Highway 33, except as provided in the Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

~~(A)~~(i) are likely to produce a violation of the state ozone standard in the North Central Coast Air Basin, or that portion of Solano County within the Broader Sacramento Area, or that portion of Sonoma County within the North Coast Air Basin, or that portion of Stanislaus County west of Highway 33; and

~~(B)~~(ii) are dominated by overwhelming pollutant transport from the San Francisco Bay Air Basin; and

~~(C)~~(iii) are not measurably affected by emissions of ozone precursors from sources located within the North Central Coast Air Basin, or that portion of Solano County within the Broader Sacramento Area, or that portion of Sonoma County within the North Coast Air Basin, or that portion of Stanislaus County west of Highway 33.

~~(c)~~(3) San Joaquin Valley Air Basin shall:

(A) require the adoption and implementation of all feasible measures as expeditiously as practicable.

~~(1)~~(B) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. ~~At a minimum, the plan shall provide for the adoption of rules that represent best available~~

~~retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.~~

~~(2)~~(C) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the Mojave Desert Air Basin, the Great Basin Valleys Air Basin, and that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

~~(A)~~(i) are likely to produce a violation of the state ozone standard in the Mojave Desert Air Basin, or the Great Basin Valleys Air Basin, or that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border; and

~~(B)~~(ii) are dominated by overwhelming pollutant transport from the San Joaquin Valley Air Basin; and

~~(C)~~(iii) are not measurably affected by emissions of ozone precursors from sources located within the Mojave Desert Air Basin or the Great Basin Valleys Air Basin, or that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border.

~~(d)~~(4) South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border shall, for sources located in that portion of the Basin:

(A) require the adoption and implementation of all feasible measures as expeditiously as practicable.

~~(1)~~(B) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. ~~At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.~~

~~(e)~~(5) South Coast Air Basin shall:

(A) require the adoption and implementation of all feasible measures as expeditiously as practicable.

~~(1)~~(B) *require the adoption and implementation of best available retrofit* control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. ~~At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.~~

~~(2)~~(C) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, the San Diego Air Basin, the Mojave Desert Air Basin, and the Salton Sea Air Basin, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

~~(A)~~(i) are likely to produce a violation of the state ozone standard in the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, or in the San Diego Air Basin, or in the Mojave Desert Air Basin, or in the Salton Sea Air Basin; and

~~(B)~~(ii) are dominated by overwhelming pollutant transport from the South Coast Air Basin; and

~~(C)~~(iii) are not measurably affected by emissions of ozone precursors from sources located within the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, or the San Diego Air Basin, or the Mojave Desert Air Basin, or the Salton Sea Air Basin.

(c) Implementation

(1) By November 1 of each year, each district subject to the requirements set forth in section 70600(b), shall, in consultation with the downwind districts, review the list of control measures identified in its most recently approved

attainment plan and make an initial finding as to whether the list of control measures meets the requirements of section 70600(b). Once the district has made the initial finding, the district shall:

(A) issue a public notice describing the basis of the initial finding and provide for public comment on the initial finding for a period of at least 30 days;

(B) review the public comments and make a final finding;

(C) by December 31 of each year, submit, concurrent with the submittal of a progress report to the state board required under Health and Safety Code section 40924(a), a final finding as to whether the list of control measures continues to include the measures required by section 70600(b) and, if not, a listing of measures that will be added;

(2) Within 60 days of submittal, the state board shall review the final finding and public comments and notify the district if additional measures must be added to the list of control measures.

(3) Within 180 days of receiving notification by the state board, the district shall, as appropriate, update the rulemaking calendar required pursuant to Health and Safety Code section 40923.

Note: Authority cited: Sections 39601 and 39610(b), Health and Safety Code. Reference: Sections 39610, 40912, 40913, 40921 and 41503, Health and Safety Code.

70601. Procedure for Limiting the Application of All Feasible Measures and Best Available Retrofit Control Technology.

A district may exclude one or more sources from the requirement to apply all feasible measures, best available retrofit control technology, or both, as transport mitigation pursuant to section 70600 provided that the district plan prepared pursuant to part 3, chapter 10 (commencing with section 40910) of division 26 of the Health and Safety Code and approved by the Board pursuant to part 4, chapter 1 (commencing with section 41500) of division 26 of the Health and Safety Code demonstrates that:

(a) emissions from the source, because of its location, do not contribute to ozone violations in any downwind area; or

(b) emissions reductions from the source are not needed to attain the ozone standard in any downwind area; or

(c) the district is implementing an alternative emissions reduction strategy pursuant to section 40914 of the Health and Safety Code and that strategy will be at least as effective and as expeditious as the transport mitigation requirements specified in section 70600; or

(d) the most recent transport assessment demonstrates that the district's transport impact is inconsequential.

Note: Authority cited: Sections 39601, 39610(b), Health and Safety Code. References cited: Sections 39610, 40912, 40913, 40921 and 41503, Health and Safety Code.

APPENDIX B

RELEVANT SECTIONS OF THE HEALTH AND SAFETY CODE

RELEVANT SECTIONS OF THE HEALTH AND SAFETY CODE

Transport Identification and Mitigation

Section 39610 Upwind Emissions Effect on Downwind Districts

(a) Not later than December 31, 1989, the state board shall identify each air basin, or subregion thereof, in which transported air pollutants from upwind areas outside the air basin, or subregion thereof, cause or contribute to a violation of the state ambient air quality standard for ozone, and shall identify the district of origin of the transported air pollutants based upon the preponderance of available evidence. The state board shall identify and determine the priorities of information and studies needed to make a more accurate determination, including, but not limited to, emission inventories, pollutant characterization, ambient air monitoring, and air quality models.

(b) The state board shall, in cooperation with the districts, assess the relative contribution of upwind emissions to downwind ozone ambient air pollutant levels to the extent permitted by available data, and shall establish mitigation requirements commensurate with the level of contribution. In assessing the relative contribution of upwind emissions to downwind ozone ambient air pollutant levels, the state board shall determine if the contribution level of transported air pollutants is overwhelming, significant, inconsequential, or some combination thereof. Any determination by the state board shall be based upon a preponderance of the available evidence.

(c) The state board shall make every reasonable effort to supply air pollutant transport information to heavily impacted districts prior to the development of plans to attain the state ambient air quality standards, shall consult with affected upwind and downwind districts, and shall adopt its findings at a public hearing.

(d) The state board shall review and update its transport analysis at least once every three years.

(e) The state board shall conduct appropriate studies to carry out its responsibilities under this section.

All Feasible Measures

Section 40914 Five Percent Annual Emissions Reductions

(a) Each district plan shall be designed to achieve a reduction in districtwide emissions of 5 percent or more per year for each nonattainment pollutant or its precursors, averaged every consecutive three-year period, unless an alternative measure of progress is approved pursuant to Section 39607.

(b) A district may use an alternative emission reduction strategy which achieves less than an average of 5 percent per year reduction in districtwide emissions if the district demonstrates to the state board, and the state board concurs in, either of the following:

(1) That the alternative emission reduction strategy is equal to or more effective than districtwide emission reductions in improving air quality.

(2) That despite the inclusion of every feasible measure in the plan, and an expeditious adoption schedule, the district is unable to achieve at least a 5-percent annual reduction in districtwide emissions.

(c) For purposes of this section and Section 41503.1, for each district that is designated nonattainment for a state ambient air quality standard but is designated attainment for the federal air quality standard for the same pollutant, reductions in emissions shall be calculated with respect to the actual level of emissions that exist in each district during 1990, as determined by the state board. All reductions in emissions occurring after December 31, 1990, including, but not limited to, reductions in emissions resulting from measures adopted prior to December 31, 1990, shall be included in this calculation. For each district that is designated nonattainment for both state and federal ambient air quality standards for a single pollutant, reductions in emissions shall be calculated with respect to the actual level of emissions that exist in each district during the baseline year used in the state implementation plan required by the federal Clean Air Act. All reductions in emissions occurring after December 31 of the baseline year, including, but not necessarily limited to, reductions in emissions resulting from measures adopted prior to December 31 of the baseline year, shall be included in this calculation.

New Source Review Offset Thresholds

Section 40918 Moderate Air Pollution

(a) Each district with moderate air pollution shall, to the extent necessary to meet the requirements of the plan developed pursuant to Section 40913, include the following measures in its attainment plan:

(1) A stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from new or modified stationary sources which emit or have the potential to emit 25 tons per year or more of nonattainment pollutants or their precursors. The program shall require the use of best available control technology for any new or modified stationary source which has the potential to emit 25 pounds per day or more of any nonattainment pollutant or its precursors.

(2) The use of reasonably available control technology for all existing stationary sources, except that stationary sources permitted to emit five tons or more per day or

250 tons or more per year shall be equipped with the best available retrofit control technology.

(3) Reasonably available transportation control measures sufficient to substantially reduce the rate of increase in passenger vehicle trips and miles traveled per trip if the district contains an urbanized area with a population of 50,000 or more.

(4) Provisions to develop areawide source and indirect source control programs.

(5) Provisions to develop and maintain an emissions inventory system to enable analysis and progress reporting and a commitment to develop other analytical techniques to carry out its responsibilities pursuant to subdivision (b) of Section 40924.

(6) Provisions for public education programs to promote actions to reduce emissions from transportation and areawide sources.

(b) Any district with moderate air pollution that is not below the pollutant concentrations for a moderate classification pursuant to Sections 40921 and 40921.5 by December 31, 1997, shall comply with Section 40919 if the state board demonstrates that the additional requirements of Section 40919 will substantially expedite the district's attainment of the state ambient air quality standards. Any actions taken by the state board pursuant to this subdivision are subject to Section 41503.4.

Section 40919 Serious Air Pollution

(a) Each district with serious air pollution shall, to the extent necessary to meet the requirements of the plan adopted pursuant to Section 40913, include the following measures in its attainment plan:

(1) All measures required for moderate nonattainment areas, as specified in Section 40918.

(2) A stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all new or modified stationary sources which emit, or have the potential to emit, 15 tons or more per year. The program shall require the use of best available control technology for any new or modified stationary source which has the potential to emit 10 pounds per day or more of any nonattainment pollutant or its precursors.

(3) The use of the best available retrofit control technology, as defined in Section 40406, for all existing permitted stationary sources.

(4) Measures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets.

(b) Any district with serious air pollution that has not met the criteria for a moderate classification by December 31, 1997, shall comply with Section 40920 if the state board demonstrates that the additional requirements of Section 40920 will substantially expedite the district's attainment of the state ambient air quality standards. Any actions taken by the state board pursuant to this subdivision are subject to Section 41503.4.

Section 40920 Severe Air Pollution

Each district with severe air pollution shall, to the extent necessary to meet the requirements of Section 40913, include the following measures in its attainment plan:

(a) All measures required for moderate and serious nonattainment areas, as specified in Sections 40918 and 40919.

(b) A stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all new or modified stationary sources which emit, or have the potential to emit, 10 tons or more per year.

(c) Measures sufficient to reduce overall population exposure to ambient pollutant levels in excess of the standard by at least 25 percent by December 31, 1994, 40 percent by December 31, 1997, and 50 percent by December 31, 2000, based on average per capita exposure and the severity of the exposure, so as to minimize health impacts, using the average level of exposure experienced during 1986 through 1988 as the baseline.

Section 40920.5 Additional Measures for Districts with Extreme Air Pollution

Each district with extreme air pollution shall, to the extent necessary to meet the requirements of the plan developed pursuant to Section 40913, include the following measures in its attainment plan:

(a) All measures required for moderate, serious, and severe areas.

(b) A stationary source control program designed to achieve no net increase in emissions from new or modified stationary sources of nonattainment pollutants or their precursors.

(c) Any other feasible controls that can be implemented, or for which implementation can begin, within 10 years of the adoption date of the most recent air quality plan.

APPENDIX C

"NO NET INCREASE" THRESHOLD EMISSION ANALYSIS

"NO NET INCREASE" THRESHOLD ANALYSIS

This analysis describes the potential impact of lowering the offset thresholds of the Bay Area Air Quality Management District (BAAQMD) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) from 15 tons per year to 10 tons per year. To conduct this evaluation, the Air Resources Board (ARB) relied on information provided by the BAAQMD and the SMAQMD.

The New Source Review (NSR) "no net increase" thresholds for the BAAQMD and the SMAQMD are both currently 15 tons per year for ozone and ozone precursors. Because these districts are classified as "serious" with regard to nonattainment of the State ozone standard, State law requires them to adopt a stationary source control program that results in "no net increase" in emissions from all new or modified stationary sources that have the potential to emit 15 or more tons per year of oxides of nitrogen (NOx) or volatile organic compounds (VOCs). To achieve "no net increase" in emissions from such sources, these districts' rules require emission reduction offsets to be provided to mitigate emission increases. The BAAQMD currently maintains a Small Facility Bank that provides offsets to facilities that have the potential to emit between 15 and 50 tons per year of NOx or VOCs. Offsets for the bank are largely supplied by facilities that have shut down and have not applied to receive emission reduction credits.

ARB staff contacted the BAAQMD and the SMAQMD and requested information regarding the following two questions:

1. If the offset threshold were lowered from 15 tons per year to 10 tons per year, what would be the magnitude of the additional emission increases of VOCs and NOx that would need to be offset each year?

2. How many facilities would potentially be affected by lowering the offset threshold?

Bay Area Air Quality Management District

The BAAQMD used its computerized permit tracking system to extract relevant data from permit actions that occurred over the past five years to estimate the additional emission increases that would have been offset had the NSR threshold been 10 tons per year. The following table summarizes the District's estimates:

BAAQMD ESTIMATES OF ADDITIONAL OFFSETS THAT WOULD BE REQUIRED IF THE OFFSET THRESHOLD WAS REDUCED FROM 15 TONS PER YEAR TO 10 TONS PER YEAR		
Year	Additional NOx offsets (tons per year)	Additional VOC offsets (tons per year)
2001	57	32
2000	8	42
1999	12	51
1998	8	20
1997	4	12
Annual average	18	31

Note: Surge in NOx emissions in 2001 is consistent with increase in power plant permit activity.

According to BAAQMD staff, the reported emission increases represent permit actions on about 15 to 25 facilities per year. There are approximately 70 facilities in the BAAQMD that are permitted between 10 and 15 tons per year of NOx or VOC. Those facilities would potentially be affected at the time of future permit modification, if any, by lowering the offset threshold.

As mentioned above, the BAAQMD currently maintains a Small Facility Bank that provides offsets to facilities that have the potential to emit between 15 and 50 tons per year of NOx or VOCs. The BAAQMD staff indicated that if the "no net increase" threshold were lowered to 10 tons per year, the District might consider modifying its Small Facility Bank provisions to provide for the additional offsets needed. However, recent demands on the Small Facility Bank have been heavy, and other changes may need to be made to assure the continued viability of that bank.

Broader Sacramento Area

Several years ago, the SMAQMD performed an analysis of three years (1996 – 1998) of permit actions to estimate the impact of lowering the offset threshold for ozone precursors from 15 tons per year to 10 tons per year. The SMAQMD believes this analysis is still a valid reflection of more recent permit activities in the District. The following estimates are of the additional emission increases that would have been offset had the NSR threshold been 10 tons per year:

SMAQMD ESTIMATES OF ADDITIONAL OFFSETS THAT WOULD BE REQUIRED IF THE OFFSET THRESHOLD WAS REDUCED FROM 15 TONS PER YEAR TO 10 TONS PER YEAR		
	Additional NOx offsets (tons per year)	Additional VOC offsets (tons per year)
Annual average	72	115

The SMAQMD staff explained that, while their estimates were the best they could make with available information, the above numbers may overestimate the additional offsets for several reasons. First, while offset requirements motivate facilities to try to keep emissions below the 15 tons per year offset threshold, many facilities permitted with a potential to emit just below 15 tons per year may actually operate well below those levels. If the offset threshold was 10 tons per year, those facilities might have chosen permit conditions that limited their potential to emit below 10 tons per year, and would not have needed to provide additional offsets.

For background, the difference between actual emissions and potential emissions is described briefly here. A facility's potential to emit reflects the amount of each pollutant that it can emit based on its design, or the amount of emissions that the facility owner agrees not to exceed. The potential to emit of a facility is typically reflected in its permit and is the amount that is offset. Actual facility emissions generally are less than potential emissions so that the facility operator has a margin of safety to ensure that permit limits are not violated. The SMAQMD estimates that only one third to one half of the companies permitted just below the 15 tons per year threshold have actual emissions greater than 10 tons per year. Thus, the District's estimates of the emission increases from facilities between 10 and 15 tons per year may include up to one-half to two-thirds too many facilities.

The second reason that these numbers may overestimate the amount of offsets that would be required is that the calculation of the annual amount of offsets was based on the highest quarter's emissions. If a facility operates more during certain seasons, this method would overestimate the amount of offsets it would be required to provide. It should also be noted that the SMAQMD applied a 1.2:1 offset ratio to its calculations to reflect provisions in its NSR rules. This ratio, which increases the estimated amount of offsets needed by 20 percent, may not be required by the District for all emission increases, and would not be required by State or federal law for those facilities between 10 and 15 tons per year if the offset threshold was lowered.

The reported emission increases represent permit actions on an average of about 20 facilities per year, which, for reasons described above, may include facilities that are really smaller than 10 tons per year. From data on "actual" emissions, there are approximately 20 to 40 facilities in the SMAQMD that operate between 10 and 15 tons

per year of NOx or VOC. Those facilities would potentially be affected at the time of future permit modification, if any, by lowering the offset threshold.

ARB staff concluded that approximately 30-35 sources might be affected in these districts if the "no net increase" thresholds were changed from 15 tons per year to 10 tons per year, based on the district's evaluations of permitting activities over the past several years. In addition, ARB staff estimates the costs for the proposal of revising the "no net increase" thresholds to range from $400,000 to $800,000 per year, or roughly $11,000 to $23,000 per business per year. These estimates were based on the district's estimates of additional offsets needed and a 3-year average market cost to purchase emission credits.

Emission Reductions

There is potentially an air quality benefit (unquantifiable) of sources keeping emissions below the newly established 10 tons per year threshold to avoid triggering offsets. Historically the tendency has pushed air pollution control technology to lower levels. Based on evaluations of permitting activities, the BAAQMD estimates emission impacts of 0.05 tons per day of oxides of nitrogen and 0.09 tons per day of reactive hydrocarbons. The SMAQMD estimates maximum potential impacts of 0.20 tons per day of oxides of nitrogen and 0.30 tons per day of reactive hydrocarbons. The BAAQMD number is lower because the potential-to-emit from their facilities was closer to the 10 ton per year level than the facilities in the SMAQMD and would therefore not result in as many offsets required.

The emission reduction benefit of requiring upwind districts to have the same "no net increase" thresholds as downwind districts may be relatively small compared to other district rules; however, it ensures that upwind and downwind districts are taking equal responsibility to reduce emissions.

APPENDIX D

CURRENT OZONE TRANSPORT REGULATIONS

CURRENT OZONE TRANSPORT REGULATIONS

A. Transport Identification Regulation

Article 5. Transported Air Pollutants

70500 Transport Identification

(a) Purpose: This regulation identifies the areas in which transported air pollutants from upwind areas cause or contribute to a violation of the state ambient air quality standard for ozone and the areas of origin of the transported pollutants. All areas identified in the table are the air basins except as otherwise specifically described and defined.

(b) Definitions:

(1) "California Coastal Waters" includes the area between the California coastline and a line starting at the California-Oregon border at the Pacific Ocean; thence to 42.0 degrees North, 125.5 degrees West; thence to 41.0 degrees North, 125.5 degrees West; thence to 40.0 degrees North, 125.5 degrees West; thence 39.0 degrees North, 125.0 degrees West; thence to 38.0 degrees North, 124.5 degrees West; thence to 37.0 degrees North, 123.5 degrees West; thence to 36.0 degrees North, 122.5 degrees West; thence to 35.0 degrees North, 121.5 degrees West; thence to 34.0 degrees North, 120.5 degrees West; thence to 33.0 degrees North, 119.5 degrees West; thence to 32.5 degrees North, 118.5 degrees West; and ending at the California-Mexican border at the Pacific Ocean.

(2) "Upper Sacramento Valley" includes the Colusa, Butte, Glenn, Tehama, and Shasta County Air Pollution Control Districts, and that area of the Feather River Air Quality Management District which is north of a line connecting the northern border of Yolo County to the southwestern tip of Yuba County and continuing along the southern Yuba County border to Placer County.

(3) "Broader Sacramento Area" includes the Sacramento Metropolitan Air Quality Management District; Yolo-Solano Air Pollution Control District; the portions of the El Dorado County Air Pollution Control District included in 1990 U.S. Census Tracts 306.01, 307, 308.01, 308.02, 308.03, 308.04, 309.01, 309.02, 310, 311, 312, 315.01, and 315.02; and the portions of the Placer County Air Pollution Control District included in 1990 U.S. Census Tracts 203, 204, 205, 206.01, 206.02, 206.03, 207.01, 207.02, 207.03, 208, 209, 210.01, 210.02, 211.01, 211.02, 212, 213.01, 213.02, 214, 215.01, 215.02, 216, 218.01, and 218.02; and that area of the Feather River Air Quality Management District which is south of a line connecting the northern border of Yolo County to the southwestern tip of Yuba County, and continuing along the southern Yuba County border to Placer County.

(c) Transport Identification Table

OZONE IMPACTED BY TRANSPORT:	AREAS OF ORIGIN OF TRANSPORT:
1. North Central Coast	San Francisco Bay Area
	San Joaquin Valley
2. South Central Coast	South Coast
	California Coastal Waters
	San Joaquin Valley
	San Francisco Bay Area
3. South Coast	South Central Coast
4. San Diego	South Coast
	Mexico
5. Upper Sacramento Valley	Broader Sacramento Area
6. Broader Sacramento Area	San Francisco Bay Area
	San Joaquin Valley
7. San Joaquin Valley	San Francisco Bay Area
	Broader Sacramento Area
8. Great Basin Valleys	San Joaquin Valley
9. Mojave Desert	South Coast
	San Joaquin Valley
	Mexico
10. San Francisco Bay Area	Broader Sacramento Area
11. Mountain Counties	Broader Sacramento Area
	San Joaquin Valley
	San Francisco Bay Area
12. Salton Sea	South Coast
	Mexico
13. North Coast	San Francisco Bay Area

Note: Authority cited: Sections 39600, 39601, 39610(a), Health and Safety Code. Reference: Section 39610(a), Health and Safety Code.

B. Transport Mitigation Regulations

ARTICLE 6. Transport Mitigation
70600. Emission Control Requirements

Districts within the areas of origin of transported air pollutants, as identified in section 70500(c), shall include sufficient emission control measures in their attainment plans for ozone adopted pursuant to Chapter 10 of the Health and Safety Code, Part 3, Division 26, beginning with section 40910, to mitigate the impact of pollution sources within their jurisdictions on ozone concentrations in downwind areas. At a minimum, the attainment plans for districts within the air basins or areas specified below shall conform to the following requirements:

(a) Broader Sacramento Area (as defined in section 70500(b)(3)) shall:

(1) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for *permitted stationary sources, no later than January 1, 1994.*

(2) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the Upper Sacramento Valley and that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

(A) are likely to produce a violation of the state ozone standard in the Upper Sacramento Valley or that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border; and
(B) are dominated by overwhelming pollutant transport from the Broader Sacramento Area; and
(C) are not measurably affected by emissions of ozone precursors from sources located within the Upper Sacramento Valley or that portion of the Mountain Counties Air Basin north of the Calaveras-Tuolumne County border and south of the Sierra-Plumas County border.

(b) San Francisco Bay Area Air Basin shall:

(1) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.

(2) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the North Central Coast Air Basin, that portion of Solano County within the Broader Sacramento Area, that portion of Sonoma County within the North Coast Air Basin, and that portion of Stanislaus County west of Highway 33, except as provided in the Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

(A) are likely to produce a violation of the state ozone standard in the North Central Coast Air Basin, or that portion of Solano County within the Broader Sacramento Area, or that portion of Sonoma County within the North Coast Air Basin, or that portion of Stanislaus County west of Highway 33; and
(B) are dominated by overwhelming pollutant transport from the San Francisco Bay Air Basin; and
(C) are not measurably affected by emissions of ozone precursors from sources located within the North Central Coast Air Basin, or that portion of Solano County within the Broader Sacramento Area, or that portion of Sonoma County within the North Coast Air Basin, or that portion of Stanislaus County west of Highway 33.

(c) San Joaquin Valley Air Basin shall:

(1) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.

(2) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the Mojave Desert Air Basin, the Great Basin Valleys Air Basin, and that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

(A) are likely to produce a violation of the state ozone standard in the Mojave Desert Air Basin, or the Great Basin Valleys Air Basin, or that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border; and
(B) are dominated by overwhelming pollutant transport from the San Joaquin Valley Air Basin; and
(C) are not measurably affected by emissions of ozone precursors from sources located within the Mojave Desert Air Basin or the Great Basin Valleys Air Basin, or that portion of the Mountain Counties Air Basin south of the Amador-El Dorado County border.

(d) South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border shall, for sources located in that portion of the Basin:

(1) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emissions inventory for permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.

(e) South Coast Air Basin shall:

(1) require the adoption and implementation of best available retrofit control technology, as defined in Health and Safety Code section 40406, on all existing stationary sources of ozone precursor emissions as expeditiously as practicable. At a minimum, the plan shall provide for the adoption of rules that represent best available retrofit control technology for source categories that collectively amount to 75 percent of the 1987 actual reactive hydrocarbon emission inventory of permitted stationary sources, and 75 percent of the 1987 actual nitrogen oxides emissions inventory for permitted stationary sources, no later than January 1, 1994.

(2) include measures sufficient to attain the state ambient air quality standard for ozone by the earliest practicable date within the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, the San Diego Air Basin, the Mojave Desert Air Basin, and the Salton Sea Air Basin, except as provided in Health and Safety Code section 41503(d), during air pollution episodes which the state board has determined meet the following conditions:

(A) are likely to produce a violation of the state ozone standard in the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, or in the San Diego Air Basin, or in the Mojave Desert Air Basin, or in the Salton Sea Air Basin; and
(B) are dominated by overwhelming pollutant transport from the South Coast Air Basin; and
(C) are not measurably affected by emissions of ozone precursors from sources located within the South Central Coast Air Basin south of the Santa Barbara-San Luis Obispo County border, or the San Diego Air Basin, or the Mojave Desert Air Basin, or the Salton Sea Air Basin.

Note: Authority cited: Sections 39601 and 39610(b), Health and Safety Code. Reference: Sections 39610, 40912, 40913, 40921 and 41503, Health and Safety Code.

70601. Procedure for Limiting the Application of Best Available Retrofit Control Technology.

A district may exclude one or more sources from the requirement to apply best available retrofit control technology as transport mitigation pursuant to section 70600 provided that the district plan prepared pursuant to part 3, chapter 10 (commencing with section 40910) of division 26 of the Health and Safety Code and approved by the Board pursuant to part 4, chapter 1 (commencing with section 41500) of division 26 of the Health and Safety Code demonstrates that:

(a) emissions from the source, because of its location, do not contribute to ozone violations in any downwind area; or

(b) emissions reductions from the source are not needed to attain the ozone standard in any downwind area; or

(c) the district is implementing an alternative emissions reduction strategy pursuant to section 40914 of the Health and Safety Code and that strategy will be at least as effective and as expeditious as the transport mitigation requirements specified in section 70600.

Note: Authority cited: Sections 39601, 39610(b), Health and Safety Code. References cited: Sections 39610, 40912, 40913, 40921 and 41503, Health and Safety Code.

SUMMARY OF BOARD ITEM

ITEM # 03-4-6: Status Report on the Development of Technical Information to Support the Air Resources Board's Environmental Justice Program

STAFF RECOMMENDATION: Informational Item

DISCUSSION: During the January 2003 Board Meeting, the Board requested a status report on the progress being made to identify and address technical issues related to the implementation of the environmental justice program.

The Policies and Actions for Environmental Justice, approved by the Board in December 2001, contained a commitment to develop technical information and tools to assist agencies and others in addressing environmental justice issues. The focus of this effort is to improve our understanding of the cumulative emissions, exposures, and health risks in California communities. ARB staff is actively working to develop technical tools and identify new sources of information to ensure that local government agencies and the general public have the information necessary to assess air quality impacts in their communities. We are working with the EJ Stakeholders group and CAPCOA as we develop and refine these tools.

SUMMARY AND IMPACTS: This status report will update the Board on the development of technical information to support the Air Resources Board's Environmental Justice Program.

SUMMARY OF BOARD ITEM

AGENDA ITEM # 03-4-7: Public Meeting to Consider Findings on Exempting Additional Vehicles from California's Basic Smog Check Program, in Response to Assembly Bill 2637 (Cardoza, 2002).

STAFF RECOMMENDATION: Staff evaluated the emissions impact of exempting five and six year old cars from biennial inspections in Basic Smog Check areas. Currently, cars are exempt their first four years. Staff's evaluation indicates that increasing the exemption to five or six would result in an adverse impact in Basic Smog Check areas that are classified as severe or extreme ozone nonattainment areas under the federal Clean Air Act, and that do not qualify for redesignation to attainment. Consequently, staff recommends that the Board find that increasing the exemption in those areas would prohibit California from meeting its State Implementation Plan (SIP) obligations.

DISCUSSION: AB 2637 exempts new vehicles from Smog Check inspections for up to six model years, statewide, starting January 1, 2004, unless ARB finds that exempting additional vehicles would prohibit the State from meeting the federal Clean Air Act conformity requirements or California SIP commitments. At the April 24, 2003 Board hearing, the Board considered a staff proposal to exclude all areas subject to the Enhanced Smog Check requirements from the six-year exemption. The Board found that in Enhanced Smog Check areaS, a fleet-wide exemption for new motor vehicles beyond the current four years would result in adverse emissions impact that would prohibit the State from meeting California's commitments with respect to the SIP. The Board also directed staff to further investigate the impact of the six-year exemption in Basic Smog Check areas to determine if increasing the exemption to five or

determine if increasing the exemption to five or six years in these basic areas would prohibit California from meeting its SIP commitments.

Staff analysis indicates that any loss of benefits, in federal severe and extreme ozone nonattainment areas that do not qualify for redesignation to attainment, would inhibit the areas from meeting federal one-hour ozone attainment deadlines. The severe area attainment deadlines are either 2005 or 2007. The extreme area attainment deadline is 2010. Staff analysis also indicates that five and six-year old vehicles could be exempted in serious and moderate nonattainment and attainment areas without impacting California's ability to meet its SIP obligations. The moderate and serious attainment deadlines have passed and are 1996 and 1999, respectively.

SUMMARY AND IMPACTS: Approval of the staff's recommendations will leave the Basic Smog Check program unchanged in federal severe and extreme nonattainment and those areas that do not qualify for redesignation to attainment, thereby, preserving all the associated emissions benefits and ensuring compliance with the California SIP. The exemption for new cars subject to the Basic Smog Check Program in serious and moderate nonattainment or attainment areas, would be expanded from four to six model years as provided by AB2637, thereby reducing costs to persons with cars registered in those areas.