

State of California  
AIR RESOURCES BOARD

RESOLUTIONS

No.	Item	Staff	Hearing Scheduled	Date Adopted	+ EIS to Resources
90-1	Receptor Modeling of Acidic Air Pollutants and Oxidants to Forested... Desert Research Inst. \$240,678	RD	1/11/90	1/11/90	
90-2	A Proposal to Determine the Transport of Acidic Air Pollutants to Forest...	RD	1/11/90	1/11/90	
90-3	Aquatic Biota in the Sierra Nevada: Current Status and Potential Effects... Unv. of CA, Santa Barbara \$178,391	RD	1/11/90	1/11/90	
90-4	Aquatic Amphibians in the Sierra Nevada: Current Status and Potential... Unv of CA, Los Angeles \$ 90,000	RD	1/11/90	1/11/90	
90-5	Effects of Nitric Acid Vapor and Ozone in Exercising, Healthy Subjects as...	RD	1/11/90	1/11/90	
90-6	Test Methods	MLD	1/11/90	1/11/90	
90-7	Carbon Monoxide Ambient Air Quality Standards		2/08/90	2/08/90	
90-8	Monitoring of Phthalates and PAHs in Indoor and Outdoor Air Samples in S. CA Research Triangle Inst. \$287,904	RD	2/08/90	2/08/90	
90-9	The Effect of Ozone on Photosynthesis, Vegetative Growth, and Productivity... Unv. of CA, Davis \$105,342	RD	2/8/90	2/08/90	
90-10	After-Market Parts	MSD	2/8/90	2/08/90	
90-11	Transportation Requirements of the California Clean Air Act		2/08/90	2/08/90	
90-12	RSC Member Resigning Catherine Wilson	RD	4/13/90	4/13/90	
90-13	Characterization of Driving Patterns & Emissions from Light-Duty Vehicles... Sierra Research, Inc. \$249,923	RD	4/13/90	4/13/90	
90-14	Effects of Use of Low-Oxygenate Gasoline Blends Upon Emissions from... Auto. Testing Labs, Inc. \$740,000	RD	4/13/90	4/13/90	
90-15	A survey and Analysis of Employee Responses to Employer-Sponsored Trip.. COMSIS Corporation \$195,417	RD	4/13/90	4/13/90	
90-16	Determination of Emissions from Burning of Agricultural & Forestry... University of CA, Davis \$ 54,044	RD	4/13/90	4/13/90	

State of California  
AIR RESOURCES BOARD

RESOLUTIONS

No.	Item	Staff	Hearing Scheduled	Date Adopted	+ EIS to Resources
90-17	Analysis of On-Road CO Emissions University of Denver \$ 24,990	RD	4/13/90	4/13/90	
90-18	Methods Development for Quantification of Ozone Transport for California Sonoma Technology, Inc. \$423,430	RD	4/13/90	4/13/90	
90-19	Dermal Absorption of Methanol and gasoline/Methonal Mixtures Univ. of CA, Davis \$ 84,373	RD	4/13/90	4/13/90	
90-20	The toxicities of Chemical Constituents of PM10 in the South Coast Air Basin... Univ. of CA, Irvine \$449,261	RD	4/13/90	4/13/90	
90-21	Incidence of Respiratory Symptoms and Chronic Diseases in a Non-Smoking... Univ. Preventive Med. \$218,335	RD	4/13/90	4/13/90	
90-22	Development of a Model for Assessing Indoor Exposure to Air Pollutants GEOMET Technologies, Inc. \$223,200	RD	4/13/90	4/13/90	
90-23	A Demonstration of the Effects of Smog on Ornamental and Home Garden Plants Dept. of Arboreta & Botanic \$ 65,727	RD	4/13/90	4/13/90	
90-24	Crop and Forest Losses From Air Pollutants -- An Assessment Program Univ. of CA, Riverside \$ 97,519	RD	4/13/90	4/13/90	
90-25	Asbestos Test Methods	MLD	4/12/90	4/12/90	
90-26	Research Plan: 1990	RD	4/13/90	4/13/90	
90-27	Asbestos Control Measures	MLD	4/12/90	4/12/90	
90-28	CCAA Guidance		4/13/90	4/13/90	
90-29	Proposal Number 1611-141 entitled "Chronic Toxicity of Mixed Air Pollut... Univ. of CA, Irvine \$535,720	RD	5/10/90	5/10/90	
90-30	Single Cell Probes for Acid and Oxidant Exposures Univ. of CA, Irvine \$ 63,469	RD	5/10/90	5/10/90	
90-31	Filter Preparation and Training for CADMP Dry Desposition Network Desert Research Inst. \$51,149.38	RD	5/10/90	5/10/90	
90-32	Atmospheric Acidity Protection Program	RD	5/10/90	5/10/90	

State of California  
AIR RESOURCES BOARD

RESOLUTIONS

No.	Item	Staff	Hearing Scheduled	Date Adopted	+ EIS to Resources
90-33	Permit and fee regs for non-vehicular sources pursuant to CCAA	TSD	5/10/90	5/10/90	
90-34	EtO	SSD	5/10/90	5/10/90	
90-35	MDV <i>Exhaust Emission Standards</i>	MSD	6/14/90	6/14/90	
90-36	"Hot Spots", Criteria Guidelines	TSD	6/14/90	6/14/90	
90-37	"Hot Spots", Smaller Sources	TSD	6/14/90	6/14/90	
90-38	Revision to Designation Criteria	TSD	6/15/90	6/15/90	
90-39	Research Proposals	RD	6/15/90	6/15/90	
90-40	Research Proposals	RD	6/15/90	6/15/90	
90-41	MV Toxics Control Report	MSD	6/21/90	6/21/90	
90-42	Consumer Products BAAQMD	SSD	6/21/90	6/21/90	
90-43	Sulfur Content of MV Diesel Fuel	SSD	6/21/90	6/21/90	
90-44	SC Conformity	EO	6/21/90	6/21/90	
90-45	Dioxin-Med. Waste Incineration	SSD	7/13/90	7/13/90	
90-46	ISR	SSD	7/12/90	7/12/90	
90-47	NSR	SSD	7/12/90	7/12/90	
90-48	Emission Reduction <i>Accounting Procedures</i>	EO/AQPL	7/12/90	7/12/90	

State of California  
AIR RESOURCES BOARD

RESOLUTIONS

No.	Item	Staff	Hearing Scheduled	Date Adopted	+ EIS to Resources
90-49	Inorganic Arsenic ID as TAC	SSD	7/13/90	7/13/90	
90-50	Revised Evap. Standards <i>TEST PROCEDURES, ETC.</i>	MSD	8/9/90	8/9/90	
90-51	CFC Emissions	MSD	8/9/90	8/9/90	
90-52	Modeling Guidelines	TSD	8/9/90	8/9/90	
90-53	Transported Pollutants	EO/TSD	8/10/90	8/10/90	
90-54	Criteria Levels/Ozone	RD	9/13/90	9/13/90	
90-55	"Hot Spots"	SSD	9/13/90	9/13/90	
90-56	CCAA/Cost Effect. Guidance	EO	9/13/90	9/13/90	
90-57	Landfill Gas: Eval. Guide/SCM	SSD	9/13/90	9/13/90	
90-58	Clean Fuels/Vehicular Regs.	SSD/MSD	9/27/90	9/28/90	
90-59	Reform Gas: Phase I	SSD	9/28/90	9/28/90	
90-60	VOC Reduction/Consumer Products	SSD	10/11/90	10/11/90	
90-61	Guidance/Attainment Demonstration	EO	10/11/90	10/11/90	
90-62	ID Trichloroethylene as TAC	SSD	10/12/90	10/12/90	
90-63	Abrasive Blasting Regs	CD	11/8/90	11/8/90	
90-64	Heavy Duty Smoke Regs	MSD	11/8/90	11/8/90	

State of California  
AIR RESOURCES BOARD

RESOLUTIONS

No.	Item	Staff	Hearing Scheduled	Date Adopted	+ EIS to Resources
90-65	Area Designations/CCAA	TSD	11/8/90	11/8/90	
90-66	AQ-Related Indicators	TSD	11/8/90	11/8/90	
90-67	Research Proposal #1800-159, "Remote Sensing & In-Use Emissions of Motor Vehicles", Univ./Denver, \$349,164	RD	11/8/90	12/14/90	
90-68	DROPPED				
90-69	Research Proposal #1801-159, "Vapor Phase Mutagens", Univ./Davis \$59,998.	RD	11/8/90	11/8/90	
90-70	Research Proposal #1798-159, "Pesticides Monitoring", Univ./Fresno, \$149,061.	RD	11/8/90	11/8/90	
90-71	Research Proposal #796-159, "Atmospheric Reactivity (VOC's), Univ./Riverside, \$231,141.	RD	11/8/90	11/8/90	
90-72	Research Proposal #1802-159, "SCAQ5 NO <sub>2</sub> and NO <sub>x</sub> ", Unisearch, \$9,632.	RD	11/8/90	11/8/90	
90-73	Research Proposal #1793-158, "Aromatic Hydrocarbons/Long-Chain Alkanes", Univ./Riverside, \$199,887.	RD	11/8/90	11/8/90	
90-74	ID Vinyl Chloride as a TAC	SSD	12/13/90	12/13/90	
90-75	ID Chloroform as a TAC	SSD	12/13/90	12/13/90	
90-76	Aromatic Hydrocarbon Content of Motor Vehicle Diesel Fuel	SSD	12/13/90	12/13/90	
90-77	DROPPED				
90-78	Mobil Source Plan (Post 87)	MSD	12/13/90	12/13/90	
90-79	Conflict of Interest Code	EO	12/13/90	12/13/90	
90-80	Utility Lawn and Garden Engines	MSD	12/14/90	12/14/90	



State of California

AIR RESOURCES BOARD

Resolution 90-1

January 11, 1989

Item #90-1-5

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911; and

WHEREAS, a solicited research proposal, Number 213-36, entitled "Receptor Modeling of Acidic Air Pollutants and Oxidants to Forested Regions in the Sierra Nevada," has been submitted by Desert Research Institute; and

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

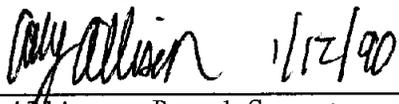
Proposal Number 213-36, entitled "Receptor Modeling of Acidic Air Pollutants and Oxidants to Forested Regions in the Sierra Nevada," submitted by Desert Research Institute for a total amount not to exceed \$240,678.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 213-36, entitled "Receptor Modeling of Acidic Air Pollutants and Oxidants to Forested Regions in the Sierra Nevada," submitted by Desert Research Institute for a total amount not to exceed \$240,678.

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, in an amount not to exceed \$240,678.

I hereby certify that the above is a true and correct copy of Resolution #90-1, as adopted by the Air Resources Board.

 1/12/90  
Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-2

January, 1989

Item #90-1-5

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911; and

WHEREAS, a solicited research proposal, Number 212-36, entitled "A Proposal to Determine the Transport of Acidic Air Pollutants to Forests and Alpine Regions of the Sierra Nevada (TAAPs)," has been submitted by Tracer Technologies; and

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

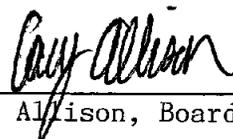
Proposal Number 212-36, entitled "A Proposal to Determine the Transport of Acidic Air Pollutants to Forests and Alpine Regions of the Sierra Nevada (TAAPs)," submitted by Tracer Technologies for a total amount not to exceed \$260,627.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 212-36, entitled "A Proposal to Determine the Transport of Acidic Air Pollutants to Forests and Alpine Regions of the Sierra Nevada (TAAPs)," submitted by Tracer Technologies for a total amount not to exceed \$260,627.

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, in an amount not to exceed \$260,627.

I hereby certify that the above is a true and correct copy of Resolution #90-2, as adopted by the Air Resources Board.

 1/12/90

Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-3  
January 11, 1990

Item #90-1-5

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911; and

WHEREAS, an unsolicited research proposal, Number 207-36, entitled "Aquatic Biota in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," has been submitted by University of California, Santa Barbara; and

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

Proposal Number 207-36, entitled "Aquatic Biota in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," submitted by University of California, Santa Barbara, for a total amount not to exceed \$178,391.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 207-36, entitled "Aquatic Biota in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," submitted by University of California, Santa Barbara, for a total amount not to exceed \$178,391.

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 in an amount not to exceed \$178,391.

I hereby certify that the above is a true and correct copy of Resolution #90-3, as adopted by the Air Resources Board.

 1/12/90  
Cary Allison, Board Secretary

**State of California**

**AIR RESOURCES BOARD**

Resolution 90-4  
January 11, 1990

Item #90-1-5

**WHEREAS**, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911; and

**WHEREAS**, an unsolicited research proposal, Number 208-36, entitled "Aquatic Amphibians in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," has been submitted by University of California, Los Angeles; and

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

**WHEREAS**, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

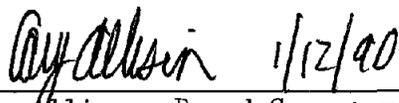
Proposal Number 208-36, entitled "Aquatic Amphibians in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," submitted by University of California, Los Angeles, for a total amount not to exceed \$90,000.

**NOW, THEREFORE, BE IT RESOLVED**, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 208-36, entitled "Aquatic Amphibians in the Sierra Nevada: Current Status and Potential Effects of Acid Deposition on Populations," submitted by University of California, Los Angeles, for a total amount not to exceed \$90,000.

**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 in an amount not to exceed \$90,000.

I hereby certify that the above is a true and correct copy of Resolution #90-4, as adopted by the Air Resources Board.

  
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Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-5  
January 11, 1990

Item #90-1-5

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; and

WHEREAS, an unsolicited research proposal, Number 1723-152 entitled "Effects of Nitric Acid Vapor and Ozone in Exercising, Healthy Subjects as Assessed by Isolated Airway Lavage," has been submitted by the University of California, San Francisco; and

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:

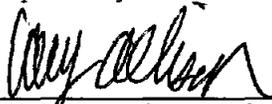
Proposal Number 1723-152, entitled "Effects of Nitric Acid Vapor and Ozone in Exercising, Healthy Subjects as Assessed by Isolated Airway Lavage," submitted by the University of California, San Francisco, for a total amount not to exceed \$129,956.

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 1723-152, entitled "Effects of Nitric Acid Vapor and Ozone in Exercising, Healthy Subjects as Assessed by Isolated Airway Lavage," submitted by the University of California, San Francisco, for a total amount not to exceed \$129,956.

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 in an amount not to exceed \$129,956.

I hereby certify that the above is a true and correct copy of Resolution #90-5, as adopted by the Air Resources Board.

  
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Cary Allison, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: PUBLIC HEARING TO CONSIDER THE ADOPTION AND AMENDMENT OF REGULATIONS  
REGARDING TEST METHODS FOR DETERMINING EMISSIONS FROM NONVEHICULAR  
SOURCES

Agenda Item No.: 90-1-2

Public Hearing Dates: November 8, 1989  
Continued to: January 11, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified:

  
Judith M. Lounsbury  
Board Secretary

Date:

9/10/90

RECEIVED BY  
Office of the Secretary

OCT 15 1990

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-6

January 11, 1990

Agenda Item: 90-1-2

WHEREAS, Section 39601 of the Health and Safety Code authorizes the Air Resources Board (the "Board") to adopt standards, rules, and regulations necessary for the proper execution of the powers and duties and granted to and imposed upon the Board by Law:

WHEREAS, Section 39607(d) of the Health and Safety Code requires the Board to adopt test procedures to measure compliance with its nonvehicular emission standards and those of the air pollution control and air quality management districts ("districts");

WHEREAS, Section 41954 of the Health and Safety Code requires the Board to adopt procedures for determining the compliance of any system designed for the control of gasoline vapor emissions during gasoline marketing operations with performance standards established by the Board;

WHEREAS, the Board has previously adopted Sections 94100-94145, Title 17, California Code of Regulations, which establish 45 test methods for determining whether a nonvehicular (stationary) source is in compliance with the district emission standards;

WHEREAS, the Board has previously adopted the "Certification and Test Procedures for Vapor Recovery Systems at Gasoline Bulk Plants" and the "Certification and Test Procedures for Vapor Recovery Systems at Gasoline Terminals", (together the "Vapor Recovery Certification and Test Procedures"), which are incorporated by reference respectively in Sections 94002 and 94003, Title 17, California Code of Regulations;

WHEREAS, the Board's staff has now proposed one new test method for gathering emissions data and determining compliance with district nonvehicular emission standards, has proposed amendments to four existing nonvehicular source test methods and to the Vapor Recovery Certification and Test Procedures, and has proposed that the Vapor Recovery Certification and Test Procedures be referenced as nonvehicular source test methods so that they are applicable to determination of compliance with pertinent district emission limitations;

WHEREAS, the new test method and proposed amendments have been thoroughly evaluated by the Board's staff;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as proposed if feasible alternatives or mitigation measures are available which would substantially reduce such adverse impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Government Code, Title 2, Division 3, Part 1, chapter 3.5); and

WHEREAS, the Board finds that:

Adoption of the new regulations set forth in Attachment A and of new Method 434 as set forth in Attachment B, with the modifications set forth in Attachment C, is necessary and appropriate to satisfy the requirements of Section 39607(d) of the Health and Safety Code;

The amendments to the four existing test methods and amendments to the Vapor Recovery Certification and Test procedures set forth in Attachment B, with the modifications set forth in Attachment C, and the amendments to the regulations set forth in Attachment A incorporating the test methods and procedures, are necessary and appropriate to expand the applicability of the methods and procedures, to improve their accuracy, and to clarify their provisions; and

The actions approved herein will have no significant adverse environmental impacts.

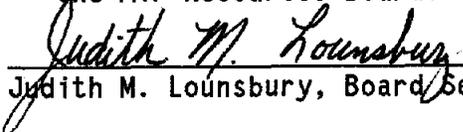
NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the adoption of Sections 94146, 94148, and 94149, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby approves the adoption of new Method 434 as set forth in Attachment B, with the modifications set forth in Attachment C.

BE IT FURTHER RESOLVED that the Board hereby approves the amendments to Sections 94002, 94003, 94132, 94135, 94139, and 94140, Title 17, California Code of Regulations, as set forth in Attachment A, and approves the amendments to the four existing test methods and the Vapor Recovery Certification and Test Procedures as set forth in Attachment B with the modifications set forth in Attachment C.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the regulatory changes set forth in Attachment A and B with the modifications set forth in Attachment C, after making them available to the public for a period of fifteen days, with such further modifications as may be appropriate in light of written comments submitted, provided that the Executive Officer shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted in light of the supplemental written comments received.

I hereby certify that the above is a true and correct copy of Resolution 90-6, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-7

January 11, 1990

Agenda Item No.: 90-1-3

WHEREAS, Health and Safety Code Section 39606(b) requires the Air Resources Board ("ARB" or "Board") to adopt ambient air quality standards in consideration of the public health, safety and welfare, including but not limited to health, illness, irritation to the senses, aesthetic value, interference with visibility, and effects on the economy;

WHEREAS, Health and Safety Code Section 39606(b) further provides that standards relating to health effects shall be based upon the recommendation of the State Department of Health Services;

WHEREAS, the Board periodically reviews existing state ambient air quality standards to ensure that they reflect current scientific knowledge;

WHEREAS, the existing statewide ambient air quality standards for carbon monoxide (CO), which were established in 1982, of 20 parts per million (ppm) averaged over one hour and 9 ppm averaged over 8 hours are based upon evidence of aggravation of angina and other aspects of cardiovascular disease at carboxyhemoglobin (COHb) levels of 2.0 percent or greater which may be produced by breathing CO at levels slightly higher than these standards (Title 17, California Code of Regulations, Section 70200);

WHEREAS, recently published scientific research findings from studies which tested the effects of CO on persons with angina reconfirmed that carboxyhemoglobin levels as low as 2.0 percent aggravate angina;

WHEREAS, ARB staff and Department of Health Services ("DHS") staff have reviewed the recent health effects studies and concur in their recommendation to the Board that the current statewide ambient air quality standards for carbon monoxide are adequately protective of public health, and regulatory action to revise the standards is not necessary at this time;

WHEREAS, the Board has held a duly noticed public meeting at which it has received and considered evidence, both written and oral, presented to it by staff, other scientists, and members of the public relating to the standards;

WHEREAS, the California Environmental Quality Act and Board regulations require that action not be taken as proposed if feasible mitigation measures or alternatives exist which would substantially reduce any significant adverse environmental effects of the proposed action;

WHEREAS, the Board finds that the current state carbon monoxide ambient air quality standards are necessary to afford persons with coronary artery disease protection against aggravation of angina pectoris and other aspects of cardiovascular disease and to prevent possible increased risk to persons with peripheral vascular diseases and/or chronic obstructive pulmonary disease, and fetuses;

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Board regulations, that this regulatory action will have no significant adverse impact on the environment;

NOW, THEREFORE, BE IT RESOLVED that the Board hereby affirms that the existing state ambient air quality standards for carbon monoxide are adequate to protect the public health, and regulatory action is not necessary to revise the standards at this time.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to continue to monitor research efforts and regulatory issues relevant to these standards and to inform the Board of any significant new developments.

BE IT FURTHER RESOLVED that the Board also directs the Executive Officer to review these standards again in five years, or sooner if new information indicates that the existing standards may no longer be appropriate.

I hereby certify that the above is a true and correct copy of Resolution 90-7, as adopted by the Air Resources Board.

  
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Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-8  
February 8, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1733-154, entitled "PTEAM: Monitoring of Phthalates and PAHs in Indoor and Outdoor Air Samples in Southern California," has been submitted by Research Triangle Institute; and

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 1733-154, entitled "PTEAM: Monitoring of Phthalates and PAHs in Indoor and Outdoor Air Samples in Southern California," submitted by Research Triangle Institute, for a total amount not to exceed \$287,904.

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 1733-154, entitled "PTEAM: Monitoring of Phthalates and PAHs in Indoor and Outdoor Air Samples in Southern California," submitted by Research Triangle Institute, for a total amount not to exceed \$287,904.

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 in an amount not to exceed \$287,904.

I hereby certify that the above is a true and correct copy of Resolution #90-8, as adopted by the Air Resources Board.

  
Cary, Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-9  
February 8, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1730-154 entitled "The Effect of Ozone on Photosynthesis, Vegetative Growth, and Productivity of Prunus salicina in the San Joaquin Valley of California", has been submitted by the University of California, Davis; and

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:

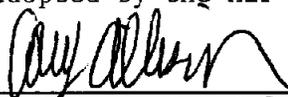
Proposal Number 1730-154, entitled "The Effect of Ozone on Photosynthesis, Vegetative Growth, and Productivity of Prunus salicina in the San Joaquin Valley of California," submitted by the University of California, Davis, for a total amount not to exceed \$105,342.

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 1730-154, entitled "The Effect of Ozone on Photosynthesis, Vegetative Growth, and Productivity of Prunus salicina in the San Joaquin Valley of California," submitted by the University of California, Davis, for a total amount not to exceed \$105,342.

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 in an amount not to exceed \$105,342.

I hereby certify that the above is a true and correct copy of Resolution # 90-9, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider Adoption of Amendments to Regulations Regarding Procedures for Exemption of Add-on and Modified Parts from the Prohibitions of Sections 27156 and 38391 of the California Vehicle Code

Agenda Item No.: 90-2-1

Public Hearing Date: February 8, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

CERTIFIED: Pat Hutcherson  
Board Secretary

Date: 5/24/90

RECEIVED BY  
Office of the Secretary

OCT 15 1990

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-10

February 8, 1990

Agenda Item No.: 90-2-1

WHEREAS, Sections 39002 and 39003 of the Health and Safety Code charge the Air Resources Board (the "Board" or "ARB") with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in Section 43000 of the Health and Safety Code the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state;

WHEREAS, in Section 43000.5 of the Health and Safety Code the Legislature has declared that while significant reductions in vehicle emissions have been achieved in recent years, continued growth in population and vehicle miles traveled throughout the state have the potential not only of preventing attainment of state standards, but in some cases resulting in worsening of air quality;

WHEREAS, Sections 43000 and 43011 of the Health and Safety Code authorize the Board to establish criteria for the evaluation of the effectiveness of motor vehicle pollution control devices;

WHEREAS, Section 43013 of the Health and Safety Code authorizes the Board to adopt motor vehicle emission standards and in-use performance standards which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, Sections 27156 and 38391 of the California Vehicle Code prohibit the installation, sale, offering for sale or advertisement of any motor vehicle pollution control device or system which alters or modifies the original design or performance of any such motor vehicle pollution control device or system unless found by resolution of the Air Resources Board either to not reduce the effectiveness of any motor vehicle pollution control device or to result in emissions from a modified vehicle which comply with existing state or federal standards;

WHEREAS, Section 39515 of the Health and Safety Code states that the Board may delegate to the Executive Officer any duty which it deems appropriate;

WHEREAS, in Section 43008.6 of the Health and Safety Code the Legislature has given the Board expressed authority to issue penalties under the Vehicle Code;

WHEREAS, the Board adopted on November 4, 1977, and amended on May 19, 1981, generic evaluation procedures for aftermarket parts to be exempted from the prohibitions of Vehicle Code Sections 27156 and 38391 (the "Criteria for Evaluation of Add-On Parts and Modified Parts");

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted if feasible alternatives or mitigation measures to the proposed action are available to reduce and avoid such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

The overall air quality will be improved by increased participation of add-on and modified aftermarket parts manufacturers in the ARB exemption process, and that such participation will be increased by streamlining of the exemption granting process;

Compliance Criteria add-on and modified aftermarket parts do not require emission testing, because they present a low risk of increased emissions;

There is good correlation between the CVS-75 test procedure, and the test known as the "Cold 505," and the use of the "Cold 505" test will decrease testing costs to the manufacturers of General Criteria parts, and will increase the likelihood of participation in the testing program;

The proposed regulations will result in a cost savings to and a decreased burden on aftermarket parts manufacturers;

The proposed regulations will allow the staff to focus their efforts on more potentially polluting add-on and modified aftermarket parts; and

The attached amendments will not result in any significant adverse environmental impacts.

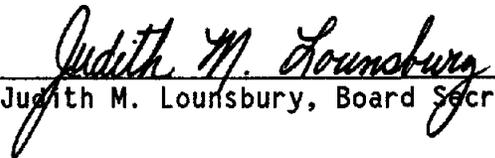
NOW, THEREFORE, BE IT RESOLVED that the Board hereby amends Sections 1900(b)(2), 2222(e), and 2224(b) in Chapter 3 of Title 13, California Code of Regulations, and the procedures incorporated therein, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Executive Officer shall be delegated the authority to incorporate additional aftermarket parts into the Compliance Criteria list, or to modify the incorporated Compliance Criteria, following public hearings and approval of the Office of Administrative Law.

BE IT FURTHER RESOLVED that the Board hereby determines that the amendments approved herein will not cause the California emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards, will not cause the California requirements to be inconsistent with Section 202(a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to Section 209 of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, if necessary, forward the amended regulation to the Environmental Protection Agency with a request either for confirmation that the amendments are within the scope of the existing waiver or for issuance of a new waiver, pursuant to Section 209(b)(1) of the Clean Air Act.

I hereby certify that the above is a true and correct copy of Resolution 90-10, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-11

February 8, 1990

Agenda Item No.: 90-2-2

WHEREAS, Health and Safety Code Sections 39600 and 39605 authorize the Air Resources Board (ARB or Board) to act as necessary to execute the powers and duties granted to and imposed upon the Board and to assist the local air pollution control and air quality management districts;

WHEREAS, Health and Safety Code Section 39003 directs the Board to "systematically attack the serious problem caused by motor vehicles, which is the major source of air pollution in many areas of the state";

WHEREAS, Health and Safety Code Section 39606(b) directs the Board to "adopt standards of ambient air quality for each air basin in consideration of the public health, safety, and welfare...";

WHEREAS, Health and Safety Code Section 39602 states that the Board is responsible for the preparation of the state implementation plan required by the Clean Air Act (42 U.S.C. Sec. 7401 et seq.) and "... shall coordinate the activities of all districts necessary to comply with the Act";

WHEREAS, Health and Safety Code Section 40910 states that districts shall "focus particular attention on reducing the emissions from transportation and areawide emission sources";

WHEREAS, Health and Safety Code Section 40911 states that districts designated nonattainment for "state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide shall prepare and submit a plan for attaining and maintaining the standards to the state board no later than December 31, 1990";

WHEREAS, the California Clean Air Act, in Sections 40918, 40919, and 40920 of the Health and Safety Code, requires:

- areas with moderate air pollution to adopt plans to attain state ambient air quality standards as expeditiously as practicable and to include in such plans reasonably available transportation control measures, provisions to develop an indirect source control program, and public education programs to promote actions to reduce emissions from transportation and areawide sources;

- areas with serious air pollution to include, in addition to all measures specified above, transportation control measures to substantially reduce passenger vehicle trips and miles traveled per trip; and
- areas with severe air pollution to include, in addition to all measures specified above, transportation control measures to achieve an average during weekday commute hours of 1.5 or more persons per passenger vehicle by 1999 and no net increase in vehicle emissions after 1997.

WHEREAS, the Board adopted Resolution #88-60 on December 8, 1988, which states the Board's commitment to assist state, regional, and local efforts to reduce emissions from motor vehicles by reducing the growth in usage and by reducing dependency on the single occupancy vehicle;

WHEREAS, the Board directed staff to assist in efforts to identify and promote the implementation of reasonably available transportation control measures;

WHEREAS, the Board directed staff to work with Caltrans to define a common ground to attack both air pollution and traffic congestion and to ensure that the transportation provisions of the California Clean Air Act are successfully implemented;

WHEREAS, the Board finds that the development of effective transportation control measures is critical to attaining air quality standards and to relieving traffic congestion in major urban areas of the state; and

WHEREAS, the Board finds that in order to successfully meet the requirements of the California Clean Air Act, local air quality plans and local transportation plans will need to be fully integrated and to address mutually supportive goals.

NOW, THEREFORE, BE IT RESOLVED that the Board reaffirms its support for integrated air quality and transportation planning and directs staff to continue to assist in this effort at both the state and local level.

BE IT FURTHER RESOLVED that the Board encourages local air pollution control districts to be aggressive in developing their transportation control strategies and in working with state, regional, and local transportation agencies and local jurisdictions.

BE IT FURTHER RESOLVED that the Board supports an aggressive, yet flexible, definition for reasonably available transportation control measures in order to insure recognition of the seriousness of the problem as well as the unique nature of each locality.

BE IT FURTHER RESOLVED that the Board directs staff to continue to work with local air pollution control districts and transportation agencies in any areas necessary to achieve the performance standards and other transportation requirements in the California Clean Air Act.

BE IT FURTHER RESOLVED that the Board supports the document, California Clean Air Act Guidance Paper #2, Transportation Requirements of the California Clean Air Act, as a basis for developing transportation control measures in response to the requirements set forth in the California Clean Air Act.

BE IT FURTHER RESOLVED the Board directs the Executive Officer to utilize the above Guidance Paper as ARB policy when reviewing transportation control measures and policies developed and submitted to comply with the California Clean Air Act.

BE IT FURTHER RESOLVED that the Board recognizes that the review policies set forth in this document are subject to refinement as more is learned about transportation control measures and their implementation.

BE IT FURTHER RESOLVED that the Executive Officer is directed to forward the guidance document to the air pollution control and air quality management districts; to state, regional, and local transportation agencies; and to local jurisdictions of nonattaining areas; for consideration in the preparation of the 1991 air quality plans.

BE IT FURTHER RESOLVED that the Executive Officer is directed to provide assistance to any district requesting assistance in interpreting the transportation requirements of the California Clean Air Act, the guidance document, or the evolving review policies of this Board.

I hereby certify that the above is a true and correct copy of Resolution 90-11, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Cary Allison, Board Secretary

90-12  
Missing  
Resolution

State of California

AIR RESOURCES BOARD

Resolution 90-13  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1773-156 entitled "Characterization of Driving Patterns and Emissions from Light-Duty Vehicles in California," has been submitted by Sierra Research, Inc.; and

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:

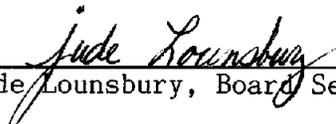
Proposal Number 1773-156 entitled "Characterization of Driving Patterns and Emissions from Light-Duty Vehicles in California," submitted by Sierra Research, Inc., for a total amount not to exceed \$249,923.

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 1773-156, entitled "Characterization of Driving Patterns and Emissions from Light-Duty Vehicles in California," submitted by Sierra Research, Inc., for a total amount not to exceed \$249,923.

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 in an amount not to exceed \$249,923.

I hereby certify that the above is a true and correct copy of Resolution #90-13, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-14  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1765-155 entitled "Effects of Use of Low-Oxygenate Gasoline Blends Upon Emissions from California Vehicles," has been submitted by Automotive Testing Laboratories, Inc.; and

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:

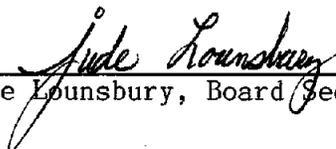
Proposal Number 1765-155, entitled "Effects of Use of Low-Oxygenate Gasoline Blends Upon Emissions from California Vehicles," submitted by Automotive Testing Laboratories, Inc., for a total amount not to exceed \$740,000.

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 1765-155, entitled "Effects of Use of Low-Oxygenate Gasoline Blends Upon Emissions from California Vehicles," submitted by Automotive Testing Laboratories, Inc., for a total amount not to exceed \$740,000.

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 in an amount not to exceed \$740,000.

I hereby certify that the above is a true and correct copy of Resolution #90-14, as adopted by the Air Resources Board.

  
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Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-15  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1781-156 entitled "A Survey and Analysis of Employee Responses to Employer-Sponsored Trip Reduction Incentive Programs", has been submitted by COMSIS Corporation; and

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:

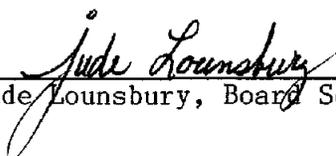
Proposal Number 1781-156, entitled "A Survey and Analysis of Employee Responses to Employer-Sponsored Trip Reduction Incentive Programs," submitted by COMSIS Corporation, for a total amount not to exceed \$195,417.

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 1781-156, entitled "A Survey and Analysis of Employee Responses to Employer-Sponsored Trip Reduction Incentive Programs," submitted by COMSIS Corporation, for a total amount not to exceed \$195,417.

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 in an amount not to exceed \$195,417.

I hereby certify that the above is a true and correct copy of Resolution #90-15, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-16  
April 13, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1761-155 entitled "Determination of Emissions from Open Burning of Agricultural and Forestry Wastes-Phase II: Flame Characterization," has been submitted by the University of California, Davis; and

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:

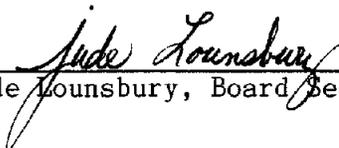
Proposal Number 1761-155, entitled "Determination of Emissions from Open Burning of Agricultural and Forestry Wastes-Phase II: Flame Characterization," submitted by the University of California, Davis, for a total amount not to exceed \$54,044.

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 1761-155, entitled "Determination of Emissions from Open Burning of Agricultural and Forestry Wastes-Phase II: Flame Characterization," submitted by the University of California, Davis, for a total amount not to exceed \$54,044.

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 in an amount not to exceed \$54,044.

I hereby certify that the above is a true and correct copy of Resolution #90-16, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

**State of California**

**AIR RESOURCES BOARD**

Resolution 90-17  
April 13, 1990

**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; and

**WHEREAS**, an unsolicited research proposal, Number 1790-156 entitled "Analysis of On-Road CO Emissions," has been submitted by the University of Denver; and

**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:

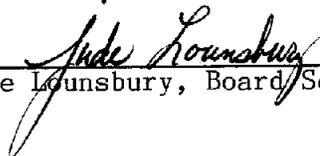
Proposal Number 1790-156, entitled "Analysis of On-Road CO Emissions," submitted by the University of Denver, for a total amount not to exceed \$24,990.

**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 1790-156, entitled "Analysis of On-Road CO Emissions," submitted by the University of Denver, for a total amount not to exceed \$24,990.

**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 in an amount not to exceed \$24,990.

I hereby certify that that above is a true and correct copy of Resolution #90-17, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-18  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1779-156 entitled "Methods Development for Quantification of Ozone Transport for California," has been submitted by Sonoma Technology, Inc.; and

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:

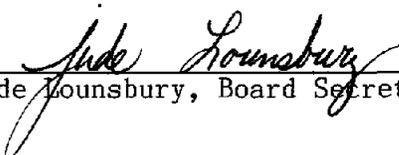
Proposal Number 1779-156 entitled "Methods Development for Quantification of Ozone Transport for California," submitted by Sonoma Technology, Inc., for a total amount not to exceed \$423,430.

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 1779-156, entitled "Methods Development for Quantification of Ozone Transport for California," submitted by Sonoma Technology, Inc., for a total amount not to exceed \$423,430.

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 in an amount not to exceed \$423,430.

I hereby certify that the above is a true and correct copy of Resolution #90-18, as adopted by the Air Resources Board.

  
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Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-19  
April 13, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1769-156, entitled "Dermal Absorption of Methanol and Gasoline/Methanol Mixtures," has been submitted by the University of California, Davis; and

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:

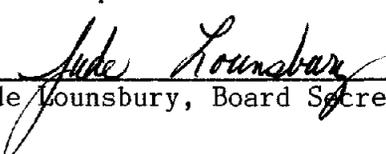
Proposal Number 1769-156, entitled "Dermal Absorption of Methanol and Gasoline/Methanol Mixtures," submitted by the University of California, Davis, for a total amount not to exceed \$84,373.

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 1769-156, entitled "Dermal Absorption of Methanol and Gasoline/Methanol Mixtures," submitted by the University of California, Davis, for a total amount not to exceed \$84,373.

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 in an amount not to exceed \$84,373.

I hereby certify that the above is a true and correct copy of Resolution #90-19, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-20  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1759-155 entitled "The Toxicities of Chemical Constituents of PM<sub>10</sub> in the South Coast Air Basin of California," has been submitted by the University of California, Irvine; and

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:

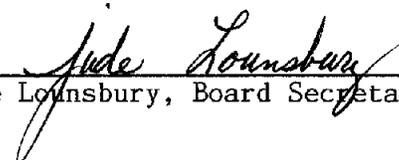
Proposal Number 1759-155, entitled "The Toxicities of Chemical Constituents of PM<sub>10</sub> in the South Coast Air Basin of California," submitted by the University of California, Irvine, for a total amount not to exceed \$449,261.

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 1759-155, entitled "The Toxicities of Chemical Constituents of PM<sub>10</sub> in the South Coast Air Basin of California," submitted by the University of California, Irvine, for a total amount not to exceed \$449,261.

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 in an amount not to exceed \$449,261.

I hereby certify that the above is a true and correct copy of Resolution #90-20, as adopted by the Air Resources Board.

  
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Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-21  
April 13, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1768-155, entitled "Incidence of Respiratory Symptoms and Chronic Diseases in a Non-Smoking Population as a Function of Long-Term Cumulative Exposure to NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>," has been submitted by the Loma Linda University Preventive Medicine Medical Group, Inc.; and

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:

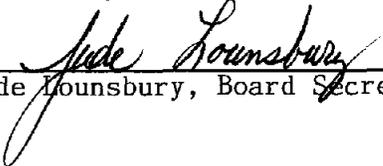
Proposal Number 1768-155, entitled "Incidence of Respiratory Symptoms and Chronic Diseases in a Non-Smoking Population as a Function of Long-Term Cumulative Exposure to NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>," submitted by the Loma Linda University Preventive Medicine Medical Group, Inc., for a total amount not to exceed \$218,335.

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 1768-155, entitled "Incidence of Respiratory Symptoms and Chronic Diseases in a Non-Smoking Population as a Function of Long-Term Cumulative Exposure to NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>," submitted by the Loma Linda University Preventive Medicine Medical Group, Inc., for a total amount not to exceed \$218,335.

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 in an amount not to exceed \$218,335.

I hereby certify that the above is a true and correct copy of Resolution #90-21, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-22  
April 13, 1990

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; and

WHEREAS, a solicited research proposal, Number 1752-155, entitled "Development of a Model for Assessing Indoor Exposure to Air Pollutants", has been submitted by GEOMET Technologies, Inc.; and

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:

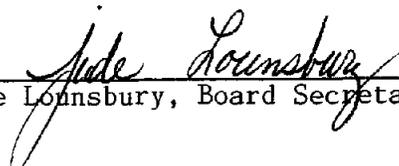
Proposal Number 1752-155, entitled "Development of a Model for Assessing Indoor Exposure to Air Pollutants", submitted by GEOMET Technologies, Inc., for a total amount not to exceed \$223,200.

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 1752-155, entitled "Development of a Model for Assessing Indoor Exposure to Air Pollutants", submitted by GEOMET Technologies, Inc., for a total amount not to exceed \$223,200.

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 in an amount not to exceed \$223,200.

I hereby certify that the above is a true and correct copy of Resolution #90-22, as adopted by the Air Resources Board.

  
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Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-23  
April 13, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1789-156 entitled "A Demonstration of the Effects of Smog on Ornamental and Home Garden Plants", has been submitted by the California Arboretum Foundation, Inc., Department of Arboreta and Botanic Gardens; and

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:

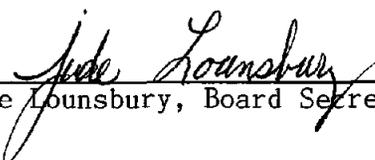
Proposal Number 1789-156, entitled "A Demonstration of the Effects of Smog on Ornamental and Home Garden Plants," submitted by the California Arboretum Foundation, Inc., Department of Arboreta and Botanic Gardens, for a total amount not to exceed \$65,727.

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 1789-156, entitled "A Demonstration of the Effects of Smog on Ornamental and Home Garden Plants," submitted by the California Arboretum Foundation, Inc., Department of Arboreta and Botanic Gardens, for a total amount not to exceed \$65,727.

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 in an amount not to exceed \$65,727.

I hereby certify that the above is a true and correct copy of Resolution #90-23, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-24  
April 13, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1788-156 entitled "Crop and Forest Losses From Air Pollutants - An Assessment Program", has been submitted by the University of California, Riverside; and

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:

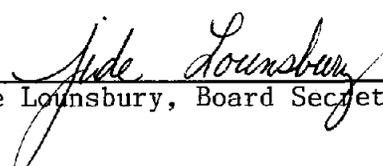
Proposal Number 1788-156, entitled "Crop and Forest Losses From Air Pollutants - An Assessment Program," submitted by the University of California, Riverside, for a total amount not to exceed \$97,519.

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 1788-156, entitled "Crop and Forest Losses From Air Pollutants - An Assessment Program," submitted by the University of California, Riverside, for a total amount not to exceed \$97,519.

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 in an amount not to exceed \$97,519.

I hereby certify that the above is a true and correct copy of Resolution #90-24, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider Adoption of a Regulation Establishing a Test Method for the Determination of Asbestos Content of Serpentine Aggregate

Agenda Item No.: 90-3-2

Public Hearing Date: April 12, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified: Judith M. Lounsbury  
Judith M. Lounsbury  
Board Secretary

Date: 2/13/91

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-25

April 12, 1990

Agenda Item: 90-3-2

WHEREAS, Section 39601 of the Health and Safety Code authorizes the Air Resources Board (the "Board") to adopt standards, rules, and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Section 39607(d) of the Health and Safety Code requires the Board to adopt test procedures to measure compliance with its nonvehicular emission standards and those of the air pollution control and air quality management districts ("districts");

WHEREAS, the Board has previously adopted Sections 94100-94145, Title 17, California Code of Regulations, which establish 45 test methods for determining whether a nonvehicular (stationary) source is in compliance with the district emission standards;

WHEREAS, the Board's staff has now proposed one new test method, Method 435, Determination of Asbestos Content of Serpentine Aggregate, for determining the asbestos content of serpentine aggregate and determining compliance with Board and district nonvehicular emission standards.

WHEREAS, the new test method and proposed amendments have been thoroughly evaluated by the Board's staff;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as proposed if feasible alternatives or mitigation measures are available which would substantially reduce such adverse impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Government Code, Title 2, Division 3, Part 1, Chapter 3.5); and

WHEREAS, the Board finds that:

Adoption of the new regulations set forth in Attachment A and of new Method 435 as set forth in Attachment B, with the modifications set forth in Attachment C, is necessary and appropriate to satisfy the requirements of Section 39607(d) of the Health and Safety Code;

The actions approved herein will have no significant adverse environmental impacts.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the adoption of Section 94147, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby approves the adoption of new Method 435 as set forth in Attachment B, with the modifications set forth in Attachment C.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the regulatory changes set forth in Attachment A and B with the modifications set forth in Attachment C, after making them available to the public for a period of fifteen days, with such further modifications as may be appropriate in light of written comments submitted, provided that the Executive Officer shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted in light of the supplemental written comments received.

I hereby certify that the above is a true and correct copy of Resolution 90-25, as adopted by the Air Resources Board

  
\_\_\_\_\_  
Judith M. Lounsbury Board Secretary

90-26  
Missing  
Resolution

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of an Airborne Toxic Control Measure for Asbestos-Containing Serpentine Rock in Surfacing Applications

Agenda Item No.: 90-3-3

Public Hearing Date: April 12, 1990

Response Date: N/A

Issuing Authority: Air Resources Board

Comment: The Board received comments alleging that certain significant adverse environmental impacts could result from the adoption of the proposed regulations. The regulations would prohibit the use of asbestos-containing serpentine as a surfacing material in California. Commenters stated that the regulations could result in an increase in emissions from motor vehicles, due to the need to transport alternate surfacing materials to areas where serpentine is currently quarried and used.

Response: The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action will not have a significant adverse impact on the environment. While ARB staff analysis shows that a slight increase in vehicular emissions may occur in one county as a result of the regulations, the Board concluded that this increase is so small that it will not constitute a significant environmental impact. A more detailed analysis of the environmental effects of the regulation is contained in the Final Statement of Reasons, Section III-B.

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Office of the Secretary

CERTIFIED:

Judith M. Lounsbury  
Board Secretary

MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

Date: 2/13/91

State of California  
AIR RESOURCES BOARD

Resolution 90-27

April 12, 1990

Agenda Item: 90-3-3

WHEREAS, on March 27, 1986, pursuant to Section 39662 of the Health and Safety Code, the Air Resources Board (Board) identified asbestos (in the following forms: chrysotile, crocidolite, amosite, tremolite, actinolite, and anthophyllite) as a toxic air contaminant for which there is not sufficient available scientific evidence to support identification of a threshold exposure level below which no significant adverse health effects are anticipated (see Title 17, California Code of Regulations, Section 93000);

WHEREAS, following identification of asbestos as a toxic air contaminant, the Executive Officer, with the participation of local air pollution control districts, is required to prepare a report on the need for and appropriate degree of control of asbestos emissions;

WHEREAS, the staff has worked closely with the districts through the statewide Technical Review Group (TRG) and with the affected sources to develop as expeditiously as practical an airborne toxic control measure for emissions of asbestos fibers from serpentine-covered surfaces;

WHEREAS, the staff has developed a proposed airborne toxic control measure (ATCM) for asbestos emissions which would substantially reduce the sale and application of asbestos-containing serpentine material for surfacing;

WHEREAS, the staff has prepared the "Proposed Control Measure for Asbestos-Containing Serpentine Rock In Surfacing Applications" (staff report and its Technical Support Document), which includes: estimates of potential cancer risks due to airborne asbestos fibers near an unpaved serpentine road; a discussion of possible technologically feasible control alternatives including relative costs and efficiencies; estimated costs for alternative surfacing materials; a description of the requirements of the proposed regulation; and a discussion of potential costs of the proposed regulation;

WHEREAS, the staff report for the proposed ATCM and its Technical Support Document constitute the report on the need and appropriate degree of regulation for asbestos required by Health and Safety Code Section 39665;

WHEREAS, the proposed ATCM would substantially reduce asbestos emissions resulting from the sale or application of asbestos-containing serpentine material for surfacing, and is considered to be the best available control technology, as required by Health and Safety Code Section 39666(c);

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as proposed if feasible alternatives or mitigation measures are available;

WHEREAS, a public hearing and other administrative proceedings were held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the proposed ATCM was made available to the public for review and comment, and was discussed at public consultation meetings on April 5, July 27, November 14, 1989, and January 29, 1990;

WHEREAS, in accordance with Health and Safety Code Section 39665(c), the staff report and relevant comments received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, in consideration of the staff report and the written comments and public testimony it has received, the Board finds that:

Existing federal, state, and local regulations do not sufficiently protect the public health from serpentine sources of asbestos;

The use of asbestos-containing serpentine material for surfacing may result in potentially harmful concentrations of asbestos fibers being entrained in the air, and these asbestos fiber concentrations may pose a significant health risk to exposed members of the public;

The proposed airborne toxic control measure would substantially reduce asbestos emissions from the sale or use of asbestos-containing serpentine material for surfacing;

The proposed regulation for asbestos-containing serpentine material complies with the requirements of state law for control of sources of toxic air contaminants identified by the Board;

Before proposing additional controls which might require the removal of asbestos-containing serpentine material which is present on existing surfaces, additional information is needed regarding the extent and nature of possible public exposure to asbestos fibers from existing surfaces.

Some schools and day-care centers may have areas surfaced with asbestos-containing serpentine material, and, under some conditions, children attending such schools or day-care centers may be exposed to potentially harmful levels of asbestos fibers;

This regulatory action will not have a significant adverse impact on the environment.

WHEREAS, the Board further finds, in accordance with the Health and Safety Code Section 39650(e), that:

While absolute and undisputed scientific evidence may not be available to determine the exact nature and extent of risk from emissions of asbestos from serpentine material, it is necessary to take action to protect public health;

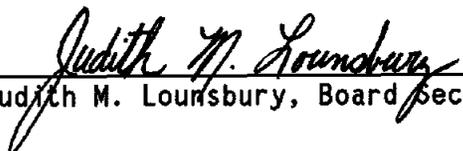
NOW, THEREFORE, BE IT RESOLVED that the Board approves the adoption of Section 93106, Subchapter 7.5, Chapter 1, Part III, Titles 17 and 26, California Code of Regulations as set forth in Attachment A.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the airborne toxic control measure as set forth in Attachment A after making it available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to evaluate the need for control of asbestos emissions from serpentine material present on existing surfaces, and to return to the Board at such time with an airborne toxic control measure should it be deemed necessary to further control emissions from existing surfaces.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to inform schools, pre-schools, and day-care centers of the potential health hazards posed by playgrounds and other areas surfaced with asbestos-containing serpentine material and to assist these schools in determining whether they have serpentine that contains asbestos on the premises.

I hereby certify that the above is a true and correct copy of Resolution 90-27, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-28

April 13, 1990

Agenda Item No.: 90-4-1

WHEREAS, Health and Safety Code Section 39606(b) directs the Air Resources Board (ARB or Board) to "adopt standards of ambient air quality for each air basin in consideration of the public health, safety, and welfare" and whereas the Board has adopted such standards as set forth in Section 70200 of Title 17, California Code of Regulations;

WHEREAS, Health and Safety Code Sections 39600, 39605, and 40916 authorize the Board to act as necessary to execute the powers and duties granted to and imposed upon the Board and to assist local and regional air pollution control and air quality management districts (districts) in their efforts to attain the state ambient air quality standards;

WHEREAS, Health and Safety Code Sections 40911 and 40913 require districts which have not attained the state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide to prepare and submit a plan for attaining and maintaining such standards by the earliest practicable date to the state board no later than June 30, 1991;

WHEREAS, the California Clean Air Act, in Sections 40918, 40919, and 40920 of the Health and Safety Code, requires:

areas with moderate air pollution to include in such plans, to the extent necessary to meet the planning requirements of the Act, reasonably available control technology (RACT) for all existing sources, among other specified measures; and

areas with serious and severe air pollution to include in such plans, to the extent necessary to meet the planning requirements of the Act, a requirement for the application of best available retrofit control technology (BARCT), as defined in Section 40406, to existing stationary sources, among other specified measures;

WHEREAS, Health and Safety Code Sections 41500 and 41503(a) require the ARB to review each district's attainment plan to determine whether the attainment date specified therein represents the earliest practicable date and whether the measures contained in the plan are sufficient to achieve and maintain the state ambient air quality standards;

WHEREAS, the California Clean Air Act, in Section 41503(b) of the Health and Safety Code, states that the Board shall determine whether the combination of measures in all the plans of every district in the air basin is sufficient to achieve and maintain the state ambient air quality standards throughout the basin and shall require control measures for the same emission sources to be uniform throughout the air basin to the maximum

extent feasible, unless a district demonstrates to the satisfaction of the Board that adoption of the measure within its jurisdiction is not necessary to achieve or maintain the state ambient air quality standards;

WHEREAS, the Health and Safety Code, in Section 40406 defines best available retrofit control technology (BARCT) as "an emission limitation based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category," and does not define RACT;

WHEREAS, the ARB staff developed the RACT and BARCT guidance for use by the districts in developing their plans to attain and maintain state ambient air quality standards and held a public workshop to obtain comments on the guidance;

WHEREAS, the Board recognizes that the review policies set forth in this document are inherently flexible and subject to refinement by the Executive Officer as more is learned about RACT and BARCT determinations and their application to specific source categories in specific districts and circumstances;

WHEREAS, the Board finds that the development of RACT and BARCT determinations is critical to the attainment planning process and for attaining the state ambient air quality standards by the earliest practicable date;

WHEREAS, the Board finds that the definitions proposed by the staff for RACT and BARCT, the factors which will be considered in determining RACT and BARCT, and the process for determining RACT and BARCT for specific categories of stationary sources meet the requirements of the California Clean Air Act and represent necessary and useful guidance to the districts in preparing their attainment plans; and

WHEREAS, the Board finds that the continuing cooperation and assistance of those industries affected by these determinations and of the districts and the public is desirable in order to ensure the uniformity and effectiveness of the RACT/BARCT determinations and their application to stationary sources.

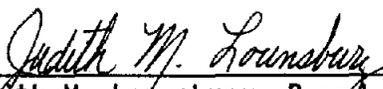
NOW, THEREFORE, BE IT RESOLVED that the Board approves the document titled California Clean Air Act Guidance for the Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology, dated March 1990, and directs the Executive Officer to begin the process of determining RACT and BARCT for existing sources, in cooperation with local and regional air pollution control and air quality management districts, the Environmental Protection Agency and with affected industries and the public.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the guidance document and forthcoming RACT and BARCT determinations to the districts for consideration in preparing their 1991 air quality plans and to notify the districts the ARB consider the determinations based on

this guidance as a starting point in reviewing district plans and regulations pertaining to existing stationary sources.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to provide assistance to any district requesting assistance in interpreting the RACT and BARCT requirements of the California Clean Air Act, the guidance document, or the evolving review policies of the ARB.

I hereby certify that the above is a true and correct copy of Resolution 90-28, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-29  
May 10, 1990

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; and

WHEREAS, an unsolicited research proposal, Number 1611-141 entitled "Chronic Toxicity of Mixed Air Pollutants: Phase II", has been submitted by the University of California, Irvine, and

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:

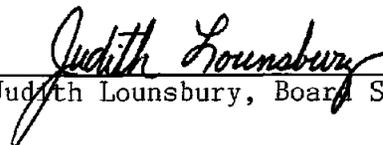
Proposal Number 1611-141 entitled "Chronic Toxicity of Mixed Air Pollutants: Phase II", submitted by the University of California, Irvine for a total amount not to exceed \$535,720.

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 1611-141 entitled "Chronic Toxicity of Mixed Air Pollutants: Phase II", submitted by the University of California, Irvine for a total amount not to exceed \$535,720.

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 in an amount not to exceed \$535,720.

I hereby certify that the above is a true and correct copy of Resolution # 90-29, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-30  
May 10, 1990

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911;

WHEREAS, an unsolicited research proposal, Number 215-37 entitled "Single Cell Probes for Acid and Oxidant Exposures", has been submitted by the University of California, Irvine;

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

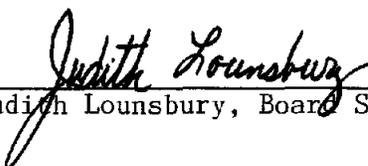
Proposal Number 215-37 entitled "Single Cell Probes for Acid and Oxidant Exposures", submitted by the University of California, Irvine, for a total amount not to exceed \$63,469.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 215-37 entitled "Single Cell Probes for Acid and Oxidant Exposures", submitted by the University of California, Irvine, for a total amount not to exceed \$63,469.

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 in an amount not to exceed \$63,469.

I hereby certify that the above is a true and correct copy of Resolution #90-30, as adopted by the Air Resources Board.

  
Judith Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-31

May 10, 1990

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911; and

WHEREAS, an unsolicited research proposal, Number 218-37, entitled "Filter Preparation and Training for CADMP Dry Deposition Network," has been submitted by Desert Research Institute; and

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

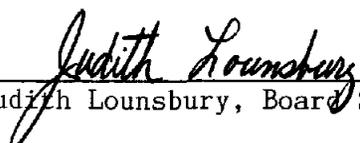
Proposal Number 218-37, entitled "Filter Preparation and Training for CADMP Dry Deposition Network," submitted by Desert Research Institute for a total amount not to exceed \$51,149.38;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 218-37, entitled "Filter Preparation and Training for CADMP Dry Deposition Network," submitted by Desert Research Institute for a total amount not to exceed \$51,149.38.

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, in an amount not to exceed \$51,149.38.

I hereby certify that the above is a true and correct copy of Resolution #90-31, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of Regulations Regarding the  
Atmospheric Acidity Protection Program Fees

Agenda Item No.: 90-5-3

Public Hearing Date: May 10, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: Pat Hutchens for  
Judith M. Lounsbury  
Board Secretary

Date: January 29, 1991

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MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-32

May 10, 1990

Agenda Item No.: 90-5-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in the Atmospheric Acidity Protection Act of 1988 (Stats. 1988, ch. 1518, Health and Safety Code section 39900-39911), the Legislature declared that the deposition of atmospheric acidity resulting from other than natural sources is occurring in various regions in California, and that the continued deposition of this acidity, alone or in combination with other man-made pollutants and naturally occurring phenomena, could have potentially significant adverse effects on public health, the environment and the economy;

WHEREAS, in section 39904 of the Health and Safety Code, the Legislature directed the Board to adopt and implement the Atmospheric Acidity Protection Program to determine the nature and extent of potential damage to public health and the State's ecosystems which may be expected to result from atmospheric acidity, and to develop measures which may be needed for the protection of public health and sensitive ecosystems within the state;

WHEREAS, section 39906 of the the Health and Safety Code authorizes the Board to require local air pollution control districts and air quality management districts ("districts") to impose additional permit and variance fees on nonvehicular sources which emit 500 tons per year or more of sulfur oxides or nitrogen oxides to recover the costs of acid deposition research and monitoring program which is required to provide districts and the Board with the necessary basis for evaluating the public health and environmental impact of the emissions of acid deposition precursors from large nonvehicular sources and for determining the feasibility and cost of control measures and air quality management strategies to mitigate the efforts of those emissions;

WHEREAS, the Air Resources Board staff, in consultation with representatives of the local districts, has developed the proposed fee regulations for fiscal year 1990-91;

WHEREAS, in accordance with Health and Safety Code section 39909, the proposed fee regulations have been designed to provide the Board net revenues in fiscal year 1990-91 in an amount which is the lesser of one million five hundred thousand dollars (\$1,500,000) or the amount appropriated from state funds for acid deposition research and monitoring program by the Legislature; and include a ten percent contingency adjustment to cover unanticipated shortfalls in fees collected;

WHEREAS, any excess fees collected shall be considered when setting fees in future years;

WHEREAS, the proposed fee regulations specify by district the amount to be transmitted to the Board and authorize each district to assess additional fees to recover the administrative costs of collecting the fees;

WHEREAS, the proposed emissions fee regulations are based on the most current annual emissions data available from the districts, which are for the calendar year 1988;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

The funds to be collected pursuant to the proposed fee regulations are needed to implement the acid deposition research and monitoring program established pursuant to the Atmospheric Acidity Protection Act;

The proposed regulations are based on the most current data available for annual emissions of sulfur oxides or nitrogen oxides from sources emitting 500 tons or more of either pollutant;

The proposed fee regulations will not have a significant adverse economic impact on affected sources of sulfur oxides or nitrogen oxides, on other businesses or private persons affected, or on the districts, which are authorized to recover their administrative costs of collecting the fees; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Air Resources Board regulations, that this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves sections 90620, 90621, 90621.1, 90622, and 90623, Title 17, California Code of Regulations, as set forth in Attachment A.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt sections 90620, 90621, 90621.1, 90622, 90623, Title 17, California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board gives notice of its intention to review the status of the acid deposition research and monitoring program in

1991, and to reconsider at that time the renewal and modification, as necessary, of the fee program in order to reflect changes in program needs and capabilities, base-year emissions, and such other factors as may influence acid deposition research and monitoring program and funding requirements.

I hereby certify that the above is a true and correct copy of Resolution 90-32, as adopted by the Air Resources Board.

*Pat Hutchens for*  
\_\_\_\_\_  
Judith M. Lounsbury Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of Permit Fee Regulations for  
Nonvehicular Sources Pursuant to the California Clean Air Act

Agenda Item No.: 90-5-2

Public Hearing Date: May 10, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: *J. M. Lounsbury*  
Judith M. Lounsbury  
Board Secretary

Date: *January 29, 1991*

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-33

May 10, 1990

Agenda Item No.: 90-5-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature in 1988 enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) to address the problem of air pollution in California;

WHEREAS, in the California Clean Air Act the Legislature declared that attainment of the Board's health-based ambient air quality standards is necessary to protect public health, particularly of children, older people, and those with respiratory diseases and directed that these standards be attained at the earliest practicable date;

WHEREAS, the California Clean Air Act directs the Board to perform numerous tasks related to both vehicular and nonvehicular sources of air pollution;

WHEREAS, section 39612 of the Health and Safety Code authorizes the Board to require air pollution control and air quality management districts ("districts"), beginning July 1, 1989, to impose additional permit fees on nonvehicular sources which emit 500 tons per year or more of any nonattainment pollutant or its precursors in order to recover costs of additional state programs related to nonvehicular sources authorized or required by the Act;

WHEREAS, the Board staff has conferred with representatives of local districts and with their assistance has developed a proposed fee program which specifies the amount of fees to be collected by each district for transmission to the Board;

WHEREAS, the proposed fee regulations have been designed to provide the Board with net revenues of three million dollars (\$3,000,000) in fiscal year 1990-91 to cover budgeted expenses of implementing nonvehicular source related activities under the Act, and include a ten percent contingency adjustment to cover unanticipated shortfalls in fees collected;

WHEREAS, the fee regulations provide that any excess fees collected shall be carried over and considered when setting fees in future years;

WHEREAS, the proposed fee regulations specify by district the amount to be transmitted to the Board for deposit in the Air Pollution Control Fund in Fiscal Year 1990-91 and authorize each district to assess additional fees to recover the administrative costs to the district of collecting the fees;

WHEREAS, pursuant to section 39612 of the Health and Safety Code the proposed fee program for Fiscal Year 1990-91 is based on emissions of nonattainment pollutants or their precursors, as provided in the Act, using the most current statewide emission data available from the districts, which are for calendar year 1988;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

The funds which would be collected pursuant to the proposed fee regulations are needed to implement the nonvehicular source related programs established pursuant to the California Clean Air Act;

The proposed regulations are based on annual emissions of nonattainment pollutants from facilities that emit 500 tons per year or more of any nonattainment pollutant or its precursors based on the most recent statewide data available;

The proposed fee regulations will not have a significant adverse economic impact on either the affected sources, on other businesses or private persons affected, or on the districts, which are authorized to recover the administrative costs of collecting the fees; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action will not have any significant adverse impact on the environment.

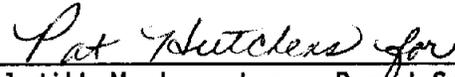
NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves sections 90800.1 and 90803, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt sections 90800.1 and 90803, Title 17, California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the attached regulations to the affected districts for appropriate action, and to the Department of Finance, the Legislative Analyst, and the State Controller, for information and for appropriate action.

BE IT FURTHER RESOLVED that the Board gives notice of its intention to review the status of the program to implement the provisions of the California Clean Air Act in 1991, and to reconsider at that time the renewal and modification, as necessary, of the fee program in order to reflect changes in program needs and capabilities, base year emissions, and such other factors as may influence funding requirements of the Act.

I hereby certify that the above  
is a true and correct copy of  
Resolution 90-33, as adopted by  
the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues and  
Statement of Overriding Considerations

Item: Public Hearing to Consider the Adoption of an Airborne Toxic Control Measure for Ethylene Oxide Emissions from Sterilizers and Aerators

Agenda Item No.: 90-5-1

Public Hearing Date: May 10, 1990

Issuing Authority: Air Resources Board

Comment: Chlorofluorocarbon-12 (CFC-12) is a commonly used diluent for ethylene oxide mixtures and is emitted from some sterilizers and aerators as a part of the mixture; chlorofluorocarbons have been implicated in the destruction of the ozone layer.

Response: Adoption of the proposed ATCM is not expected to result in any increase in CFC-12 emissions, and may bring about a decrease in CFC-12 emissions by encouraging more efficient use of EtO-CFC mixtures, or the use of alternative sterilization methods.

Comment: Adoption of the proposed ATCM may result in significant adverse environmental impacts by resulting in increased generation of liquid ethylene glycol (about 900,000 lbs/year) and airborne carbon dioxide (about 300,000 lbs/year), reaction products of common ethylene oxide control technologies.

Response: Mitigation of the impacts caused by increased generation of liquid ethylene glycol are governed by regulations adopted by the Department of Health Services in Title 22, California Code of Regulations. Thus, ethylene glycol is considered a hazardous waste as defined in Title 22, Section 66696 (a)(6), California Code of Regulations; if discharged untreated, it could pose a hazard to human health and the environment due to its toxicity. Mitigation measures to avoid the potential hazard include recycling, treatment and discharge to a sanitary sewer if permitted by the local sanitation district, and disposal as a hazardous waste. The California Department of Health Services is required by law to regulate these disposal activities under Title 22, California Code of Regulations; local sanitation districts are permitted to accept hazardous waste at publicly owned treatment works pursuant to Title 22, Sections 66371 (2) and 66392 (a), California Code of Regulations.

Response: Carbon dioxide has been identified as a greenhouse gas which contributes to global warming; there are no feasible mitigation measures which could be imposed by the Board or any other public agency and no feasible alternatives which would substantially reduce the potential adverse impact of increased carbon dioxide emissions while at the same time providing the substantial overall health benefit realized by the reduction in emissions of ethylene oxide through the application of control technology. In consideration of public health, the increase in emissions of carbon dioxide has been balanced against the decrease in emissions of ethylene oxide. Abandonment of the ETO control measure (the "no-project" alternative) or control of ETO to a lesser degree were considered and rejected because of the desirability of limiting emissions of ETO, a carcinogen, to the greatest degree practicable. Thus, the proposed ATCM will result in significant public health benefits due to the 99 percent overall reduction in both ethylene oxide emissions and associated potential cancer risks; this consideration overrides any potential adverse environmental impact that may occur as a result of any slight increase in carbondioxide emissions.

Certified:

*Judith M. Lounsbury*  
Judith M. Lounsbury  
Board Secretary

Date:

5/20/91

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Office of the Secretary

MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-34

May 10, 1990

WHEREAS, on November 12, 1987, pursuant to Section 39662 of the Health and Safety Code, the Air Resources Board (Board) identified ethylene oxide as a toxic air contaminant for which there is not sufficient available scientific evidence to support identification of a threshold exposure level below which no carcinogenic health effects are anticipated (see Title 17, California Code of Regulations, Section 93000);

WHEREAS, following identification of ethylene oxide as a toxic air contaminant, the Executive Officer, with the participation of local air pollution control districts, is required by Health and Safety Code Section 39655 to prepare a report on the need for, and appropriate degree of, control of ethylene oxide emissions;

WHEREAS, the staff has worked closely with the districts through the statewide Technical Review Group (TRG), the TRG Committee on Ethylene Oxide, and with affected sources and other parties to develop as expeditiously as practical an airborne toxic control measure for emissions of ethylene oxide from sterilizers (which include fumigators) and aerators;

WHEREAS, Health and Safety Code Section 39655 provides that toxic air contaminants which are pesticides shall be regulated in their pesticidal use by the California Department of Food and Agriculture;

WHEREAS, districts have primary jurisdiction to regulate air pollutants for which there is no ambient air quality standard and which have not been identified by the Board as toxic air contaminants pursuant to Health and Safety Code Section 39662;

WHEREAS, the staff has proposed an airborne toxic control measure (ATCM) for ethylene oxide emissions which would significantly reduce the quantity of ethylene oxide emitted to the atmosphere by requiring emission controls on most sterilizers and aerators;

WHEREAS, the staff has prepared the document titled "Proposed Ethylene Oxide Control Measure for Sterilizers and Aerators" (Staff Report and Technical Support Document), which constitutes the report required by Health and Safety Code Section 39655 and includes: estimates of ethylene oxide emissions, public exposure, and potential cancer risk; a discussion of the technical feasibility of control and of existing emission control devices; an estimate of the costs to comply with the ATCM; a discussion of the anticipated effect of the ATCM on public exposure to ethylene oxide from sterilizers and aerators and the associated risk; a discussion of alternatives to the ATCM; and identification of any potential adverse environmental effects of the ATCM and possible mitigation measures;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as proposed if feasible alternatives or mitigation measures are available to eliminate or substantially reduce such impacts;

WHEREAS, the proposed ATCM was made available to the public for review and comment, and was discussed at public consultation meetings on October 31, 1989, November 3, 1989, February 22, 1990, and February 27, 1990;

WHEREAS, in accordance with Health and Safety Code Section 39665(c), the Staff Report, Technical Support Document, and relevant comments on the proposed ATCM received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, a public hearing and other administrative proceedings were held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, in consideration of the Staff Report, Technical Support Document, and the written comments and public testimony it has received, the Board finds that:

Ethylene oxide emissions from sterilizers and aerators are not currently regulated to a degree that adequately protects the public health statewide;

The emission of ethylene oxide from sterilizers and aerators after the pesticidal use has been completed results in public exposure to ethylene oxide;

Lifetime exposure (70 years) to ethylene oxide emitted from sterilizers and aerators contributes an additional 360 to 510 potential cancer cases to the statewide incidence of cancer;

The proposed ATCM would reduce ethylene oxide emissions from sterilizers and aerators by 99 percent overall by requiring most sources to reduce emissions from sterilizers by 99-99.9 percent and emissions from aerators by 95-99 percent;

The proposed ATCM has tiered control requirements and the degree of control required is proportional to the amount of ethylene oxide used per year at each source;

The proposed ATCM would require facilities to reduce their ethylene oxide emissions from sterilizers and aerators to the lowest level achievable through application of the best available control technology, as required by Health and Safety Code Section 39666(c), and therefore complies with the requirements of state law for the control of sources of toxic air contaminants identified by the Board;

Compliance with the requirements of the proposed ATCM will not interfere with the pesticidal use of ethylene oxide;

No alternative considered would be either more effective at carrying out the purpose for which the ATCM is proposed, or both as effective and less burdensome to affected private persons, than the proposed ATCM;

Adoption of the proposed ATCM will not have a significant, adverse economic impact on most small businesses because they use four or less pounds of ethylene oxide per year and would be exempt from the control requirements and associated costs; the proposed ATCM may have significant, adverse economic impact on some small businesses using more than four pounds of ethylene oxide per year and subject to the control requirements; the reporting and emission control requirements which apply to small businesses are necessary for the health, safety, and welfare of the people of the state;

WHEREAS, the Board further finds that:

Chlorofluorocarbon-12 (CFC-12) is a commonly used diluent for ethylene oxide mixtures and is emitted from some sterilizers and aerators as a part of the mixture; chlorofluorocarbons have been implicated in the destruction of the ozone layer;

Adoption of the proposed ATCM is not expected to result in any increase in CFC-12 emissions, and may bring about a decrease in CFC-12 emissions by encouraging more efficient use of EtO-CFC mixtures, or the use of alternative sterilization methods;

Adoption of the proposed ATCM may result in significant adverse environmental impacts by resulting in increased generation of liquid ethylene glycol (about 900,000 lbs/year) and airborne carbon dioxide (about 300,000 lbs/year), reaction products of common ethylene oxide control technologies;

Ethylene glycol is considered a hazardous waste as defined in Title 22, Section 66696 (a)(6), California Code of Regulations; if discharged untreated, it could pose a hazard to human health and the environment due to its toxicity; mitigation measures to avoid the potential hazard include recycling, treatment and discharge to a sanitary sewer if permitted by the local sanitation district, and disposal as a hazardous waste; the California Department of Health Services is required by law to regulate these disposal activities under Title 22, California Code of Regulations; local sanitation districts are permitted to accept hazardous waste at publicly owned treatment works pursuant to Title 22, Sections 66371 (2) and 66392 (a), California Code of Regulations;

Carbon dioxide has been identified as a greenhouse gas which contributes to global warming; there are no feasible mitigation

measures which could be imposed by the Board or any other public agency and no feasible alternatives which would substantially reduce the potential adverse impact of increased carbon dioxide emissions while at the same time providing the substantial overall health benefit realized by the reduction in emissions of ethylene oxide through the application of control technology; and

The proposed ATCM will result in significant public health benefits due to the 99 percent overall reduction in both ethylene oxide emissions and associated potential cancer risks; this consideration overrides any potential adverse environmental impact that may occur as a result of any slight increase in carbon dioxide emissions.

NOW, THEREFORE, BE IT RESOLVED that the Board approves the ATCM, to be set forth in Section 93108, Subchapter 7.5, Chapter 1, Part III, Titles 17 and 26, California Code of Regulations, including the changes from the original staff proposal as discussed on the record and endorsed by the Board, as set forth in Attachment A.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the airborne toxic control measure as set forth in Attachment A after making it available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board recommends that local Air Pollution Control Districts and Air Quality Management Districts consider including provisions to decrease chlorofluorocarbon emissions when adopting their district regulations to implement the proposed ATCM.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to send the adopted ATCM to the districts and provide assistance to the districts in adopting regulations to implement the ATCM.

I hereby certify that the above  
is a true and correct copy of  
Resolution 90-34, as adopted by  
the Air Resources Board.

*Pat Hutchins for*  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Notice of Public Hearing to Consider Amendments to Regulations Regarding Exhaust Emission Standards, Certification and Compliance Test Procedures, and Durability Requirements Applicable to Light-Duty Trucks and Medium-Duty and Light Heavy-Duty Vehicles and Engines

Agenda Item No.: 90-6-1

Public Hearing Date: June 14, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified: \_\_\_\_\_

*Judith M. Lounsbury*  
Board Secretary

Date: \_\_\_\_\_

*4/16/91*

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MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-35

June 14, 1990

Agenda Item No.: 90-6-1

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in Section 43000 of the Health and Safety Code, the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and, in Sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, in Section 43000.5 of the Health and Safety Code, enacted as part of the California Clean Air Act of 1988 (Stats. 1988, ch. 1568) the Legislature has further declared that while significant reductions in vehicle emissions have been achieved in recent years, continued growth in population and vehicle miles traveled throughout the state have the potential not only to prevent attainment of the state standards, but in some cases to result in worsening of air quality;

WHEREAS, in Section 43000.5 of the Health and Safety Code, the Legislature has further declared that the attainment and maintenance of the state air quality standards will necessitate the achievement of substantial reductions in new vehicle emissions and substantial improvements in the durability of vehicle emissions systems;

WHEREAS, Sections 43013, 43101 and 43104 of the Health and Safety Code authorize the Board to adopt emission standards and test procedures applicable to new motor vehicles which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, Section 43018 of the Health and Safety Code, enacted as part of the California Clean Air Act of 1988, directs that the Board endeavor to achieve the maximum degree of emission reduction possible from motor vehicles to accomplish the attainment of the state standards at the earliest practicable date;

WHEREAS, Section 43018 of the Health and Safety Code further directs the Board to take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, no later than December 31, 2000, a reduction in the actual emissions of reactive organic gases and oxides of nitrogen of 55% and 15%, respectively, from motor vehicles based

on emissions in 1987, and to achieve the maximum feasible reductions in particulates, carbon monoxide, and toxic air contaminants from vehicular sources;

WHEREAS, Section 43018 of the Health and Safety Code further directs the Board to achieve the specified emission reductions by requiring the most cost-effective combination of control measures for motor vehicles and motor vehicle fuels, and for this purpose specifically requires the Board to consider, no later than November 15, 1990, the adoption of regulations governing standards for heavy-duty and medium-duty vehicle emissions;

WHEREAS, the staff has proposed an amendment to Section 1900, Title 13, California Code of Regulations, to redefine MDVs as any motor vehicle having a gross vehicle weight rating (GVWR) from 6,001 lbs. to 14,000 lbs.;

WHEREAS, the Board has adopted "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," (hereinafter "MDV Emission Standards and Test Procedures") incorporated by reference in Section 1960.1, Title 13, California Code of Regulations;

WHEREAS, the Board has adopted "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" and "California Exhaust Emission Standards and Test Procedures for 1987 Model Heavy-Duty Otto-Cycle Engines and Vehicles" (hereinafter "Heavy-Duty Emission Standards and Test Procedures") incorporated by reference in Section 1956.8, Title 13, California Code of Regulations;

WHEREAS, the MDV Emission Standards and Test Procedures currently specify chassis test procedures for vehicles with a GVWR of 8,500 lbs. or less, and the Heavy-Duty Emission Standards and Test Procedures currently specify engine test procedures for vehicles greater than 8,500 lbs., GVWR;

WHEREAS, the staff has proposed amendments to the MDV Emission Standards and Test Procedures and Heavy-Duty Emission Standards and Test Procedures to require chassis test procedures at a test weight equivalent to the average of the curb weight and the GVWR for all vehicles from 6,001 to 14,000 lbs., GVWR, except diesel vehicles and incomplete vehicles from 8501 to 14,000 lbs., GVWR, which are allowed to comply with optional engine test procedures;

WHEREAS, the MDV Emission Standards and Test Procedures currently specify 50,000 mile exhaust emission standards of 0.39 grams per mile (g/mi) non-methane hydrocarbon (NMHC), 9.0 g/mi carbon monoxide (CO), and 0.4 g/mi oxides of nitrogen (NOx) for MDVs with a loaded vehicle weight (LVW) from 0-3750 lbs., 0.50 g/mi NMHC, 9.0 g/mi CO, and 1.0 g/mi NOx for MDVs from 3751-5750 lbs. LVW, and 0.60 g/mi NMHC, 9.0 g/mi CO, and 1.5 g/mi NOx for MDVs from 5751 lbs. LVW and larger;

WHEREAS, the MDV Emission Standards and Test Procedures currently specify a 50,000 mile particulate standard of 0.08 g/mi for diesel MDVs;

WHEREAS, the staff has proposed amendments to the exhaust emission standards to lower the 50,000 mile emission standards for MDVs to 0.25 g/mi NMHC and 3.4 g/mi CO and 0.4 g/mi NOx from 0-3750 lbs., 0.32 g/mi NMHC and 4.4 g/mi CO and 0.7 g/mi NOx from 3751-5750 lbs., 0.39 g/mi NMHC and 5.0 g/mi CO and 1.1 g/mi NOx from 5751-8500 lbs., 0.46 g/mi NMHC and 5.5 g/mi CO and 1.3 g/mi NOx from 8501-10,000 lbs., and 0.60 g/mi NMHC and 7.0 g/mi CO and 2.0 g/mi NOx from 10,001-14,000 lbs.;

WHEREAS, the staff has proposed amendments to the exhaust emission standards to implement 120,000 mile exhaust emission standards for MDVs of 0.36 g/mi NMHC and 5.0 g/mi CO and 0.55 g/mi NOx from 0-3750 lbs., 0.46 g/mi NMHC and 6.4 g/mi CO and 0.98 g/mi NOx from 3751-5750 lbs., 0.56 g/mi NMHC and 7.3 g/mi CO and 1.53 g/mi NOx from 5751-8500 lbs., 0.66 g/mi NMHC and 8.1 g/mi CO and 1.81 g/mi NOx from 8501-10,000 lbs., and 0.86 g/mi NMHC and 10.3 g/mi CO and 2.77 g/mi NOx from 10,001-14,000 lbs.;

WHEREAS, the staff has proposed amendments to the exhaust emission standards to implement 120,000 mile particulate standards for diesel vehicles of 0.08 g/mi from 0-3750 lbs., 0.10 g/mi from 3751-5750 lbs., 0.12 g/mi from 5751-8500 lbs., 0.12 g/mi from 8501-10,000 lbs., and 0.12 g/mi from 10,001-14,000 lbs.;

WHEREAS, the staff has proposed that the 120,000 mile emission standards shall apply to all chassis-certified diesel MDVs and that the 50,000 mile and 120,000 mile emission standards shall apply to all other chassis-certified MDVs, including gasoline, methanol, and gaseous-fueled vehicles;

WHEREAS, the Heavy-Duty Emission Standards and Test Procedures currently specify 110,000 mile emission standards of 1.1 grams per brake horsepower hour (g/bhp-hr) NMHC, 14.4 g/bhp-hr CO, and 5.0 g/bhp-hr NOx for gasoline-powered engines and 1.3 g/bhp-hr NMHC, 15.5 g/bhp-hr CO, 5.0 g/bhp-hr NOx, and 0.10 g/bhp-hr particulate for diesel-powered vehicles in the 1995 model-year;

WHEREAS, the staff has proposed amendments to the exhaust emission standards of the optional engine test procedures to require 120,000 mile emission standards of 3.9 g/bhp-hr HC + NOx and 14.4 g/bhp-hr CO for all engines and an additional particulate standard of 0.10 g/bhp-hr for diesel engines;

WHEREAS, the staff has proposed that the more stringent standards be phased-in over a two year period beginning with the 1995 model year, and that during the first two years of certification to the new standards manufacturers would be subject to less stringent in-use compliance standards;

WHEREAS, the staff has proposed amendments to Section 2139, Title 13, California Code of Regulations, to give manufacturers certifying diesel engines or engines used in incomplete vehicles a choice of three options to conduct in-use compliance testing of engine-certified vehicles;

WHEREAS, the first proposed option would allow engine testing as long as manufacturers conduct the in-use compliance testing at their expense, with ARB staff oversight; the second proposed option would allow manufacturers the option to develop "correlation factors" which would permit the use of chassis testing procedures to determine the in-use compliance of engine-certified vehicles; and the third proposed option would allow manufacturers to use chassis test data and correlation factors as a screening process with compliance to be determined by engine testing;

WHEREAS, the staff has proposed amendments to the Board's on-board diagnostic controls (OBD) contained in Section 1968.1, Title 13, California Code of Regulations, which would require manufacturers to use the applicable certification test procedure, whether chassis or engine based, in order to comply with OBD requirements;

WHEREAS, the staff has proposed amendments to Section 2112, Title 13, California Code of Regulations, to provide that the in-use compliance period for MDVs subject to the 120,000 mile exhaust emission standards is 11 years or 120,000 miles, whichever occurs first;

WHEREAS, the staff has proposed amendments to the NOx exhaust emission standard for light duty trucks from 3751-5750 pounds, loaded vehicle weight, to reduce the current NOx standard of 1.0 g/mi to 0.7 g/mi, in order to provide consistency with the proposed MDV exhaust emission standards;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available which would substantially reduce or avoid such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

The proposed exhaust emission standards are necessary to achieve the maximum reduction in emissions from motor vehicles in order to attain state ambient air quality standards at the earliest practicable date;

The proposed NMHC standards are necessary to achieve, by December 31, 2000, a reduction in the actual emissions of reactive organic gases and oxides of nitrogen of 55% and 15%, respectively, from motor vehicles based on emissions in 1987, and to achieve the maximum feasible reductions in particulates, carbon monoxide, and toxic air contaminants from vehicular sources;

The light-duty chassis test procedures are the appropriate emission test procedures for MDVs from 6,001 to 14,000 lbs. GVWR

due to the use of these vehicles in a duty similar to commuter vehicles;

Conducting emission testing of MDVs at a loaded condition is necessary because these vehicles are currently tested under lightly loaded conditions which are not representative of the significant loads MDVs can carry;

Extended durability requirements of 120,000 miles are necessary for MDVs to ensure proper durability of the emission control system throughout the useful life.

Optional engine test procedures for diesel engines and engines in incomplete vehicles provide a valid alternative to the chassis test procedures for the two largest commercial usage categories;

Optional engine test procedures for diesel engines and engines used in incomplete vehicles need to be combined with an in-use compliance testing program conducted by the manufacturer since no practical method of in-use compliance testing engine-certified vehicles currently exists;

Full implementation of the proposed standards and test procedures over a period of two years beginning in the 1995 model year will provide sufficient lead time to enable manufacturers to comply with the more stringent standards and will allow manufacturers to spread the costs of recertifying vehicles to the new standards over the phase-in period;

The proposed OBD requirements provide an important emission control strategy and are necessary to provide consistency for all MDVs, whether certified by chassis test procedures or optional engine test procedures;

The proposed in-use compliance periods are necessary to provide consistency with Health and Safety Code Sections 43105 and 43106;

The proposed NMHC, CO, NOx, and particulate standards for MDVs, LHDVs, and light-duty trucks are technologically feasible and cost effective, and together with existing and anticipated standards and regulations for all classes of motor vehicles and for motor vehicle fuels, reflect the most cost-effective combination of control measures to reduce air pollution caused by motor vehicles;

WHEREAS, the Board further finds that:

The proposed amendments will result in reductions of ambient levels of ozone as a result of reductions in emissions of HC and NOx, and of CO and particulates, both as an effect of the lower standards and the increased emission control system durability;

There will be no significant adverse environmental impacts as a result of the adoption of the proposed amendments;

NOW, THEREFORE BE IT RESOLVED, that the Board hereby approves the proposed amendments to Sections 1900, 1956.8, 1960.1, 1968.1, 2061, 2112, and 2139, Title 13, California Code of Regulations, and the incorporated documents, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Sections 1900, 1956.8, 1960.1, 1968.1, 2061, 2112, and 2139, Title 13, California Code of Regulations, and the incorporated documents, as set forth in Attachment A, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board hereby determines that the amendments approved herein will not cause the California emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards, will not cause the California requirements to be inconsistent with Section 202(a) of the Clean Air Act, and will not raise new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to Section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall forward the amended regulations to the Environmental Protection Agency with a request for a waiver or for confirmation that the amendments are within the scope of an existing waiver, as appropriate, pursuant to Section 209(b)(1) of the Clean Air Act.

I hereby certify that the above  
is a true and correct copy of  
Resolution 90-35, as adopted by  
the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-36

June 14, 1990

Agenda Item No.: 90-6-2

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature found in the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("the Act", Health and Safety Code Section 44300 et seq.) that facilities manufacturing or using hazardous substances may be exposing nearby populations to toxic air releases on a routine basis and that it is in the public interest to ascertain the nature and quantity of hazardous releases from specific sources which may create air toxics "hot spots";

WHEREAS, the Act sets forth a program to develop air toxics emission inventories and to assess the risk to public health from exposure to these emissions;

WHEREAS, pursuant to Health and Safety Code Section 44342, the Board approved criteria and guidelines for site-specific air toxics emission inventory plans and reports on April 14, 1989;

WHEREAS, pursuant to Health and Safety Code Section 44340, the operators of those facilities enumerated in Health and Safety Code Sections 44320(a) and (b) and Sections 44322 (a) and (b) are in the process of preparing and submitting to the districts their comprehensive emission inventory plans and reports;

WHEREAS, Health and Safety Code Section 44344 requires the Board to develop procedures for the biennial update of the emission inventories;

WHEREAS, Health and Safety Code Section 44322(c) requires the Board to identify by July 1, 1990 those classes of facilities that emit less than 10 tons per year of criteria pollutants to be included in the Air Toxics "Hot Spots" program and to specify a timetable for their inclusion;

WHEREAS, the Board staff, in consultation with representatives of the air pollution control and air quality management districts ("districts") and the Department of Health Services, and in response to comments from affected

industry representatives and other interested persons, has proposed a number of amendments to the emission inventory criteria and guidelines regulation, which have been discussed with the public at four consultation meetings;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code and the Board has considered the testimony presented by interested persons and the staff;

WHEREAS, the Board finds that:

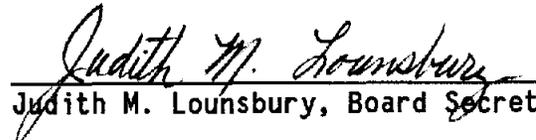
1. The proposed amendments to the criteria and guidelines for site-specific air toxics emission inventory plans comply with the specifications described in Health and Safety Code Section 44342 and improve the regulation by annotating the list of substances (Appendix A) to simplify reporting and updating emissions, and by clarifying definitions, language, and requirements in the text, instructions to the reporting forms (Appendix B), the function of the Facility "Look-Up" Table (Appendix C), and the provisions in the source test requirements (Appendix D);
2. The proposed procedures for the biennial updates to the emission inventories comply with Health and Safety Code Section 44344 and ensure that the updated emission inventory plans and reports represent current conditions at facilities, adequately reflect the health risk the current emissions may pose to the public, and include information on any new operations at facilities and any additional listed substances;
3. The proposed reporting requirements and timetable for the classes of facilities that emit less than 10 tons per year of criteria pollutants which are proposed for inclusion in the program comply with Health and Safety Code Section 44322(c) and focus program efforts on characterizing the most significant sources of risk to public health;
4. The economic impact of the proposed regulation may be significant for some small businesses where source testing is required; the proposed alternatives to source testing suggested for small businesses will mitigate this economic impact to the extent feasible in consideration of the need to obtain accurate emission data;

5. This regulatory action will not have a significant adverse impact on the environment and may benefit air quality by stimulating a reduction in emissions of both toxic and criteria pollutants and by providing information which will be used by the Board and others for control purposes; and
6. No alternative considered by the Board or presented in the testimony would be more effective in carrying out the statutory mandate for biennial updates and the requirement to include facilities which emit less than 10 tons per year of criteria pollutants, or would be as effective and less burdensome to affected industry, than the proposed action.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby adopts the amendments to Sections 93300-93354, Title 17, California Code of Regulations, including Appendices A through E thereof, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the adopted regulations to the districts for appropriate action in reviewing the emission inventory plans and reports submitted by facility operators.

I hereby certify that the above is a true and correct copy of Resolution 90-36, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

90-37  
Missing  
Resolution

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of Amendments to the Emission Inventory Criteria and Guidelines Regulation Pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987

Agenda Item No.: 90-6-2

Public Hearing Date: June 14, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified: Pat Hutchins for  
Judith M. Lounsbury  
Board Secretary

Date: 11/19/90

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JAN 28 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-38

June 15, 1990

Agenda Item No.: 90-7-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) declaring that it is necessary that the state ambient air quality standards be attained by the earliest practicable date to protect the public health, particularly the health of children, older people, and those with respiratory diseases;

WHEREAS, the Act directs the Board in section 39607(e) of the Health and Safety Code to establish criteria for designating an air basin as attainment or nonattainment for any state ambient air quality standard set forth in section 70200 of Title 17 of the California Code of Regulations (ozone, carbon monoxide, sulfur dioxide, sulfates, nitrogen dioxide, PM-10, lead, hydrogen sulfide, and visibility reducing particles);

WHEREAS, on June 8, 1989, the Board adopted sections 70300 to 70306, Title 17, California Code of Regulations, establishing designation criteria (the "adopted criteria") consistent with the requirements of the Act;

WHEREAS, on June 8, 1989, the Board also directed the Executive Officer to form a work group comprising representatives of the Board staff, districts, industry, and other interested persons to examine possible alternatives to the definitions and standards in the adopted criteria, including the use of one violation in three years to determine nonattainment, the designation of areas where there are no or limited air quality data, and the appropriate use of transport related data;

WHEREAS, the Board requested the Executive Officer to report back within one year with any recommendations for modifications to the adopted criteria that may result from the efforts of the work group;

WHEREAS, the Board staff formed a work group and met with that group from August 1989 through January 1990 to discuss issues related to the adopted criteria and develop alternative approaches;

WHEREAS, as a result of the efforts of the work group, the Board staff proposes amending section 70303 of the adopted criteria to provide for a transitional category of nonattainment to apply in areas that are close to attaining a state ambient air quality standard;

WHEREAS, the Board staff also proposes amending section 70304 of the adopted criteria to provide a mechanism for redesignating a nonattainment area as attainment when monitoring at a high concentration site is discontinued;

WHEREAS, the Board staff also proposes amending Appendix 2 of the adopted criteria to provide for identifying exceptional events and extreme concentration events as highly irregular or infrequent violations that should not be considered in the designations;

WHEREAS, the Board staff has provided opportunities for public comment and considered such comments before proposing to the Board amendments to the adopted criteria;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts; and,

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code and the Board has considered the testimony presented by interested persons and the staff;

WHEREAS, the Board finds that:

The proposed amendments to the adopted criteria, i.e., new subsection (c) of section 70303, new subsection (d) of section 70304, and amended Appendix 2 to sections 70300-70306 of Title 17 of the California Code of Regulations, are consistent with the existing provisions of the adopted criteria;

The proposed amendments are necessary for the designation of areas as nonattainment or attainment for the state ambient air quality standards and comply with the specifications described in section 39607(e) of the Health and Safety Code;

The proposed amendments assure that area designations will continue to be based on appropriate and reliable air quality information;

This regulatory action will not have a significant economic impact on any public agency, small business, or private persons or businesses other than small businesses; and

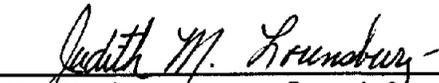
This regulatory action will not have a significant adverse impact on the environment. In fact, it should ultimately result in environmental benefits because it is part of a multi-step program designed to achieve and maintain the state ambient air quality standards.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves subsection (c) of section 70303, subsection (d) of section 70304, and amended Appendix 2 to sections 70300-70306 of Title 17 of the California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt subsection (c) of section 70303, subsection (d) of section 70304, and amended Appendix 2 to sections 70300-70306 of Title 17 of the California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to coordinate, with districts in areas designated as nonattainment based on Section 70303(a)(2), the collection of data necessary to document ambient air quality levels in the nonattainment area; the collection of ambient air quality data shall be consistent with existing Board air monitoring criteria and the availability of air monitoring resources.

I hereby certify that the above is a true and correct copy of Resolution 90-38, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Notice of Public Hearing to Consider the Adoption of Amendments to Criteria For Designating Areas of California as Nonattainment, Attainment, or Unclassified for State Ambient Air Quality Standards

Agenda Item No.: 90-7-2

Public Hearing Date: June 15, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified: *Pax Hutchins for*  
Judith M. Lounsbury  
Board Secretary

Date: 11/26/90

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JAN 28 1991

RESOURCES AGENCY OF CALIFORNIA

State of California

AIR RESOURCES BOARD

Resolution 90-39  
June 15, 1990

#90-7-3

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; and

WHEREAS, an unsolicited research proposal, Number 1791-157 entitled "Lifetimes and Fates of Toxic Air Contaminants in California's Atmosphere," has been submitted by the University of California, Riverside; and

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:

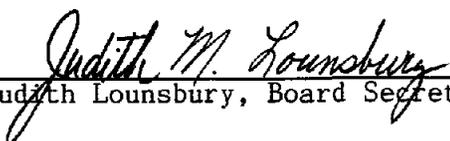
Proposal No. 1791-157, entitled "Lifetimes and Fates of Toxic Air Contaminants in California's Atmosphere," submitted by the University of California, Riverside, for a total amount not to exceed \$99,005.

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 No. 1791-157 entitled, "Lifetimes and Fates of Toxic Air Contaminants in California's Atmosphere," submitted by the University of California, Riverside, for a total amount not to exceed \$99,005.

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 in an amount not to exceed \$99,005.

I hereby certify that the above is a true and correct copy of Resolution #90-39, as adopted by the Air Resources Board.

  
Judith Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-40

June 15, 1990

#90-7-3

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; and

WHEREAS, an unsolicited proposal, Number 1792-157 entitled "Growth, Physiological and Biochemical Responses of Ponderosa Pine (Pinus ponderosa) to Ozone," has been submitted by the University of California, Riverside; and

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:

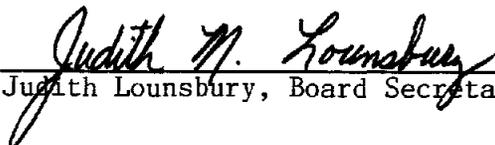
Proposal Number 1792-157, entitled "Growth, Physiological and Biochemical Responses of Ponderosa Pine (Pinus ponderosa) to Ozone," submitted by the University of California, Riverside, for a total amount not to exceed \$59,965.

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 1792-157, entitled "Growth, Physiological and Biochemical Responses of Ponderosa Pine (Pinus ponderosa) to Ozone," submitted by the University of California, Riverside, for a total amount not to exceed \$59,965.

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 in an amount not to exceed \$59,965.

I hereby certify that the above is a true and correct copy of Resolution #90-40, as adopted by the Air Resources Board.

  
Judith Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-41

June 21, 1990

Agenda Item No.: 90-8-3

WHEREAS, in section 1(a) of Assembly Bill (AB) 4392 (Stats. 1988, ch. 940), the Legislature finds and declares that the Air Resources Board has classified, or has under review for classification as toxic air contaminants several substances which are emitted primarily from vehicular sources;

WHEREAS, in section 1(b) of AB 4392, the Legislature finds and declares that, with respect to some of these substances, the state board and the Scientific Review Panel on Toxic Air Contaminants have been unable to identify a level of exposure below which no adverse health effects may be expected to occur;

WHEREAS, in section 1(c) of AB 4392, the Legislature finds and declares that existing state law requires that public exposure to toxic air contaminants for which no threshold of exposure has been identified should be reduced to the lowest level achievable through the application of the best available control technology or more effective control methods;

WHEREAS, in section 1(d) of AB 4392, the Legislature finds and declares that, in order to reduce public exposure to known and suspected toxic air contaminants emitted from vehicular sources through the application of the best available control technology or more effective control methods, it is necessary to clarify and enhance the authority of the state board with respect to the control of vehicular fuel composition and new vehicle emissions;

WHEREAS, in section 1(e) of AB 4392, the Legislature finds and declares that, in order to reduce public exposure to harmful toxic air contaminants as expeditiously as possible, and to provide affected industries with the necessary lead time for compliance with regulations, it is necessary for the Legislature to direct the state board to adopt, as soon as practicable, regulations which the state board determines to be necessary and technologically feasible;

WHEREAS, pursuant to section 39663(a) of the Health and Safety Code, the Board prepared and considered at a public hearing June 8, 1989 a report regarding the potential nature, extent and severity of public exposure to known and suspected toxic air contaminants emitted by vehicular sources in California;

WHEREAS, following the review required by section 39663(a), section 39663(b) requires the state board to reassess the pollutant review schedule under the toxic air contaminant program to determine whether sufficient emphasis has been placed on pollutants emitted by motor vehicles, and to revise the

schedule, as necessary, to give due weight to public health risks caused or potentially caused by motor vehicle emissions;

WHEREAS, section 39663(c) provides that not later than June 30, 1990, the state board shall hold a public hearing to consider a plan for reducing public exposure to known and suspected toxic air contaminants emitted by motor vehicles;

WHEREAS, the Board finds that:

Five substances account for the majority of the statewide motor vehicle-related cancer cases, namely, benzene, 1,3-butadiene, diesel particulate, formaldehyde, and acetaldehyde;

These five substances are appropriately prioritized under the Board's toxics program in that they have either been identified by regulation (Section 93000, Title 17, California Code of Regulations) as toxic air contaminants or are under review for identification as a toxic air contaminant;

While previous emission control efforts have reduced emissions of these five substances, significant emissions remain to warrant further emission control;

Emission control measures which target the reduction of exhaust hydrocarbons as a class of chemical compounds are also effective in reducing most motor vehicle toxics as well;

The Motor Vehicle Toxics Control Plan, which consists of the Post-1987 Motor Vehicle Plan (and its 1990 update) in conjunction with substance-specific measures is an effective means of reducing ambient air concentrations of known and suspected toxic substances emitted by vehicular sources, including benzene, 1,3-butadiene, diesel particulate, formaldehyde, and acetaldehyde;

Implementation of the Motor Vehicle Toxics Control Plan will result in substantial emission reductions of the five high-risk substances as well as other known and suspected motor vehicle toxic substances; and

There are no foreseeable significant adverse environmental impacts that would result from adoption of the proposed Motor Vehicle Toxics Control Plan.

NOW, THEREFORE BE IT RESOLVED that the Board hereby approves the proposed Motor Vehicle Toxics Control Plan as set forth in the report: "Motor Vehicle Toxics Control Plan and Review of Schedule."

State of California  
AIR RESOURCES BOARD

Resolution 90-42

June 15, 1990

Agenda Item No.: 90-7-1

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature in 1988 enacted the California Clean Air Act of 1988 (Stats. 1988, ch. 1568) to address the problem of air pollution in California;

WHEREAS, in the California Clean Air Act the Legislature declared that attainment of the Board's health-based ambient air quality standards is necessary to protect public health, particularly of children, older people, and those with respiratory diseases, and directed that these standards be attained at the earliest practicable date;

WHEREAS, Section 41712 of the Health and Safety Code directs the Board to adopt regulations to achieve the maximum feasible reduction in reactive organic compounds emitted by consumer products, if the Board determines that adequate data exists for it to adopt the regulations, and if the regulations are technologically and commercially feasible and necessary;

WHEREAS, on January 10, 1990, the United States District Court for the Northern District of California issued an order in the consolidated cases of Citizens For A Better Environment and Jean Siri v. George Deukmejian, California Air Resources Board, et al. and Sierra Club v. Metropolitan Transportation Commission, et. al. (the "Court Order");

WHEREAS, the Court Order directs the Board and the Bay Area Air Quality Management District (BAAQMD) to adopt by July 1, 1990, control measures designed to achieve volatile organic compound (VOC) emission reductions from consumer products in the BAAQMD of at least one ton per day by February 1, 1991, and a total of at least four tons per day by February 1, 1993;

WHEREAS, to implement the Court Order, the Board and the BAAQMD have entered into an agreement under which the BAAQMD has agreed to adopt a control measure to achieve a one ton per day reduction in VOC emissions by February 1, 1991, and the Board has agreed to adopt a control measure to achieve the remaining 3 tons per day reduction in VOC emissions by February 1, 1993;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

Consumer products represent one of the few remaining emission sources that have not been controlled in order to attain and maintain national and state ambient air quality standards;

Consumer products contribute to concentrations of ozone and PM10 in the BAAQMD;

The national and state ambient air quality standards for these pollutants are violated in the BAAQMD;

Reducing the VOC content of consumer products will reduce the ambient concentrations of ozone and PM10 in the BAAQMD;

There exists adequate data to adopt the proposed regulations;

The proposed regulations will achieve at least a 3 tons per day reduction in emissions from consumer products in the BAAQMD;

The proposed regulations will result in a significant reduction in VOC emissions, and concomitant reductions in ozone and PM10 levels;

The proposed regulations will comply with the the requirements of the Court Order and the Board's agreement with the BAAQMD;

The cost-effectiveness ratios for reducing emissions from consumer products through the proposed VOC limits are within the range of other control measures adopted to reduce emissions of these pollutants;

The proposed regulations are necessary to attain and maintain the state and national ambient air quality standards, to comply with the Court Order, and to fulfill the Board's agreement with the BAAQMD;

The proposed regulations are technologically and commercially feasible.

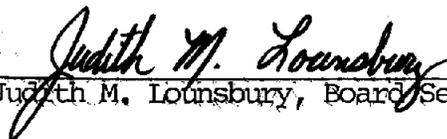
WHEREAS, the Board further finds that:

The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action will not have any significant adverse impact on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves Sections 94520-94527, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Sections 94520-94527, Title 17, California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

I hereby certify that the above is a true and correct copy of Resolution 90-42, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider Amendments to a Regulation Limiting the Sulfur Content of Motor Vehicle Diesel Fuel Statewide

Agenda Item No.: 90-8-2

Public Hearing Date: June 21, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

Judith M. Lounsbury  
Judith M. Lounsbury  
Board Secretary

Date:

8/28/90

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Office of the Secretary

OCT 15 1990

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-43

June 21, 1990

Agenda Item No.: 90-8-2

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the Board) to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Health and Safety Code section 43013 authorizes the Board to adopt and implement motor vehicle fuel specifications for the control of air contaminants which the Board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of Division 26 of the Health and Safety Code;

WHEREAS, Health and Safety Code section 43018 directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date, and directs the Board no later than January 1, 1992 to take whatever actions are necessary, cost effective, and technologically feasible in order to achieve, not later than December 31, 2000, specified reductions in the emissions of air pollutants from vehicular sources, including the maximum feasible reductions in particulate;

WHEREAS, following a hearing on November 18, 1988, the Board adopted Title 13, California Code of Regulations, section 2255, establishing a statewide maximum sulfur content standard of 500 parts per million (ppm) for motor vehicle diesel fuel, starting October 1, 1993;

WHEREAS, section 2255(a)(2) substitutes a 1500 ppm sulfur content limit for the 500 ppm limit where the person selling, supplying, or offering the diesel fuel demonstrates that he or she has taken reasonable precautions to assure that the diesel fuel will be dispensed to motor vehicles only at altitudes above 3000 feet and only between November 1 and March 31;

WHEREAS, the provisions in section 2255 on the sulfur content of diesel fuel sold for use in the wintertime at higher elevations were included because some refiners indicated it was necessary for them to blend higher sulfur content jet fuel into diesel fuel sold at higher elevations in the wintertime to achieve acceptable cloud/pour point characteristics;

WHEREAS, the staff has proposed an amendment to section 2255 which would delete the provisions establishing the less stringent sulfur content standard for higher altitude wintertime diesel fuel;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts and alternatives or feasible mitigation measures to the proposed action are available which would substantially reduce or avoid such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

Emissions from diesel-powered motor vehicles contribute to ambient concentrations of PM10 and visibility reducing particles;

The national and/or state ambient air quality standards for these pollutants are violated in California;

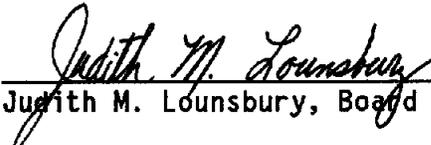
Reducing the sulfur content of motor vehicle diesel fuel reduces emissions of sulfur dioxide and particulate matter from diesel-powered motor vehicles;

It is technologically feasible and cost-effective to eliminate the regulatory provisions establishing the less stringent sulfur content standard for higher altitude wintertime diesel fuel because most California refiners produce jet fuel that has a sulfur content below 500 ppm, and in those instances where refiners do not produce low sulfur jet fuel they can either (a) engage in an exchange agreement with refiners that produce low sulfur jet fuel, (b) hydrodesulfurize jet fuel as needed, or (c) use cloud point/pour point depressancy additives; all these options are available within a reasonable range of cost-effectiveness; and

The amendments adopted herein will not result in any significant adverse environmental impacts.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby adopts the amendment to Title 13, California Code of Regulations, section 2255 as set forth in Attachment A hereto.

I hereby certify that the above is a true and correct copy of Resolution 90-43, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-44

June 21, 1990

Agenda Item No.: 90-8-1

WHEREAS, Section 39602 of the Health and Safety Code designates the Air Resources Board (ARB or Board) as the state air pollution control agency for all purposes set forth in federal law and as the state agency responsible for the preparation of the State Implementation Plan (SIP) required by the federal Clean Air Act (hereinafter "the Act"; 42 USC Sections 7401 et seq.);

WHEREAS, Sections 110 and 172(a) and (b)(2) of the Act as amended in 1977 require that all national ambient air quality standards ("NAAQS") be attained as expeditiously as practicable through the implementation of all reasonably available stationary source, mobile source, and transportation control measures and through the adoption of such other measures as may be necessary to insure attainment and maintenance of such standards;

WHEREAS, Section 172(b)(7) and (10) of the Act requires the SIP to identify and commit the financial and personnel resources necessary to carry out its provisions, and further requires the SIP to contain written evidence that the government agencies responsible for implementing the SIP have adopted the necessary requirements and schedules and timetables for compliance and are committed to implement and enforce the SIP elements for which they are responsible;

WHEREAS, Section 176(c) prohibits the federal government and the metropolitan planning organization (i.e., the Southern California Association of Governments (SCAG) in the South Coast Air Basin) from approving any activity, project, program, or plan which does not conform to the approved SIP;

WHEREAS, Environmental Protection Agency (EPA) regulations require conformity procedures to be included in the SIP in order to assure conformity of federal agency and metropolitan planning organization actions with the SIP;

WHEREAS, Section 316 of the federal Clean Air Act empowers the Environmental Protection Agency Administrator to withhold, condition, or restrict grants for wastewater treatment facilities that may contribute directly or indirectly to an increase in emissions of any pollutant which would interfere with, or be inconsistent with, the SIP;

WHEREAS, Sections 40460 and 40462 of the Health and Safety Code require the South Coast Air Quality Management District (the District), with the active participation of the SCAG and the counties and cities within the South Coast

Air Basin, to adopt a plan to achieve and maintain state and national ambient air quality standards;

WHEREAS, Sections 40469 and 41650 of the Health and Safety Code require the Board to determine if the Plan is adequate to meet federal primary NAAQS and all other requirements of the Act;

WHEREAS, Section 40469(a) of the Health and Safety Code requires the Board, within 120 days of receipt of the Plan, to adopt and submit to the EPA those portions of the Plan that it determines meet the requirements of the Act;

WHEREAS, the 1989 South Coast Air Quality Management Plan (hereinafter "the Plan") was adopted by the District and SCAG, along with the Final Environmental Impact Report, at a joint public hearing on March 17, 1989, and transmitted to the ARB on May 1, 1989;

WHEREAS, this 1989 South Coast Plan was adopted by the ARB August 15, 1989 in Resolution 89-66, incorporated by reference herein, and whereas the Plan contained conformity guidelines from the 1982 South Coast Air Quality Management Plan;

WHEREAS, the Board directed the staff to review the updated conformity procedure as expeditiously as feasible after they were forwarded by the District to the ARB in order to submit them to EPA as a replacement for the 1982 procedures;

WHEREAS, the revised conformity procedures were adopted by the Southern California Association of Governments (SCAG) on April 21, 1989, by the South Coast Air Quality Management District (AQMD) on August 4, 1989, and were forwarded to ARB and received on September 25, 1989;

WHEREAS, the conformity procedures contain four components: general development, transportation, wastewater treatment, and local government implementation; each component specifying a process for analyzing particular types of projects, programs or plans to determine if they are in conformance with the Air Quality Management Plan;

WHEREAS, the revised conformity procedures have been available for public review and comment as required by the Clean Air Act and EPA regulations, and a public hearing has been conducted in the South Coast Air Basin;

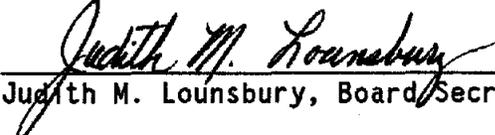
WHEREAS, after considering the oral and written testimony received on the conformity procedures, the Board finds:

- 1) the general development component of the conformity procedures is necessary to ensure attainment and maintenance of national ambient air quality standards as required by Sections 110(a)(2)(B) and 172 of the Clean Air Act;

- 2) the transportation component of the conformity procedures is necessary to satisfy Sections 176(c) and 110(a)(2)(B) of the Act and federal regulations;
- 3) the wastewater treatment component of the conformity procedures is necessary to satisfy Sections 316 and 110(a)(2)(B) of the Act and to protect the South Coast Air Basin from the imposition of sewage treatment grant sanctions;
- 4) the local government implementation component of the conformity procedures complies with Sections 110(a)(2)(B) and 172(b) of the Act and is necessary to ensure continued progress in implementing local government control measures in the SIP, to identify when plan objectives are not being met, and to satisfy federal requirements for reporting progress in implementation; and
- 5) the conformity procedures, in the aggregate, are consistent with the goals and projections set forth in the 1989 Plan, will significantly assist in the successful implementation of the Plan, and are necessary to meet Clean Air Act requirements.

NOW, THEREFORE, BE IT RESOLVED, that the Board approves the revised conformity procedures as submitted by the District and SCAG and directs the Executive Officer to submit these procedures to the Environmental Protection Agency as a revision to the California State Implementation Plan as expeditiously as practicable.

I hereby certify that the above is a true and correct copy of Resolution 90-44, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of an Airborne Toxic Control Measure for Dioxins Emissions from Medical Waste Incinerators

Agenda Item No.: 90-10-2

Public Hearing Date: July 13, 1990

Response Date: N/A

Issuing Authority: Air Resources Board

**Comment:** The Board received comments alleging that adverse environmental impacts could result from the adoption of the proposed regulation. Because many existing medical waste incinerators will cease operation as a result of the regulation, much of the waste presently being burned in these incinerators will be handled by alternative disposal methods (i.e., steam sterilization and landfilling). Commenters stated that the use of these alternative methods would result in: (1) a significant increase in waste diverted to landfills; (2) increased vehicular emissions from the transport of waste to alternative treatment and disposal sites; and (3) increased safety problems associated with the storage, handling, and in-transit accidental releases of medical waste. Commenters also alleged that some alternative methods are less effective than incineration and would cause adverse health impacts. In addition, the Staff Report identified possible adverse environmental effects from the increased generation of hazardous ash and scrubbing residuals from the air pollution control equipment that will be used on incinerators that continue to operate.

**Response:** The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action may have a significant adverse impact on the environment. Each of these potential impacts is discussed below.

The regulation may result in adverse environmental impacts from the increased generation of hazardous ash and scrubbing residuals that may occur at specific incineration sites. While hazardous ash and scrubbing residuals are classified as hazardous waste under California law and can pose a health hazard if improperly handled and disposed of, this potential adverse environmental impact will be substantially mitigated if affected sources comply with California and federal laws regarding the generation,

transportation, and disposal of hazardous waste. In addition, the total volume of ash produced in California will be reduced because many incinerators are expected to cease operation as a result of this regulation.

The control measure can also result in other significant adverse environmental impacts, in that there can be a minor increase in solid waste diverted to landfills (up to approximately .05 percent of total municipal waste generated in California) and a minor increase in vehicular emissions from increased transport of waste to landfills and other alternative disposal sites. Because alternative disposal methods do not pose significant safety problems, and are as effective as incineration in treating medical waste, no significant adverse public health or safety impacts are expected to occur from the increased use of steam sterilization and other alternative disposal methods.

For those facilities that retrofit and implement best available control technology, the control measure would result in significant public health benefits due to (1) a 90 to 99 percent overall reduction in both dioxins emissions and associated potential cancer risks, (2) an 85 to 99 percent reduction in hydrochloric acid and particulate matter emissions, and (3) a 37 to 99 percent reduction in cadmium emissions. In Resolution 90-45, the Board found that these public health benefits override the potential adverse environmental impacts described above. The Board also found that there are no feasible mitigation measures or other alternatives that would substantially reduce the adverse environmental impacts, while at the same time providing the substantial overall public health benefits that result from reducing dioxins, hydrochloric acid, particulate matter, and cadmium emissions.

Further analysis of the environmental impacts of the regulation can be found on pages 35-37 of the Staff Report, on pages 145-147 of the Technical Support Document, and the in responses to Comments 1-6 and 42 in the Final Statement of Reasons.

CERTIFIED:

Patricia Hutchins  
Board Secretary

Date:

5/16/91

APPROVED BY  
Office of the Secretary

AUG 2 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD  
PROPOSED

Resolution 90-45

July 13, 1990

Agenda Item No: 90-10-2

WHEREAS, on July 25, 1986, pursuant to Section 39662 of the Health and Safety Code, the Air Resources Board (Board) identified chlorinated dioxins and dibenzofurans (dioxins) as toxic air contaminants for which there is not sufficient available scientific evidence to support identification of a threshold exposure level below which no carcinogenic health effects are anticipated (see Title 17, California Code of Regulations, Section 93000);

WHEREAS, following identification of dioxins as toxic air contaminants, the Executive Officer, with the participation of local air pollution control districts, is required by Health and Safety Code Section 39655 to prepare a report on the need for, and appropriate degree of, control of dioxins emissions;

WHEREAS, the staff has worked closely with the districts through the statewide Technical Review Group (TRG), the TRG Committee on Dioxins, and with affected sources and other parties to develop as expeditiously as practical an airborne toxic control measure for emissions of dioxins from medical waste incinerators;

WHEREAS, the staff has proposed an airborne toxic control measure (ATCM) for dioxins emissions which would significantly reduce the quantity of dioxins emitted to the atmosphere by requiring emission controls on medical waste incinerators;

WHEREAS, the staff has prepared the "Proposed Dioxins Control Measure for Medical Waste Incinerators" (Staff Report and its Technical Support Document), which constitutes the report required by Health and Safety Code Section 39655 and includes: estimates of dioxins emissions; public exposure to dioxins and potential cancer risk; a discussion of the technical feasibility of control and of existing emission control devices; an estimate of the costs to comply with the ATCM; a discussion of the anticipated effect of the ATCM on public exposure to dioxins from medical waste incinerators and the associated risk; a discussion of alternatives to the ATCM; and identification of any potential adverse environmental effects of the ATCM and possible mitigation measures;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be

adopted as proposed if feasible alternatives or mitigation measures are available to eliminate or substantially reduce such impacts;

WHEREAS, the proposed ATCM was made available to the public for review and comment, and was discussed at public consultation meetings on July 26, 1989; November 14, 1989; November 16, 1989; March 6, 1990; and April 24, 1990;

WHEREAS, in accordance with Health and Safety Code Section 39665(c), the Staff Report, Technical Support Document, and relevant comments on the proposed ATCM received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, a public hearing and other administrative proceedings were held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, in consideration of the Staff Report, Technical Support Document, and the written comments and public testimony it has received, the Board finds that:

The operation of medical waste incinerators results in public exposure to dioxins;

Most medical waste incinerators in California are uncontrolled, poorly operated and located in residential areas;

Dioxins emissions from medical waste incinerators are not currently regulated to a degree that adequately protects the public health statewide;

The potential maximum individual lifetime cancer risk from dioxins exposure from medical waste incinerators ranges from less than 10 up to 250 chances in a million;

Emissions testing results show that medical waste incinerators are sources of other pollutants such as cadmium, particulate matter and hydrochloric acid, and these pollutants have the potential to cause adverse health effects;

Emissions testing results show that medical waste incinerators in California have particulate matter emissions that exceed local air district limits;

The proposed ATCM would require facilities that burn greater than 25 tons per year to reduce their dioxins emissions from medical waste incinerators to the lowest level achievable through application of the best available control technology, as required by Health and Safety Code Section 39666(c), and, therefore, complies with the requirements of state law for the control of sources of toxic air contaminants identified by the Board;

As provided in Health and Safety Code Section 39666(c), based on an assessment of risk it was determined that facilities that burn 25 tons or less of waste per year could improve incinerator operation with operator training and that facilities that burn more than 10 but less than 25 tons of waste per year should do an initial source test, and that the alternative level of emission reduction achieved by these requirements is adequate to prevent an endangerment of public health;

For those facilities that apply best available control technology, implementation of the proposed ATCM would reduce dioxins emissions by about 99 percent from currently uncontrolled medical waste incinerators, and about 90 percent from currently controlled facilities;

For those facilities that apply best available control technology, the proposed ATCM would reduce hydrochloric acid and particulate matter emissions by 85 to 99 percent, and reduce cadmium emissions from 37 to as much as 99 percent;

No alternative considered would be either more effective at carrying out the purpose for which the ATCM is proposed, or both as effective and less burdensome to affected private persons, than the proposed ATCM; and

WHEREAS, the Board further finds that:

Adoption of the proposed ATCM may result in significant adverse environmental impacts, in that an increased generation of hazardous ash and scrubbing residuals may occur;

While hazardous ash and scrubbing residuals can be classified as hazardous waste under California law and can pose a health hazard if improperly handled and disposed of, this potential adverse environmental impact will be substantially mitigated if affected sources follow California and federal laws regarding the generation, transportation, and disposal of hazardous waste;

Adoption of the proposed ATCM may result in other significant adverse environmental impacts, in that there may be a slight increase in waste diverted to landfills (up to approximately .05 percent of total municipal waste in California) and a slight increase in vehicular emissions from increased transport of waste to landfills and other alternative disposal sites;

For those facilities that implement best available control technology, the proposed ATCM would result in significant public health benefits due to (1) a 90 to 99 percent overall reduction in both dioxins emissions and associated potential cancer risks, (2) an 85 to 99 percent reduction in hydrochloric acid and particulate matter emissions, (3) a 37 to 99 percent reduction in

cadmium emissions, and these considerations override the potential adverse environmental impacts described above;

There are no feasible mitigation measures or other alternatives that would substantially reduce the adverse environmental impacts described above, while at the same time providing the substantial overall public health benefit realized by the significant emission reductions of dioxins, hydrochloric acid, particulate matter, and cadmium;

NOW, THEREFORE, BE IT RESOLVED that the Board approves the adoption of Section 93108, Subchapter 7.5, Chapter 1, Part III, Titles 17 and 26, California Code of Regulations as set forth in Attachment A.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the airborne toxic control measure as set forth in Attachment A after making it available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to request that local Air Pollution Control and Air Quality Management Districts evaluate the need on a case-by-case basis for further control of cadmium emissions from medical waste incinerators, and direct the Executive Officer to evaluate the need for a further control measure to reduce cadmium emissions through source minimization and segregation.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the adopted ATCM to the districts and provide appropriate assistance to the districts in adopting regulations to implement the ATCM.

I hereby certify that the above is a true and correct copy of Resolution 90-45, as adopted by the Air Resources Board

*Judith M. Lounsbury*  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-46

July 12, 1990

Agenda Item No.: 90-09-03

WHEREAS, Health and Safety Code Section 39606(b) directs the Air Resources Board (ARB or Board) to "adopt standards of ambient air quality for each air basin in consideration of the public health, safety, and welfare...", and whereas the Board has adopted such standards as set forth in Section 70200 of Title 17, California Code of Regulations;

WHEREAS, Health and Safety Code Sections 39600, 39605, and 40916 authorize the Board to act as necessary to execute the powers and duties granted to and imposed upon the Board and to assist the local and regional air pollution control and air quality management districts (districts) in their efforts to attain the state ambient air quality standards;

WHEREAS, Health and Safety Code Section 39003 directs the Board to "systematically attack the serious problem caused by motor vehicles, which is the major source of air pollution in many areas of the state";

WHEREAS, Health and Safety Code Section 40910 states that districts shall "endeavor to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide by the earliest practicable date..." and "...shall consider the full spectrum of emissions sources and focus particular attention on reducing the emissions from transportation and areawide emission sources.";

WHEREAS, Health and Safety Code Sections 40911 and 40913 require districts which have not attained such state ambient air quality standards to prepare and submit to the Board no later than June 30, 1991, a plan for their attainment and maintenance by the earliest practicable date;

WHEREAS, Health and Safety Code Section 40914(a) requires the plan to achieve a reduction in districtwide emissions of at least five percent per year for each nonattainment pollutant or its precursors unless an alternative measure of progress is approved;

WHEREAS, the California Clean Air Act, in Sections 40918, 40919, and 40920 of the Health and Safety Code, requires:

areas with moderate air pollution to include in such plans, to the extent necessary to meet the planning requirements of the Act, provisions to develop an indirect source control program, among other specified measures;

areas with serious air pollution to include, in addition to all measures specified above, transportation control measures to substantially reduce passenger vehicle trips and miles traveled per trip, among other specified measures;

areas with severe air pollution to include, in addition to all measures specified above, transportation control measures to achieve an average during weekday commute hours of 1.5 or more persons per passenger vehicle by 1999 and no net increase in vehicle emissions after 1997;

WHEREAS, the Board adopted Resolution #88-60 on December 8, 1988, which states the Board's commitment to assist state, regional, and local efforts to reduce emissions from motor vehicles by reducing the growth in usage and by reducing dependency on the single occupancy vehicle;

WHEREAS, Health and Safety Code Sections 41500 and 41503(a) require the Board to review each district's plan to determine whether the attainment date specified therein represent the earliest practicable date and whether the measures contained in the plan are sufficient to achieve and maintain the state ambient air quality standards;

WHEREAS, Health and Safety Code Section 40716(a) states that the district may adopt and implement regulations to reduce or mitigate emissions from indirect and areawide sources of air pollution and to encourage or require the use of ridesharing, vanpooling, flexible work hours, or other measures which reduce the number or length of vehicle trips;

WHEREAS, Health and Safety Code Section 40440(b)(3) requires the South Coast Air Quality Management District (AQMD) to adopt rules and regulations to provide for indirect source controls in those areas of the South Coast AQMD in which there are high-level, localized concentrations of pollutants or with respect to any new source that will have a significant effect on air quality in the South Coast Air Basin.

WHEREAS, Health and Safety Code Sections 42300 and 42311(a) authorize the districts to establish permit systems and fee schedules to cover the cost of district programs related to permitted sources, while Section 42311(g) authorizes the districts to assess fees on areawide and indirect sources which are regulated, but for which permits are not required, to recover the costs of district programs related to these sources;

WHEREAS, the staff has prepared a draft guidance document titled California Clean Air Act Guidance for the Development of Indirect Source Control Programs, and has participated in public workshops to discuss various approaches to indirect source control programs on two occasions, one on June 12, 1990 in Sacramento, and one on June 22, 1990, in Los Angeles; and

WHEREAS, after considering the staff report and the public comments presented, the Board finds that:

1. significant emissions reductions are needed in the nonattainment areas to achieve the state standards and to meet the requirements of the California Clean Air Act;

2. emissions from on-road motor vehicles account for a significant portion of the total emissions in the state ranging from four percent for PM10 to 67 percent for carbon monoxide;
3. use of the motor vehicle is increasing at a rapid rate, in significant part due to population growth, but also due to the general increasing use of the motor vehicle;
4. use of the motor vehicle is associated with travel to and from both existing and new indirect sources, such as employment sites, shopping centers, housing developments, airports, and commercial or industrial developments;
5. technological controls on tailpipe and evaporative emissions, despite their increasing stringency, are not sufficient in the long run to result in an overall decrease of motor vehicle-related emissions due to increased vehicle use;
6. significant emissions reductions can and should be achieved by reducing motor vehicle usage through the implementation of indirect source control programs in nonattainment districts;
7. indirect source control programs can also be an effective strategy to maintain state standards;
8. there are a number of different approaches which can be used to reduce emissions from both new and existing indirect sources and these approaches include, but are not limited to: a permit program, source specific regulations or ordinances, increased participation in the CEQA process, and the integration of land use policies, transportation policies, and air quality policies, in conjunction with, or in lieu of, any or all other approaches; and
9. participation by cities and counties, and other affected parties, will enhance the effectiveness of indirect source control programs.

NOW, THEREFORE, BE IT RESOLVED that the Board advocates the development of indirect source control programs for both new and existing sources as an effective tool to attain and maintain state ambient air quality standards as expeditiously as practicable and as a key strategy in the 1991 plans.

BE IT FURTHER RESOLVED that the Board encourages the districts to actively involve city and county governments as early as possible in the process.

BE IT FURTHER RESOLVED that the Board approves the document titled California Clean Air Act Guidance for the Development of Indirect Source Control Programs, July 1990, as the basis for developing indirect source control programs in response to the requirements set forth in the California Clean Air Act.

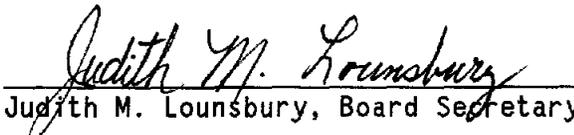
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to request all nonattainment districts, in cooperation with city and county governments, to evaluate the degree to which an indirect source control program should be implemented and to include the evaluation with the 1991 plan submittals.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the guidance document to the districts for consideration in preparing their 1991 plans and to notify the districts that the Board will use this guidance as a starting point in reviewing district plans and regulations pertaining to indirect source control programs.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to continue to assist the districts as necessary to develop and implement effective indirect source control programs.

BE IT FURTHER RESOLVED that the Board encourages the exploration of other options and recognizes that the guidance set forth in this document will need to be refined as more is learned about indirect source control measures and their implementation.

I hereby certify that this is a true and correct copy of Resolution 90-46 as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-47

July 12, 1990

Agenda Item No.: 90-9-2

WHEREAS, Health and Safety Code Section 39606(b) directs the Air Resources Board (ARB or Board) to "adopt standards of ambient air quality for each air basin in consideration of the public health, safety, and welfare" and whereas the Board has adopted such standards as set forth in Section 70200 of Title 17, California Code of Regulations;

WHEREAS, Health and Safety Code Sections 39600, 39605, and 40916 authorize the Board to act as necessary to execute the powers and duties granted to and imposed upon the Board and to assist local and regional air pollution control and air quality management districts (districts) in their efforts to attain the state ambient air quality standards;

WHEREAS, Health and Safety Code Sections 40910, 40911 and 40913 require districts which have not attained the state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide to prepare and submit a plan for attaining and maintaining such standards by the earliest practicable date to the state board no later than June 30, 1991;

WHEREAS, Sections 42300 and 42301 of the Health and Safety Code authorize districts to establish permit systems which ensure that any article, machine, equipment, or contrivance which may cause the issuance of air contaminants will comply with all rules, regulations and orders of the district and the ARB and will not interfere with the attainment or maintenance of any applicable ambient air quality standards;

WHEREAS, the California Clean Air Act, in Sections 40918, 40919, and 40920 of the Health and Safety Code, requires:

areas with moderate air pollution to include in such plans, to the extent necessary to meet the planning requirements of the Act, a permitting 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;

areas with serious and severe air pollution to include in such plans, to the extent necessary to meet the planning requirements of the Act, a permitting program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all permitted new or modified stationary sources;

WHEREAS, the ARB staff has developed permitting program guidance for new and modified stationary sources for use by the districts in developing their

plans to achieve no net increase in emissions and to attain and maintain state ambient air quality standards, and has held a public workshop to obtain comments on the guidance;

WHEREAS, the Board finds that the development of modified permitting rules is critical to the attainment planning process and for attaining the state ambient air quality standards by the earliest practicable date; and

WHEREAS, it is the Board's judgment that the district permitting rules should require Best Available Control Technology for all new and modified stationary sources, that a number of options should be available for mitigating emissions increases, that mitigation not provided individually by project proponents should be provided by the district, that mitigation should meet current offset criteria, that districts should be encouraged to adopt an emission reduction banking rule and require all emission reductions for use as offset credits be deposited into the bank, that the modified permitting rules be adopted by July 1, 1991, that the attainment plans mitigate emissions growth from projects permitted after the 1987 baseline but before the effective date of the modified permitting rules, and that implementation of an effective tracking system is necessary to satisfy CCAA requirements.

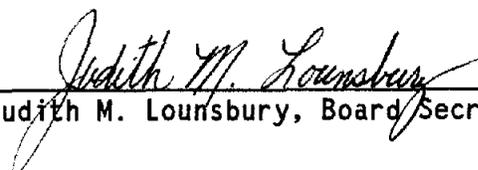
NOW, THEREFORE, BE IT RESOLVED that the Board approves the document titled California Clean Air Act Permitting Program Guidance for New and Modified Stationary Sources in Nonattainment Areas, dated July 1990.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the guidance document to the districts for consideration in preparing their 1991 air quality plans and amending their permitting rules and to notify the districts that the ARB will consider this guidance as a starting point in reviewing district plans and regulations pertaining to new and modified sources.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to provide assistance to any district requesting assistance in interpreting the permitting requirements of the California Clean Air Act, the guidance document, or the evolving review policies of the ARB.

BE IT FURTHER RESOLVED that the staff continue to work with the New Source Review Task Force of the California Air Pollution Control Officers Association on the calculation procedures, banking requirements and the development of mitigation options set forth in this guidance document.

I hereby certify that the above is a true and correct copy of Resolution 90-47, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-48

July 12, 1990

Agenda Item No.: 90-9-1

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (Stats. 1988, ch. 1568) to address the problem of air pollution in California and declared therein that attainment of the Board's health-based ambient air quality standards is necessary to protect public health, particularly of children, older people, and those with respiratory disease, and directed that these standards be attained at the earliest practicable date;

WHEREAS, Section 40914 of the Health and Safety Code enacted as part of the California Clean Air Act of 1988 requires districts designated as nonattainment to submit plans to the Board which reduce emissions by five percent per year or more, for each nonattainment pollutant or its precursors;

WHEREAS, Section 40913 of the Health and Safety Code requires the Board to determine the adequacy of the district plans to achieve and maintain the state standards;

WHEREAS, the staff has proposed adoption of regulations under Title 17, California Code of Regulations Section 70700 et seq., for the purpose of emissions accounting for nonattainment districts;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

Emissions reduction strategies are helpful in reducing ambient concentrations of nonattainment pollutants;

Standardization of accounting requirements of emission reductions will enable the Board to judge plans in a consistent and equitable manner;

Standardization of accounting requirements will assist the districts in preparing their attainment plans for Board review;

The proposed regulation will streamline the approval process by standardizing the procedure and requirements;

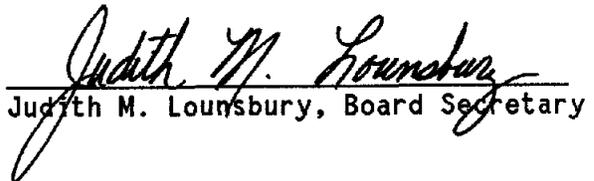
The proposed regulation will not result in any significant adverse environmental impacts, specifically, the proposed regulation will have no effect on the air pollution control measures as required by the California Clean Air Act; and

The proposed regulation does not preclude the use of alternative emission reduction strategies in lieu of the five percent reduction strategy or the use of air quality indicators as an alternative measure of progress.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves Section 70700 to 70704, Title 17, California Code of Regulations, set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Sections 70700 to 70704, Title 17, California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

I hereby certify that the above is a true and correct copy of Resolution 90-48, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Notice of Public Hearing to Consider Air Resources Board Adoption of  
Emission Reduction Accounting Procedures Pursuant to the California  
Clean Air Act

Agenda Item No.: 90-9-1

Public Hearing Date: July 12, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: Pat Hulteen Jr  
Board Secretary

Date: January 10, 1991

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Notice of Public Hearing to Consider the Adoption of a Regulatory Amendment Identifying Inorganic Arsenic as a Toxic Air Contaminant

Agenda Item No.: 90-10-1

Public Hearing Date: July 13, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

Patricia Hutchins for  
Board Secretary

Date:

5/13/91

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-49

Date: July 13, 1990

Agenda Item No.: 90-10-1

WHEREAS, Section 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to do such acts and to adopt such regulations as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the Board by law;

WHEREAS, Chapter 3.5 (commencing with Section 39650) of Part 2 of Division 26 of the Health and Safety Code establishes procedures for the identification of toxic air contaminants by the Board;

WHEREAS, Section 39655 of the Health and Safety Code defines a "toxic air contaminant" as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health;

WHEREAS, Section 39662 of the Health and Safety Code directs the Board to list, by regulation, substances determined to be toxic air contaminants, and to specify for each substance listed a threshold exposure level, if any, below which no significant adverse health effects are anticipated;

WHEREAS, in California, inorganic arsenic is emitted from many activities including wood and fossil-fuel combustion, geothermal steam development, arsenic pesticide/herbicide use, and windblown dust from dry lakebeds; and inorganic arsenic is not naturally removed or detoxified in the atmosphere at a rate that would significantly reduce the resulting public exposure;

WHEREAS, pursuant to the request of the Board, the Department of Health Services (DHS) evaluated the health effects of inorganic arsenic in accordance with Section 39660 of the Health and Safety Code;

WHEREAS, DHS concluded in its evaluation that inorganic arsenic is causally associated with cancer in humans; that health effects other than cancer are not expected to occur at existing or expected ambient levels of inorganic arsenic; that based on the upper 95 percent confidence limit of potency, the estimated range of lifetime (70 year) excess lung cancer mortality risk from continuous exposure to 1  $\mu\text{g}/\text{m}^3$  of atmospheric inorganic arsenic is from  $6.3 \times 10^{-4}$  (female never smokers) to  $1.3_3 \times 10^{-2}$  (male heavy smokers); and that, based on available data,  $3.3 \times 10^{-3}/\mu\text{g}/\text{m}^3$  is the most plausible estimate of the upper bound of the overall unit risk;

WHEREAS, for the reasons set forth in its evaluation, DHS treats inorganic arsenic-induced carcinogenesis as a nonthreshold phenomenon because DHS found no evidence that there is a carcinogenic threshold level for inorganic arsenic;

WHEREAS, upon receipt of the DHS evaluation, staff of the Board prepared a report including and in consideration of the DHS evaluation and recommendations and in the form required by Section 39661 of the Health and Safety Code and, in accordance with the provisions of that section, made the report available to the public and submitted it for review to the Scientific Review Panel (SRP) established pursuant to Section 39670 of the Health and Safety Code;

WHEREAS, in accordance with Section 39661 of the Health and Safety Code, the SRP reviewed the staff report, including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based, considered the public comments received regarding the report, and on April 16, 1990 adopted, for submittal to the Board, findings which included the following:

1. The evidence for carcinogenicity in humans due to inhaled arsenic is strong.
2. Inorganic arsenic is emitted into the outdoor air by a variety of stationary sources in California.
3. Hot spot exposures can present a significant source of inorganic arsenic, e.g., smelters, windblown dust (such as from the dry beds of Owens and Mono Lakes), pesticide application, agricultural burning, and tobacco smoke. Exposure by various routes to these sources should be considered as more data becomes available, and further research in this area should be conducted.
4. Based on the average particle size, inorganic arsenic has an estimated atmospheric lifetime of nine days.
5. Approximately 20.3 million people in California are estimated to be exposed to a population-weighted mean inorganic arsenic outdoor air concentration of 1.9 ng/m<sup>3</sup>.
6. Based on available data, indoor exposures to inorganic arsenic may be significantly greater than most outdoor exposures when tobacco smoke is present in indoor environments.
7. Adverse health effects other than cancer are not known to occur at predicted concentrations of inorganic arsenic in ambient outdoor air.

8. Based on available scientific information, an inorganic arsenic exposure level below which carcinogenic effects are not expected to occur cannot be identified.
9. Based on interpretation of available scientific evidence, DHS staff estimated lifetime excess cancer risk from exposure to airborne arsenic. Risks were evaluated separately by sex and for four smoking categories: never, former, light (less than 1 pack per day), and heavy smokers. Based on the upper 95 percent confidence limit of potency, the estimated range of lifetime excess lung cancer mortality risk from exposure to  $1 \text{ ug/m}^3$  of atmospheric inorganic arsenic is from  $6.3 \times 10^{-4}$  (female never smokers) to  $1.3 \times 10^{-2}$  (male heavy smokers). Based on available data,  $3.3 \times 10^{-3} / \text{ug/m}^3$  is the most plausible estimate of the upper bound of the overall unit risk. These upper bound excess risks are health-protective estimates; the actual risks may be below these values.
10. Using the population-weighted annual inorganic arsenic exposure concentration of  $1.9 \text{ ng/m}^3$  (California's population-weighted average ambient concentration), the DHS staff estimates the number of excess cancer deaths among non-smokers due to airborne inorganic arsenic exposure to be 0.8 to 2 per million persons exposed throughout their lives. For former smokers, the risk ranges from 3 to 10 per million; for light smokers, from 5 to 14 per million; for heavy smokers, the risk ranges from 10 to 25 per million people at the current average ambient levels of airborne inorganic arsenic. The overall population-weighted average, based on current smoking levels in California, is estimated to range from 4 to 6 deaths per million. The upper bound of excess cancer mortality risk from a lifetime of exposure to  $1.9 \text{ ng/m}^3$  of inorganic arsenic ranges from 1 to 25 cases per million persons exposed. This is to be compared with the background lifetime lung cancer rates estimated to range from 0.6 to 14.5 percent (for female never smokers to male heavy smokers).
11. Lifetime exposure to the mean ambient outdoor air concentration (weighted by population) of  $1.9 \text{ ng As/m}^3$  for a population of 20.3 million Californians could result in up to 130 excess cancers, based on the most plausible upper bound estimate of unit risk. Residential indoor exposure associated with environmental tobacco smoke could add an additional unknown number of lung cancers based on this unit risk estimate.
12. Existing data suggests there is a potential for reproductive effects in humans. Although there appears to be a sufficient margin of safety between the ambient exposure and the observed effect levels, this issue should be revisited as hot spot exposure data become available.

13. Identification of inorganic arsenic as a toxic air contaminant is required by Health and Safety Code Section 39655, since it has been identified as a hazardous air pollutant under Section 112 of the U.S. Clean Air Act.

WHEREAS, the SRP found the staff report to be without serious deficiency, and the SRP agreed with the staff recommendation that inorganic arsenic should be listed by the Air Resources Board as a toxic air contaminant, and found that, based on available scientific information, an inorganic arsenic exposure level below which carcinogenic effects are not expected to occur cannot be identified;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of Government Code;

WHEREAS, in consideration of the staff report, including DHS' evaluation and recommendations, the available evidence, the findings of the SRP, and the written comments and public testimony it has received, the Board finds that;

There is strong evidence that inorganic arsenic is a human carcinogen;

Health effects other than cancer are not anticipated at existing or expected inorganic arsenic exposure levels in ambient outdoor air;

The DHS and the SRP agree that the most plausible estimate of the upper bound of the overall unit risk is  $3.3 \times 10^{-3}/\mu\text{g}/\text{m}^3$ ;

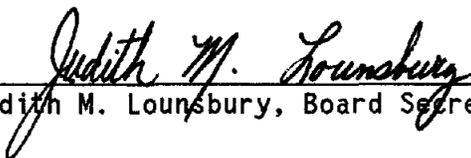
There is not sufficient available scientific evidence to support the identification of a threshold exposure level for inorganic arsenic;

Inorganic arsenic is an air pollutant which, because of its carcinogenicity, may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Board regulations, that this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE BE IT RESOLVED, that the Board adopts the proposed regulatory amendment to Section 93000, Titles 17 and 26, California Code of Regulations, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of Resolution 90-49, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of Amendments to Regulations Regarding Evaporative Emissions Standards, Test Procedures, and Durability Requirements Applicable to Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles and Heavy-Duty Vehicles

Agenda Item No.: 90-11-1

Public Hearing Date: August 9, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

*Pat Hutchins for*  
Judith M. Lounsbury  
Board Secretary

Date:

June 6, 1991

RECEIVED BY  
Office of the Secretary

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-50

August 9, 1990

Agenda Item No.: 90-11-01

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000 of the Health and Safety Code, the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the State and, in sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, in section 43000.5 of the Health and Safety Code, the Legislature has declared that the attainment and maintenance of the state air quality standards will necessitate the achievement of substantial reductions in new vehicle emissions and substantial improvements in the durability of vehicle emissions systems;

WHEREAS, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt emission standards and test procedures to control air pollution caused by motor vehicles;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction from vehicular sources to accomplish the attainment of state ambient air quality standards by the earliest practicable date, including, by July 1, 1992, taking whatever actions are necessary, cost-effective and technologically feasible to achieve a reduction in emission of reactive organic gases (hydrocarbons) of at least 55 percent from motor vehicles (based on emissions in 1987) by December 31, 2000;

WHEREAS, section 39667 of the Health and Safety Code directs the Board to consider the revision of emission standards for vehicular sources to achieve the maximum possible reduction in public exposure to toxic air contaminants and specifies that standards for new motor vehicles shall be based on the most advanced technology feasible;

WHEREAS, section 43018 further provides that the Board shall take action to achieve the maximum feasible reduction in toxic air contaminants from vehicular sources;

WHEREAS, in section 93000, Title 17, California Code of Regulations ("CCR"), the Board has identified benzene, a compound emitted by motor vehicles, as a toxic air contaminant pursuant to Health and Safety Code section 39650 et seq.;

WHEREAS, the Board has adopted Title 13, California Code of Regulations, Section 1976 and the incorporated "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Liquefied Petroleum Gas- or Gasoline- or Methanol-Fueled Motor Vehicles;"

WHEREAS, the staff has proposed amendments to section 1976, Title 13, CCR, and the document incorporated by reference therein, which would establish a modified evaporative emissions test procedure for those vehicles subject to such testing;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

Attainment of State and federal ozone standards is possible only with substantial reductions in emissions of hydrocarbons and oxides of nitrogen;

Vehicle evaporative emissions are a significant source of hydrocarbons;

The proposed test procedures will accurately measure motor vehicle evaporative emissions under all operating conditions and at typical temperatures and will ensure that evaporative emissions are reduced to the lowest levels achievable;

The proposed running loss standard will ensure that evaporative emissions during vehicle use are reduced to the lowest feasible level;

Extended durability testing to 100,000 miles for passenger cars and light-duty trucks and 120,000 miles for medium and heavy-duty vehicles will result in substantial improvements in the durability and performance of evaporative emission control systems;

Phasing in implementation of the proposed standards and test procedures over a period of four years, from 1995 to 1998, inclusive, will provide sufficient lead time to enable manufacturers to build or modify evaporative emission test facilities to comply with the new requirements;

The proposed evaporative emission standards and test procedures are technologically feasible and cost effective;

The revised evaporative emission standards and certification test procedures will result in reductions in benzene;

The proposed evaporative emission standards and test procedures will not have any adverse effect on the environment.

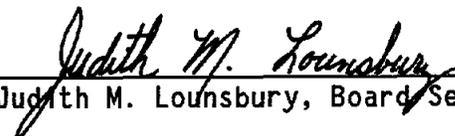
NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the amendments to Title 13, CCR, section 1976, and the document incorporated by reference therein as set forth in Appendices A and B hereto.

BE IT FURTHER RESOLVED that the Board direct the Executive Officer to adopt the amendments set forth in Appendices A and B after making them available to the public for a period of 15 days, and with such modifications as may be appropriate in light of written comments submitted during this period, provided that the Executive Officer shall present the regulations to the Board for further consideration if he determines that this is warranted in light of the written comments received.

BE IT FURTHER RESOLVED that the Board hereby determines that the amendments adopted herein will not cause the California emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards, will not cause the California requirements to be inconsistent with section 202(a) of the Clean Air Act, and raise no new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the amendments to the Environmental Protection Agency with a request for a waiver or confirmation that the amendments are within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the Clean Air Act, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 90-50, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-51

August 9, 1990

Agenda Item No.: 90-11-2

WHEREAS, the Legislature has enacted Assembly Bill (AB) 1736 (Stats. 1989, ch. 1321) which requires the Air Resources Board (the "Board") to review and evaluate the adequacy of programs to reduce chlorofluorocarbon (CFC) emissions from motor vehicle air conditioning systems;

WHEREAS, the Board is required by AB 1736 to report its findings to the Legislature and to recommend any legislation it believes is needed to reduce CFC emissions from motor vehicle air conditioning systems, and to propose a schedule of measures to reduce those emissions;

WHEREAS, to fulfill the requirements of AB 1736, the Board Staff has prepared a draft report entitled An Evaluation of Programs for Reduction of Chlorofluorocarbon (CFC) Emissions from Motor Vehicle Air Conditioning Systems (the "Report");

WHEREAS, the Report concludes that the elimination of CFC production is the most effective means of controlling CFC emissions; and

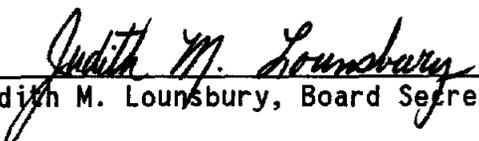
WHEREAS, the Board has held a duly noticed public meeting to consider approval of the Report, and has heard and considered the comments presented by representatives of the Board and other interested persons and agencies.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the Report and directs the Executive Officer to forward the Report to the Legislature.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to investigate whether the conclusion reached in the Report is applicable to other uses of CFCs, and to report back to the Board by June 30, 1991.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to monitor the progress achieved in eliminating CFC production and use, and to report back to the Board by January 31, 1995.

I hereby certify that the above is a true and correct copy of Resolution 90-51, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

90-52  
Missing  
Resolution

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider Air Resources Board Adoption of Emission Control Requirements to Mitigate the Impact of Transported Pollutants on Ozone Concentrations in Downwind Areas Pursuant to the California Clean Air Act

Agenda Item No.: 90-12-1

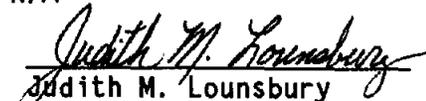
Public Hearing Date: August 10, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

  
Judith M. Lounsbury  
Board Secretary

Date:

11/13/90

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-54

September 13, 1990

Agenda Item No. : 90-13-1

**WHEREAS**, the Clean Air Act as amended (42 U.S.C., Sec. 7401, et seq.), authorizes and requires the Environmental Protection Agency (EPA) to establish national ambient air quality standards (Section 109) and to oversee the effort by the states to attain those standards;

**WHEREAS**, the nucleus of the effort to attain and maintain ambient air quality standards is the State Implementation Plan (SIP), mandated by Section 110 (a)(1) of the Clean Air Act, which requires states to submit a SIP, and bear primary responsibility for its implementation (Section 101(a)(3));

**WHEREAS**, in conjunction with this authority, EPA has promulgated regulations (40 C.F.R. 51.151 et seq.) that require the adoption of contingency plans as part of the SIP for the prevention and abatement of air pollution emergency episodes;

**WHEREAS**, California Health and Safety Code Section 39602 provides that the Air Resources Board (the Board) is designated the air pollution control agency for all purposes set forth in federal law, including preparation of the SIP, and to this end shall coordinate the activities of all air pollution control districts necessary to comply with the Clean Air Act;

**WHEREAS**, California Health and Safety Code Section 40001 requires air pollution control districts to adopt and enforce rules and regulations that provide for the prevention and abatement of air pollution episodes, if so requested by the Board;

**WHEREAS**, the Board adopted a contingency plan, known as the Air Pollution Emergency Plan, in 1974 and amended in 1977, to provide for the prevention and abatement of air pollution emergency episodes;

**WHEREAS**, the Board periodically reviews the State contingency plan to ensure that it reflects current scientific knowledge;

**WHEREAS**, the Board has received a recommendation from the Department of Health Services, dated February 24, 1989, to modify the episode criteria for oxidants in the State contingency plan;

**WHEREAS**, after considering the report prepared by ARB staff, the recommendation of the the Department of Health Services and the written and oral testimony presented on this matter, the Board finds:

1. The Department of Health Services has reviewed a substantial body of research on the health effects of ozone which provides a stronger scientific foundation for the episode criteria than when it was last reviewed in 1977;
2. The recommendations of the staff and the Department of Health Services to amend the Air Pollution Emergency Plan, when implemented, will better protect the health of the citizens of California;
3. The change in terminology in the Air Pollution Emergency Plan from oxidant to ozone reflects current technically acceptable language;
4. The creation of a health advisory for children and individuals engaging in vigorous exercise which would be declared when oxidant (ozone) reaches 0.15 ppm will result in enhanced protection of public health; and
5. The districts with five or fewer exceedances per year, at a level greater than or equal to 0.15 ppm ozone, should not be required to forecast health advisories, but should instead focus their efforts toward educating the public about air pollution and establishing procedures for notifying the public when 0.15 ppm ozone episodes do occur.

**NOW, THEREFORE, BE IT RESOLVED**, that the California Air Pollution Emergency Plan be amended as follows:

- a. Change the Air Pollution Emergency Plan terminology to refer to ozone rather than oxidant to reflect the recent change in the 1-hour ozone ambient air quality standard for ozone.
- b. Create a health advisory for children and individuals engaging in vigorous exercise which would be declared when oxidant (ozone) reaches 0.15 ppm.
- c. Require notification to affected individuals by the air quality management and air pollution control districts.
- d. Not require districts with five or fewer exceedances per year, at a level of greater than or equal to 0.15 ppm ozone, to forecast health advisories. These districts should focus their efforts toward educating the public about air pollution and establishing procedures for notifying the public when 0.15 ppm ozone episodes occur.

**BE IT FURTHER RESOLVED**, that the air quality management and air pollution control districts are directed pursuant to Health and Safety Code Section 40001 to amend their rules and regulations consistent with this resolution.

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Notice of Public Hearing to Consider Adoption of Amendments to the Fee Schedule and List of Substances and to the Emission Inventory Criteria and Guidelines Regulations Pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987

Agenda Item No.: 90-13-2

Public Hearing Date: September 13, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

Judith M. Lounsbury  
Board Secretary

Date:

2/13/91

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RESOURCES AGENCY OF CALIFORNIA

STATE OF CALIFORNIA  
Air Resources Board

Resolution 90-55

September 13, 1990

Agenda Item No.: 90-13-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature found in the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("the Act", Health and Safety Code section 44300 et seq.) that facilities manufacturing or using hazardous substances may be exposing nearby populations to toxic air releases on a routine basis and that it is in the public interest to ascertain the nature and quantity of hazardous releases from specific sources which may create air toxics "hot spots";

WHEREAS, the Act set forth a program to develop air toxics emission inventories and to assess the risk to public health from exposure to these emissions;

WHEREAS, the Board adopted amendments on February 21, 1990 to the fee schedule set forth in section 90700 et seq. of Title 17 of the California Code of Regulations pursuant to Health and Safety Code section 44380(a), which assessed a fee upon the operator of every facility subject to the Act in order to recover the costs of the Board, local air pollution control districts ("Districts"), and the Department of Health Services to implement and administer the Act;

WHEREAS, Board staff, in consultation with representatives of the Districts and the fee regulation committee convened pursuant to Health and Safety Code section 44380(b), has developed amendments to the fee regulation for fiscal year 1990-91 which have been discussed with the public at two consultation meetings;

WHEREAS, Health and Safety Code section 44321 requires the Board to compile and maintain a list of specified toxic substances for use in determining which facilities are subject to the Act and the Board's implementing regulations;

WHEREAS, Health and Safety Code section 44342 requires the Board to develop, in consultation with Districts, criteria and guidelines for site-specific air toxics emissions inventory plans and reports;

WHEREAS, the Board adopted amendments on June 14, 1990 to the criteria and guidelines regulation set forth in sections 93300 et seq. of Title 17 of the California Code of Regulations which, among other things, divides the

substances listed pursuant to Health and Safety Code section 44321 into two categories based upon those which must be quantified and those for which use must be reported but not quantified, and specifies the degree of accuracy to which these substances must be reported;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, changes have been proposed to the originally noticed text of the regulations on the basis of information presented by the Districts regarding costs of implementing the Act, among other things;

WHEREAS, based upon the information presented by the staff and the written and oral comments received prior to and at the hearing, the Board finds that:

1. The fees in the regulation are based on program costs approved by the District boards and on the most recently approved ARB statewide criteria pollutant emissions inventory for total organic gases, particulate matter, nitrogen oxides, and sulfur oxides, except for the Bay Area Air Quality Management District, where fees are based on that District's toxic emission inventory;
2. A statewide air toxics inventory has not yet been compiled, but after such an inventory is available the Board staff will propose changes to the regulation so that fees are assessed on the basis of emissions of toxic air releases;
3. The proposed addition of 103 substances to Appendix A of the fee regulation accurately reflects those required to be compiled and maintained by the ARB pursuant to Health and Safety Code section 44321;
4. Because of the proposed additions to the list of substances appended to the fee regulation, it is also necessary to amend the "List of Substances for Which Emissions Must Be Quantified" and "List of Substances for Which Production, Use, or Other Presence Must Be Reported", the list of "Emittent ID Codes for Listed Substances Lacking CAS Numbers", and the degree of accuracy text contained in the Emissions Inventory Criteria and Guidelines Regulation (Appendix A, Appendix B and section 93334, respectively, sections 93300-93347, Title 17, California Code of Regulations);

5. Districts will incur additional costs due to the recent inclusion of facilities emitting less than 10 tons per year of a criteria pollutant into the reporting requirements of the Act and a flat fee for those newly added sources will recover said costs;
6. The proposed modifications to the list of district toxic inventories, surveys and reports, as contained in Appendix B of the fee regulation reflect recent changes in the information contained therein;
7. The revenues to be assessed pursuant to the proposed fee regulation are reasonably necessary to recover the anticipated program costs for fiscal year 1990-91 which will be incurred by the Board, the Districts, and the Department of Health Services to implement and administer the Act's provisions;
8. Although preliminary cost estimates and emission inventories have been provided by District staff, several Districts have not yet submitted their District board-approved costs or their final updated emission inventories to the ARB for fiscal year 1990-91;
9. The substances proposed for addition to the list set forth in Appendix A of the fee regulation have been appropriately categorized for purposes of the Emission Inventory Criteria and Guidelines Regulation;
10. On the basis of a financial analysis conducted to indicate the economic impacts on affected facilities resulting from the fees proposed in this regulation, the economic impact on the affected facilities will not be significant; and
11. This regulatory action will not have a significant adverse impact on the environment and may indirectly benefit air quality by stimulating a reduction in emissions of both toxic and criteria pollutants.

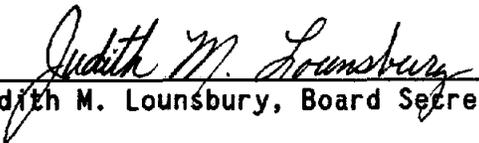
NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves sections 90700-90704, Title 17, California Code of Regulations including the appendices referenced therein, as set forth in Attachment A hereto, and Appendices A and B and section 93334 of sections 93300-93347, Title 17, California Code of Regulations, as set forth in Attachment B hereto.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to adopt sections 90700-90704, Title 17, California Code of Regulations and Appendices A and B and section 93334 of sections 93300-93347, Title 17, California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED, that because several District Boards have not provided cost information or updated emissions inventories to the ARB, the Board directs the Executive Officer to insert into the designated inventory the emissions data received no later than October 15, 1990, and to insert into the regulation the District costs received from the Districts no later than October 31, 1990, and to make other conforming changes necessitated by the new data, and to delay commencement of the 15-day public review period until such changes are made but no later than November 15, 1990.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to present annually to the Board appropriate amendments to the fee schedule, taking into account the availability of toxic inventory information generated pursuant to the Act's requirements, and to report to the Board on the effectiveness of the fee regulation in recovering state and district costs.

I hereby certify that the above is a true and correct copy of Resolution 90-55, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-56

September 13, 1990

Agenda Item No.: 90-13-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, section 39605 of the Health and Safety Code authorizes the Board to provide assistance to air pollution control and management districts;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) and declared that it is necessary that the state ambient air quality standards be attained by the earliest practicable date to protect the public health, particularly the health of children, older people, and those with respiratory diseases;

WHEREAS, in order to attain these standards, the Act in section 40910 of the Health and Safety Code mandates a comprehensive program of emission reduction measures and planning requirements for the state and local air pollution control districts ("districts") in areas where the standards are not attained;

WHEREAS, the Act in section 40910 of the Health and Safety Code directs districts to consider the cost-effectiveness of their air quality programs, rules, regulations and enforcement practices;

WHEREAS, the Act in section 40913(b) of the Health and Safety Code requires each district board to make a determination that its plan is a cost-effective strategy to achieve state standards by the earliest practicable date;

WHEREAS, the Act in section 40922(a) of the Health and Safety Code requires districts to rank the collection of available measures from the least to the most cost-effective;

WHEREAS, the Act in section 40922(b) of the Health and Safety Code requires districts to consider the relative cost-effectiveness of control measures when developing a schedule for the adoption and implementation of any specific measure;

WHEREAS, the Air Resources Board is required to review district attainment plans pursuant to sections 41500, 41503 and 41503.5 of the Health and Safety Code, and is responsible for ensuring district compliance with the Act, including provisions related to cost-effectiveness;

WHEREAS, the Act in section 43013 of the Health and Safety Code authorizes the Air Resources Board to adopt standards, regulations and specifications for motor vehicle and other mobile and non-mobile sources to the extent that those measures are necessary, technologically feasible and cost-effective;

WHEREAS, the Act in section 43018 of the Health and Safety Code directs the Board to adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public workshop was held on July 17, 1990, to assist staff in developing the cost-effectiveness guidance document;

WHEREAS, in consideration of the written comments and the testimony presented by the public and the staff, the Board finds that:

1. Cost-effectiveness is an important consideration in air quality planning and rulemaking, and deserves careful attention and evaluation;
2. "Cost-effectiveness" is a term of art in the air quality community that has been employed for several years and has a particular meaning;
3. Evidence of data utilized to calculate costs should be readily available to the public.
4. By necessity, cost-effectiveness analyses are based on available data and existing analytical tools, but can and should become more precise as data increase and existing tools are improved;
5. Districts new to air quality planning are in need of assistance from the Board and other more experienced districts, and may benefit from an educational document on cost-effectiveness containing reference materials and worksheets;
6. Districts must include sufficient information in their plans to satisfy statutory requirements related to cost-effectiveness, yet also have the discretion to expand upon that information and to present it as they deem appropriate;
7. The proposed guidance document "Cost-Effectiveness: District Options for Satisfying the Requirements of the California Clean Air Act"

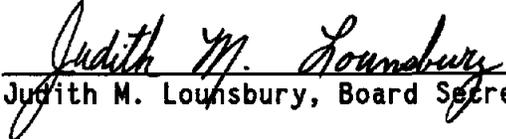
underscores the importance of cost-effectiveness evaluations, defines the term "cost-effective" as it has been employed by the air quality community, affirms the use of existing data and analytical tools yet also expresses aspirations for future improvement, provides educational assistance to districts which are new to air quality planning, and identifies the range of district options for satisfying the Act's provisions relating to cost-effectiveness.

8. Approval of the guidance document will not have adverse impacts on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the guidance document "Cost-Effectiveness: District Options for Satisfying the Requirements of the California Clean Air Act" and directs the Executive Officer to transmit the document to districts and other interested parties for their information.

BE IT FURTHER RESOLVED that the Board will rely upon the guidance document, in addition to other relevant information provided by districts and interested parties, when evaluating district plans for compliance with the requirements of the California Clean Air Act.

I hereby certify that the above is a true and correct copy of Resolution 90-56, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-57

September 13, 1990

Agenda Item No.: 90-13-4

WHEREAS, the Air Resources Board ("Board") and the federal Environmental Protection Agency have independently established health-based ambient air quality standards for ozone, and these standards are frequently exceeded in several of the state's air basins;

WHEREAS, Health and Safety Code sections 39003, 39500, 39602, and 41500 authorize the Board to coordinate, encourage, and review efforts to achieve and maintain the state and national ambient air quality standards;

WHEREAS, Health and Safety Code sections 39600 and 39605 authorize the Board to act as necessary to execute the powers and duties granted to and imposed upon the Board and to assist the local air pollution control and air quality management districts;

WHEREAS, Health and Safety Code section 41805.5 directs the districts to evaluate the air quality solid waste assessment test reports in consultation with the Department of Health Services and the Integrated Waste Management Board and take appropriate remedial action at sites where levels of one or more specified air contaminants pose a threat to human health or the environment;

WHEREAS, the statewide Technical Review Group, consisting of staff representatives of EPA, the Board, and local air pollution control and air quality management districts, has developed and approved a proposed Suggested Control Measure for the control of landfill gas emissions (the "Suggested Control Measure") and has forwarded the Suggested Control Measure to the Board for consideration;

WHEREAS, several air pollution control and air quality management districts in California have already implemented requirements for the control of landfill gas emissions, and their experience has been beneficial in developing the Suggested Control Measure;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed unless feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, the Board has held a duly noticed public meeting to consider approval of the Technical Review Group's Suggested Control Measure for landfill gas emissions, has heard and considered the comments presented by representatives of the Board, Technical Review Group, districts, affected industries, and other interested persons and agencies, and has made appropriate modifications to the Suggested Control Measure;

WHEREAS, in consideration of the Staff Report, written comments and public testimony it has received, the Board finds that:

The emissions of non-methane organic compounds contained in landfill gas contribute to the exceedance in many areas of the state of both state and national ambient air quality standards for ozone;

The control and reduction of emissions of non-methane organic compounds is necessary to the attainment and maintenance of the state and national ambient air quality standards for ozone;

The implementation of the Suggested Control Measure will reduce the emissions of non-methane organic compounds from landfills;

The implementation of the Suggested Control Measure will reduce the health threat to individuals exposed to uncontrolled emissions of landfill gas at sites containing potentially significant levels of toxic contaminants;

The technology to control landfill gas emissions to the extent provided in the Suggested Control Measure is reasonably available and cost-effective; and

WHEREAS, the Board further finds that:

Adoption of the proposed Suggested Control Measure may result in significant adverse environmental impacts from the emissions of secondary pollutants associated with the combustion of landfill gas and noise impacts on surrounding populations associated with the operation of landfill gas collection systems;

Emissions of secondary pollutants such as carbon monoxide and nitrogen oxides may be substantially mitigated by application of best available control technology and, in some cases, through offsets obtained in accordance with district new source review requirements;

Noise impacts on surrounding populations from landfill gas collection and disposal equipment may be mitigated by locating the equipment in an enclosure or in a remote area of the site;

The proposed Suggested Control Measure would result in significant air quality benefits due to reductions of non-methane organic compounds which react to form ozone and site specific reductions in emissions of toxic or odorous compounds at sites having either of these problems, and these considerations override the potential adverse environmental impacts described above; and

Other than the mitigation measures described above, there are no feasible mitigation measures or other alternatives that would substantially reduce the adverse environmental impacts described above, while at the same time providing the substantial overall public health benefits realized by the significant emission reductions of non-methane organic compounds, toxic compounds, and odorous compounds.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the Suggested Control Measure, as modified, for control of landfill gas emissions.

BE IT FURTHER RESOLVED that the Executive Officer is directed to forward the Suggested Control Measure to the air pollution control and air quality management districts for consideration and adoption in regulatory form to the extent necessary to provide for the attainment and maintenance of the ambient air quality standards.

BE IT FURTHER RESOLVED that the Executive Officer is directed to provide assistance to any district requesting assistance in adopting, interpreting, or implementing the Suggested Control Measure.

I hereby certify that the above is a true and correct copy of Resolution 90-57, as adopted by the Air Resources Board.

*Judith M. Lounsbury*  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider Adoption of Regulations Regarding  
Low-Emission Vehicles and Clean Fuels

Agenda Item No.: 90-14-1

Public Hearing Date: September 28, 1990

Response Date: January 31, 1991

Issuing Authority: Air Resources Board

Comment: Several comments were received identifying significant environmental issues pertaining to this item. These comments are summarized and responded to in the Final Statement of Reasons, which is incorporated by reference herein. See particularly comments 113-114, 225 and 234-240, and the responses thereto.

Resolution 90-58 is also incorporated herein and attached hereto. In the Resolution the Board made various findings pertaining to potential environmental impacts of the proposed regulations, particularly on pages 5 to 6 and 11 to 12. The Board found that there are no feasible mitigation measures or alternatives available to the Board which would substantially reduce the potential adverse impacts of the proposed regulations while at the same time providing the substantial overall public health benefit from the emissions reductions that will result from the regulations.

Response: See above.

Certified:

Pat Hutchens  
Pat Hutchens  
Board Secretary

Date:

7/9/91

RECEIVED BY  
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State of California  
AIR RESOURCES BOARD

Resolution 90-58

September 28, 1990

Agenda Item No: 90-14-1

WHEREAS, Health and Safety Code sections 39600 and 39601 authorize the Air Resources Board (the Board) to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in Health and Safety Code section 43000 the Legislature has declared that the emission of air contaminants from motor vehicles is the primary cause of air pollution in many parts of the state, and that the control and elimination of those air contaminants is of prime importance for the protection and preservation of the public health and well-being, and for the prevention of irritation to the senses, interference with visibility, and damage to vegetation and property;

WHEREAS, Health and Safety Code section 43018(a), enacted by the California Clean Air Act of 1988, directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date;

WHEREAS, Health and Safety Code section 43018(b) directs the Board no later than January 1, 1992 to take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, by December 31, 2000, a reduction of reactive organic gases (ROG) of at least 55 percent and a 15 percent reduction in the emissions of oxides of nitrogen (NOx) from motor vehicles, and the maximum feasible reductions in particulates (PM), carbon monoxide (CO), and toxic air contaminants from vehicular sources;

WHEREAS, Health and Safety Code section 43018(c) provides that in carrying out section 43018, the Board shall adopt standards and regulations which will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including but not limited to reductions in motor vehicle exhaust and evaporative emissions, reductions in in-use vehicular emissions through durability and performance improvements, requiring the purchase of low-emission vehicles by state fleet operators, and specification of vehicular fuel composition;

WHEREAS, Health and Safety Code section 43101 directs the Board to adopt and implement emission standards for new motor vehicles which the Board has found to be necessary and technologically feasible to carry out the purposes of Division 26 of the Health and Safety Code;

WHEREAS, Health and Safety Code sections 40460(a) and 40463(a) direct the South Coast Air Quality Management District (SCAQMD) to prepare and

periodically update a plan to achieve and maintain the state and federal ambient air quality standards in the South Coast Air Basin, and section 40460(c) provides that in consultation with specified government agencies, the Board shall provide the emission reductions attributed to technological vehicular source control strategies included in the plan;

WHEREAS, Health and Safety Code section 39663 directs the Board by June 30, 1990, to consider a plan for reducing public exposure to known and suspected toxic air contaminants; and section 39667 directs the Board, based on its determinations pursuant to section 39663, to consider adoption of regulations to achieve the maximum possible reduction in public exposure to toxic air contaminants, which regulations may include, but are not limited to, the modification, removal, or substitution of vehicle fuel, vehicle fuel components, or fuel additives, or the required installation of vehicle control measures on new motor vehicles;

WHEREAS, the Board has adopted a "Post-1987 Motor Vehicle Plan" containing the schedule for the adoption of additional vehicular emission control measures and the introduction of clean fuels;

WHEREAS, the South Coast Air Quality Management Plan (the "South Coast Plan"), adopted by the SCAQMD and the Southern California Association of Governments on March 17, 1989 and approved by the Board on August 15, 1989, contains emission reduction goals for motor vehicles which require the development and widespread use of low-emitting and extremely low-emitting vehicles by the years 2000 and 2007 respectively, where extremely low-emitting vehicles are defined as being essentially emission-free; in approving these goals in Resolution 89-66 the Board directed the Executive Officer to continue to develop measures which will result in the use of sufficient low-emission vehicles and clean fuels in the South Coast Air Basin to achieve the motor vehicle emission reduction goals for such measures;

WHEREAS, the California Advisory Board on Air Quality and Fuels, created by Assembly Bill 234 (Leonard, 1987; Health and Safety Code sections 43837-8), has found that: the use of alternative fuels will provide improvements in air quality beyond what is achievable from conventionally-fueled vehicles using the most advanced emission controls, the extra costs would be justified by the air quality benefits obtained, and the increased use of cleaner alternative fuels can be achieved by adopting air-quality-based performance standards for vehicles and fuels;

WHEREAS, the Motor Vehicle Toxics Control Plan, approved by the Board June 21, 1990 and prepared pursuant to Health and Safety Code section 39663, identifies the adoption of regulations requiring low-emission vehicles and the appropriate distribution and availability of clean fuels as a key element of the plan;

WHEREAS, in Resolution 89-102 adopted December 14, 1989, the Board endorsed the staff's intent to propose regulations requiring the production of light-duty low-emission vehicles and the distribution of clean fuel that enable the low emissions to be achieved, with the objectives of reducing the emissions of criteria and toxic pollutants from light-duty motor vehicles to

the maximum degree possible, providing flexibility in the means of compliance, and providing an opportunity for all technologies and fuels to compete consistent with their emissions performance and impact on air quality;

WHEREAS, in preparing the proposal for low-emission vehicles and clean fuels the staff conducted five workshops and conducted numerous meetings with members of the regulated public and other interested parties;

WHEREAS, the staff has now formally proposed comprehensive and integrated regulations which would phase in much more stringent exhaust emission standards and would require the distribution and availability of cleaner-burning fuels where needed to meet the exhaust emission standards;

WHEREAS, the vehicle elements of the staff proposal include:

Four new levels of exhaust emission standards for light-duty vehicles, in order of increasing stringency called transitional low-emission vehicles (TLEVs), low-emission vehicles (LEVs), ultra-low-emission vehicles (ULEVs), and zero-emission vehicles (ZEVs);

Hydrocarbon standards which are expressed as non-methane organic gases (NMOG), and are adjusted according to reactivity adjustment factors to account for the reduced ozone-forming potential of clean fuels;

Annually descending fleet average NMOG standards for light-duty vehicles, starting with the 1994 model year, with provisions for marketable credits;

Two-tiered NMOG standards for vehicles certified to a low-emission vehicle standard on an alternative clean fuel and also capable of operating on gasoline;

Light-duty vehicle exhaust emission standards for NO<sub>x</sub>, CO, PM and formaldehyde, with the NO<sub>x</sub> standard becoming more stringent for LEVs and ULEVs, and the CO, PM, and formaldehyde standards becoming more stringent for ULEVs;

Requirements that, starting with the 1998 model year, two percent of a manufacturer's light-duty vehicle production would have to be ZEVs, with the percentage increasing in succeeding years and reaching ten percent in 2003; small-volume manufacturers would not be subject to this requirement, and intermediate-volume manufacturers would not be subject until 2003;

Two new categories of standards, LEV and ULEV, for medium-duty vehicles, with emission standards of equivalent stringency to those for light-duty vehicles taking into account the greater size and weight of medium-duty vehicles, and with an implementation schedule starting with the 1998 model year under which each manufacturer would have to certify an increasing percentage of each model year's fleet to LEV and ULEV standards;

WHEREAS, the clean fuel elements of the staff proposal include:

A two-phase program, applicable from 1994 through 1996 in the SCAQMD to major gasoline suppliers who have a California refinery with a capacity over 50,000 barrels per day and who own or lease 25 or more retail stations in the SCAQMD, and applicable statewide starting in 1997 to all gasoline suppliers that produce or import gasoline, and to the owners, lessors and operators of service stations;

A requirement that gasoline suppliers distribute for use in motor vehicles assigned minimum volumes of alternative clean fuels (other than compressed natural gas (CNG) and electricity) on a quarterly basis to the extent the fuels are used to certify low-emission vehicles; the volume would be determined by the Executive Officer based on the overall clean fuel demand and the gasoline supplier's market share, and would be adjusted by a gradually increasing adjustment factor ranging from 0.25 in 1994 to 0.90 in 2000;

Provisions allowing compliance with the fuel volume distribution requirements through the use and banking of credits generated by the distribution by another person of the same clean fuel in excess of the minimum amount, or by the distribution of CNG or electricity to motor vehicles;

A requirement that the owner/lessors of gasoline retail outlets equip a minimum number of the outlets so that they are capable of dispensing clean fuels for which the distribution requirements apply, with an allowance for the "constructive allocation" of a clean fuel dispensing facility from one person to another for purposes of compliance; CNG would be included in these requirements upon appropriate findings of the California Public Utilities Commission (PUC);

Procedures for the Executive Officer to determine on an annual basis one year in advance the necessary number of outlets for each clean fuel after accounting for the fuel volumes supplied by fleet outlets and a minimum retail outlet throughput volume (25,000 gallons per month (gpm) for 1994-1997 and 50,000 gpm thereafter), and to allocate the required number of outlets among station owner/lessors based on a "minimum ownership level" which triggers the requirement for equipping outlets;

A requirement that the operator of any retail outlet required to be equipped to dispense a clean fuel have the fuel on hand and available for sale to the public;

A provision allowing a gasoline supplier to meet the distribution and retail outlet requirements for a particular clean fuel with a substitute fuel if the Board determines that the substitute fuel will not increase emissions in low-emission vehicles certified on the original clean fuel, and other vehicles capable of using the fuel, and will not adversely affect the durability of vehicle emission control systems;

Provisions making the distribution and retail outlet requirements for a given alternative clean fuel inapplicable until the Executive Officer

estimates that either 10,000 (1994-1996 in the SCAQMD only) or 20,000 (1997 and subsequent statewide) low-emission vehicles certified on the fuel will be operating in the state;

WHEREAS, the proposal would be effected by amendments to Title 13, California Code of Regulations, sections 1900, 1904, 1956.8, 1960.1, 1960.1.5, 1960.5, 1965, 2061, 2111, 2112, 2125, 2139, and the documents incorporated by reference therein, as set forth in Attachments A and C through G hereto; by the adoption of the "Non-Methane Organic Gas Test Procedures" and the "California Test Procedures for Evaluating the Emission Impacts of Substitute Fuels or New Clean Fuels", as set forth in Attachments H and I hereto; and the adoption of new Subchapter 8 of Chapter 3, Title 13, California Code of Regulations, sections 2300 through 2345, as set forth in Attachment B hereto;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts and alternatives or feasible mitigation measures to the proposed action are available which would substantially reduce or avoid such impacts;

WHEREAS, it is the Board's policy to evaluate the effects of control measures on global-warming compounds with the objective of not increasing the emissions of such compounds;

WHEREAS, the Board has considered the impact of the proposed regulations on the economy of the state;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

The state and national health-based ambient air quality standards for ozone, CO, and PM10 are regularly and significantly exceeded in many areas of California, most severely in the South Coast Air Basin;

Motor vehicles contribute more than half of the emissions in California of hydrocarbons and NOx, the precursors of ozone formation;

The emission reductions achievable by full implementation of all of the control measures committed to or proposed in the South Coast Plan are necessary to attain the national standards for ozone and PM10 and the national and state standard for carbon monoxide;

Even with the implementation of all such measures, the South Coast Plan does not identify emission reductions sufficient to result in attainment of the state standards for ozone, PM10, and visibility in the South Coast Air Basin;

Many areas outside the South Coast Air Basin are experiencing substantial population growth, and the vehicle miles traveled in these areas have risen dramatically and are expected to continue to rise;

In several areas outside the South Coast Air Basin, it is likely that the state ozone and PM10 standards will not be achieved until some time after 2000;

The emission reductions resulting from the regulations approved herein are a necessary component in the attainment and maintenance of the state ozone and PM10 standards within and outside the South Coast Air Basin;

A wide variety of toxic air contaminants and potentially toxic air contaminants are emitted by motor vehicles; the pollutants posing the majority of the potential toxic risk are benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and diesel particulate; reductions in hydrocarbon emissions from motor vehicles also reduce emissions of the most significant vehicular toxic pollutants;

In order to achieve the maximum feasible reductions in emissions from new motor vehicles it is necessary and appropriate to treat the vehicle and its fuel as a system, to provide flexibility and to encourage the vehicle and fuel industries to work together to develop the least polluting and most cost-effective vehicle and fuel technologies;

In establishing long-range regulations to achieve maximum emission reductions from new motor vehicles, it is necessary and appropriate to recognize that the use of alternative clean fuels may reduce ozone-forming potential compared to conventional fuels; the proposed regulations do that by providing for the application of reactivity adjustment factors and numerically adjusting the mass hydrocarbon emission standards on the basis of relative ozone-forming potential;

Application of the reactivity adjustment procedure using Maximum Incremental Reactivity (MIR) in the proposed regulations is appropriate to help assure that the ozone-forming potential of various fuel/vehicle systems are properly compared; to the extent the MIR values are refined the Board can subsequently consider amending the values expressed in the regulations;

The establishment of exhaust emission standards for NMOG rather than nonmethane hydrocarbons is necessary and appropriate to assure that all significantly reactive organic gas emissions are measured regardless of the fuel used, so that the ozone-forming potential of hydrocarbon emissions from candidate vehicle/fuel systems can be fully evaluated;

Within the applicable timeframes, it is technologically feasible:

To meet the light-duty TLEV standards with small conventional vehicles with close-coupled catalysts and heated fuel preparation systems, or with flexible-fuel and dual-fuel vehicles with improved catalysts;

To meet the light-duty LEV standards with gasoline vehicles with electrically heated catalysts, alcohol vehicles with close-coupled catalysts and heated fuel preparation systems, and CNG or liquified petroleum gas (LPG) vehicles with close-coupled catalysts and electronic port fuel injection systems;

To meet the light-duty ULEV standards with vehicles equipped with electrically heated catalysts and heated fuel preparation systems and powered by the expected cleaner "Phase 2" certification gasoline or by alcohol, with CNG/LPG vehicles with close-coupled/electrically heated catalysts and electronic port fuel injection, and with hybrid electric vehicles;

To meet the light-duty ZEV with battery-powered electric vehicles; in addition, future technologies may prove promising;

Given the finding above, the light-duty emission standard phase-in schedule reflected in the proposed fleet average NMOG exhaust emission standards is technologically feasible;

The proposed regulations appropriately establish intermediate in-use standards which are up to 30 percent less stringent than the corresponding certification standards; these intermediate in-use standards will provide additional time to verify the in-use durability of emission control systems;

It is appropriate to have the proposed two-tiered standards for flexible-fuel and dual-fuel vehicles capable of operating on both gasoline and an alternative fuel; because of the limited availability of alternative fuels to motorists on the national level, it is likely in the short term that most alcohol-fueled vehicles will also be capable of operating on gasoline; requiring such vehicles to meet the same NMOG standard when operating on both gasoline and an alternative fuel would force the manufacturer to optimize the vehicle emission control system for gasoline and could lessen the value of introducing alternative fuel vehicles;

The proposed mandatory percentages of ZEVs in the 1998 and subsequent model years are necessary and appropriate in order to assure the development and widespread deployment of the cleanest possible technologies since it is unlikely that the state and federal ozone standards can be achieved in the South Coast Air Basin without substantial penetration of ZEVs; the provisions exempting small-volume manufacturers from the mandatory percentages and delaying their application to intermediate-volume manufacturers are necessary and appropriate because of the proportionately greater economic impact the mandatory percentages would have on such manufacturers;

The standards and implementation schedule for medium-duty vehicles are technologically feasible because the standards are of equivalent stringency to the light-duty standards considering differences in size and weight, and additional lead time is afforded compared to the light-duty standards;

The regulatory device of the fleet average NMOG standards, and the program for earning, banking, and trading marketable credits for introducing low-emission vehicles earlier or in greater quantities than required, will afford greater flexibility to manufacturers and help ease compliance with the standards;

It is appropriate to require the demonstration of the effectiveness of vehicle emission control systems at temperatures below 68 to 86 degrees F to ensure greater control of emissions at morning temperatures in the summer, when ambient ozone levels are highest, and during the winter months when exceedances of ambient CO standards are most likely to occur;

The clean fuel elements of the proposed regulations will ensure that the fuels used to certify low-emission vehicles are also readily available for routine consumer operation of those vehicles; to the extent that alternative clean fuels are used to certify low-emission vehicles, emission reductions will be achieved in customer use only if clean fuels are readily available and used by the vehicle owners;

It is appropriate to start the clean fuels requirements in 1994-1996 in the SCAQMD only, because that area has the most severe air quality problems in the state, and because the 1994-1996 program will provide an orderly transition to the statewide program starting in 1997;

It is appropriate for the 1994-1996 SCAQMD clean fuel requirements to apply only to major gasoline suppliers who have a California refinery with a capacity over 55,000 barrels per day, and who own or lease 25 or more retail stations in the SCAQMD, because such suppliers have both the direct control over retail outlets and the financial and physical resources needed to introduce clean fuels efficiently and economically; applying the requirements to smaller suppliers in the first three years would have a disproportionate economic impact on them;

It is premature to adopt at this time the regulatory provisions proposed by staff requiring gasoline suppliers to distribute assigned minimum volumes of alternative clean fuels because of present uncertainties regarding the need for the provisions; however, the staff should continue to investigate possible regulatory means to assure that clean fuels are distributed in a manner which achieves the maximum air quality benefits from low-emission vehicles certified while operating on alternative clean fuels;

The requirements in the proposed regulations relating to equipping retail outlets for the distribution of clean fuels is necessary to assure that convenient outlets for such fuels are available;

In order to assure that adequate volumes of alternative clean fuels are marketed attractively in the absence of the clean fuel distribution requirements deleted from the regulations approved herein, it is necessary to strengthen the requirements for equipping retail outlets for the distribution of clean fuels, and to require that gasoline suppliers demonstrate a capability to supply or assure the supply of

adequate quantities of alternative clean fuels other than CNG and electricity;

Upon a determination by the PUC that a practical mechanism exists under which a gasoline retailer may purchase CNG from a public utility and resell it for use as a fuel in motor vehicles, it is appropriate to include CNG in the retail outlet requirements because such requirements are necessary to assure that CNG is available and convenient to motorists;

In light of the various elements which mitigate potential hardships in complying with the requirements for equipping retail outlets for the distribution of clean fuels, including (i) the mechanism under which the requirements are not triggered until a minimum number of clean fuel vehicles are introduced, (ii) the mechanism under which fuel distributed by fleet operators is excluded from the calculation of the minimum number of clean fuel outlets, and (iii) the provisions allowing the "constructive allocation" of a clean fuel dispensing system from one person to another, compliance with the retail outlet requirements of the regulations approved herein appears to be practicable and feasible without undue economic hardship;

The requirement that operators of retail outlets have clean fuel on hand and offer it for sale to the public at any outlet required to be equipped to dispense the clean fuel is necessary and appropriate to ensure that the clean fuel is continually available to motorists with cars designed to operate on the fuel;

It is necessary and appropriate to impose the various clean fuel requirements in the regulations approved herein as conditions on the sale of gasoline by gasoline suppliers and retailers because the requirements help mitigate the air pollution burdens created by the sale of gasoline by the persons to be regulated; the gasoline being sold results in greater pollution than comparable clean fuels which would be distributed under the regulations, and the gasoline suppliers have cumulatively contributed to the development of a motor vehicle fuel distribution network in which gasoline and diesel fuel are the only fuels widely and conveniently available to the motoring public thereby deterring the introduction of alternative fuel vehicles; the proposed regulations will therefore substantially advance legitimate governmental interests;

The clean fuels elements of the regulations approved herein are consistent with the intent of the recommendations of the AB 234 California Advisory Board on Air Quality and Fuels because the proposal establishes emission-based performance standards which reflect the differing ozone-forming potentials of different fuels and allow various fuels to compete in the marketplace as clean fuels;

The regulations approved herein are expected to reduce statewide emissions from on-road mobile sources by about 29 tons per day of NMOG and 36 tons per day of NOx in 2000, and by about 185 tons per day of NMOG and 248 tons per day on NOx by 2010; these year 2010 emissions

reductions represent 28 percent of on-road vehicular NMOG emissions and 18 percent of on-road vehicular NOx;

The reductions in emissions of NMOG from light- and medium-duty vehicles resulting from the regulations approved herein are expected to also result in substantial reductions in benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and diesel particulate, with an expected annual reduction of 20 to 40 potential cancer cases statewide by 2010;

Despite the relatively modest emission benefits from the regulations approved herein during the early years of implementation, it is necessary and appropriate to institute the program within the specified timeframe in order to encourage the early introduction of an infrastructure for the distribution of clean fuels; the gradual phase-in periods provide additional flexibility to the oil industry in implementing the clean fuel elements;

The overall cost-effectiveness of the regulations approved herein in reducing the emissions of ozone precursors in 2010, assigning one-half of the program costs to reductions of criteria air pollutants and one-half to reductions of toxic air contaminants, could range from \$0.02 per pound to \$4.90 per pound, with most likely scenarios having a range of \$0.50 per pound to \$3.30 per pound; these cost-effectiveness values are within the range of other measures that may be reasonably necessary to attain the state ambient standards pursuant to Health and Safety Code section 43018;

The overall cost-effectiveness of the regulations approved herein in reducing emissions of toxic pollutants in 2010, assigning one-half of the program costs to reductions of criteria air pollutants and one-half to reductions of toxic air contaminants, are \$0.1 million to \$78 million per potential cancer case avoided, with most likely scenarios having a range of \$4 million to \$53 million per case avoided;

The economic impacts of the regulations approved herein are warranted in light of the public health benefits associated with the regulations;

The modifications to the regulations described in Attachment J hereto by staff at the hearing are appropriate and necessary to clarify them and improve their effectiveness; and

WHEREAS, the Board also finds that:

Implementation of the proposed standards will result in significant reductions in emissions of ozone precursors, NMOG and NOx, and ozone concentrations as well as reduction in emissions of CO and certain motor vehicle toxics, including benzene, 1,3-butadiene, acetaldehyde and diesel particulates;

The production and use of low-emission vehicles and clean fuels is not expected to result in any increase in emissions which would contribute to global warming, and use of clean fuels may result in a decrease in greenhouse gases depending on the method of fuel production;

An increase in the use of methanol-fueled vehicles may have the following potential adverse effects: (1) short-term intermittent exposures to methanol, which has recognized acute health effects, and formaldehyde, a known animal carcinogen which is currently under review for identification by the Board as a toxic air contaminant; (2) an increase in the incidence of inadvertent ingestion of methanol, which due to its systemic toxicity may cause blindness and death if ingested, from fuel-siphoning, (3) methanol diffuses through ground water faster than gasoline and, if spilled, could contaminate surface or ground water supplies; (4) pure methanol burns with an invisible flame, making fire detection difficult;

Methanol has not been identified as a carcinogen or a reproductive toxin and it appears that inhalation of methanol is less of a health threat than inhalation of gasoline vapors;

Formaldehyde emissions are expected to remain within the range of formaldehyde emissions from vehicles using petroleum-based fuels because of the separate formaldehyde emission standards which were adopted on January 22, 1990;

Accidental ingestion of methanol will be prevented or minimized because the methanol vehicle regulations require vehicle manufacturers to design the fuel tank fill pipe assembly to discourage siphoning where feasible;

Aquatic life generally recovers faster from exposure to methanol than oil; also methanol is detectable in water and can be cleaned up although the best clean-up methods are not known at this time;

The Board is currently investigating additives that can be used to give flame luminosity for pure methanol, which has a lower flame temperature than gasoline; methanol containing 15 percent gasoline (M85) has adequate flame luminosity;

In general ethanol is less toxic than methanol and does not appear to pose significant environmental and safety risks, especially in comparison to gasoline or diesel fuel;

LPG is non-toxic, insoluble in water, and odorized for leak detection, and will be produced for vehicle use from currently operating gas fields;

LPG may pose a significant fire or explosion hazard in transport and use; however, this fuel is currently in use as a vehicle fuel in the United States without apparent problems;

CNG is non-toxic, insoluble in water and odorized for leak detection, and is distributed by pipeline, minimizing the danger of release in bulk during transport;

There is a potential for accidents during fueling of CNG vehicles or explosions in severe auto accidents; however, natural gas is less

flammable than gasoline and has not resulted in problems more severe than those associated with gasoline in use;

Electric vehicles produce virtually no emissions, and emissions from the production of electricity to fuel electric vehicles may be significantly less than emissions from the production of gasoline to fuel comparable vehicles, depending on the fuel source;

Improper handling of spent lead-acid batteries from electric vehicles could lead to contamination of water by hazardous metals;

State and federal regulations characterize lead acid batteries as hazardous waste and regulate their disposal to protect public health and the environment; therefore, it is expected that batteries used in electric vehicles will be integrated into the strong recycling mechanism currently in place for batteries used in motor vehicles;

Increased use of electric vehicles may result in increased demand for electricity generation; however, production of electricity can be done with less environmental effects than production of petroleum fuels, also the increased demand is not expected to require expansion of production sources because the increase will typically occur at night when existing generating sources are not operated at peak capacity;

There are no feasible mitigation measures or alternatives available to the Board which would substantially reduce the potential adverse impacts of the proposed standards while at the same time providing the substantial overall public health benefit from the reductions noted herein.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the amendments to Title 13, California Code of Regulations, sections 1900, 1904, 1956.8, 1960.1, 1960.1.5, 1960.5, 1965, 2061, 2111, 2112, 2125, 2139, and the documents incorporated by reference therein, as set forth in Attachments A and C through G hereto, approves the adoption of the "Non-Methane Organic Gas Test Procedures" and the "California Test Procedures for Evaluating the Emission Impacts of Substitute Fuels or New Clean Fuels" as set forth in Attachments H and I hereto, and approves the adoption of new Subchapter 8 of Chapter 3, Title 13, California Code of Regulations, sections 2300 through 2345, as set forth in Attachment B hereto, with the modifications to the above regulations and incorporated documents described in Attachment J hereto, and with additional modifications to the clean fuel regulations in Title 13, California Code of Regulations, sections 2300 through 2345 to: (1) delete the provisions requiring gasoline suppliers to distribute minimum assigned volumes of alternative clean fuels; (2) significantly expand the number of retail outlets required to be equipped to dispense alternative clean fuels; (3) include a mechanism that assures that owner/lessors and/or operators of retail outlets required to be equipped to dispense clean fuels: (a) locate clean fuel dispensers conveniently, mark them conspicuously, and maintain them in good working order, (b) provide a training program for attendants on operation of the dispensers and appropriate customer assistance, and (c) assure the posting of the retail prices of clean fuels in a manner that identifies the cost on an energy equivalent basis to a

gallon of gasoline; (4) require that gasoline suppliers demonstrate a capability to supply or assure the supply of adequate quantities of alternative clean fuels other than CNG and electricity; and (5) revise the definition of major gasoline supplier so that it covers persons with a California refinery crude oil capacity of 55,000 rather than 50,000 barrels per stream day.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer: (1) to incorporate into the approved regulations and incorporated documents the modifications described in Attachment J hereto, the other modifications approved herein, and such other conforming modifications as may be appropriate; (2) to conduct an informal workshop on the modified language if warranted; and (3) either to adopt the modified regulations, amendments, and new documents after making them available to the public for a supplemental written comment period of 15 days, with such additional modifications as may be appropriate in light of supplemental comments received, or to present the regulations, amendments, and documents to the Board for further consideration if he determines that this is warranted in light of supplemental written comments received.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to report to the Board by the Spring of 1992, and thereafter at least biennially, on the status of implementation of the program approved herein, identifying any significant problems and proposing any appropriate regulatory modifications; the regulated public and other interested parties shall be consulted in the preparation of such reports and the public shall be provided an opportunity to make oral and written comments to the Board in conjunction with the reports.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to monitor on an ongoing basis the pricing practices of wholesalers and retailers of motor vehicle fuel to determine how alternative clean fuels are being priced in comparison to gasoline, and to report the findings to the Board periodically.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to continue to evaluate regulatory mechanisms for assuring that clean fuels are distributed in a manner which achieves the maximum air quality benefits from low-emission vehicles certified while operating on alternative clean fuels, and to report back to the Board on suggested approaches to achieve this objective.

BE IT FURTHER RESOLVED, that the Board hereby determines that the regulations pertaining to motor vehicle emissions approved herein, in conjunction with the rest of the California motor vehicle emissions regulations, will in the aggregate be at least as protective of public health and welfare than applicable federal standards, that such regulations are necessary to meet compelling and extraordinary conditions in California, and that such regulations are not inconsistent with section 202(a) of the federal Clean Air Act.

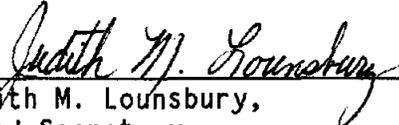
BE IT FURTHER RESOLVED, that the Executive Officer shall forward the amended motor vehicle exhaust regulations to the Administrator of the Environmental

Protection Agency with a request for a waiver of preemption pursuant to section 209(b)(1) of the federal Clean Air Act.

BE IT FURTHER RESOLVED, that where an air pollution control district or air quality management district (district) prepares a plan pursuant to Health and Safety Code sections 40910-40926 (district plan) which demonstrates attainment of the state ambient air quality standards by January 1, 1997 and demonstrates continued maintenance of the standards thereafter, where the district plan includes a request that Title 13, California Code of Regulations, sections 2300-2345 as approved herein not apply in the district, and where the Board has approved the plan including such provisions, it is the intent of the Board to amend at such time sections 2300-2345 as appropriate to make them inapplicable within the district.

BE IT FURTHER RESOLVED, that where a district other than the SCAQMD prepares a district plan which demonstrates that expansion of the 1994-1996 clean fuels provisions to include the district is reasonably necessary for timely attainment of the state ambient air quality standards within the district, and where the plan includes a request that the 1994-1996 clean fuels provisions in Title 13, California Code of Regulations, sections 2300-2345 as approved herein apply within the district, and where the Board has approved the plan including such provisions on or before December 31, 1992, it is the intent of the Board to amend at such time sections 2300-2345 as appropriate to make the 1994-1996 elements applicable within the district.

I hereby certify that the above is a true and correct copy of Resolution 90-58, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury,  
Board Secretary

Resolution 90-58

September 28, 1990

Identification of Attachments to Resolution

Resolution 90-58 references 10 documents, Attachments A through J. All of the Attachments are identified below. The first 9 documents, Attachments A through I, appear either in the Staff Report or in the Technical Support Document. Therefore they are not separately appended herein. Attachment J, which was presented at the Board hearing, is appended.

**Attachment A:** Amendments to Title 13, California Code of Regulations, sections 1900, 1904, 1956.8, 1960.1, 1960.1.5, 1960.5, 1965, 2061, 2111, 2112, 2125, and 2139, as set forth in Appendix A of the Staff Report.

**Attachment B:** Title 13, California Code of Regulations, sections 2300 through 2345, as set forth in Appendix B of the Staff Report.

**Attachment C:** California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as set forth in Appendix E-1 of the Technical Support Document.

**Attachment D:** California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, as set forth in Appendix E-2 of the Technical Support Document.

**Attachment E:** California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Otto-Cycle Heavy-Duty Diesel Engines and Vehicles, as set forth in Appendix E-3 of the Technical Support Document.

**Attachment F:** California Motor Vehicle Emission Control Label Specifications, as set forth in Appendix E-5 of the Technical Support Document.

**Attachment G:** Guidelines for Certification of 1983 and Subsequent Model-Year Federally Certified Light-Duty Motor Vehicles for Sale in California, as set forth in Appendix E-6 of the Technical Support Document.

**Attachment H:** Non-Methane Organic Gas Test Procedures, as set forth in Appendix E-4 of the Technical Support Document.

**Attachment I:** California Test Procedures for Evaluating the Emission Impacts of Substitute Fuels or New Clean Fuels, as set forth in Appendix C of the Staff Report.

**Attachment J:** Staff's Suggested Changes to the Proposed Low-Emission Vehicles and Clean Fuels Regulations (8 pages; distributed at the hearing on September 28, 1990).

FOR CONSIDERATION BY THE AIR RESOURCES BOARD  
AT THE PUBLIC HEARING ON  
THE PROPOSED REGULATIONS FOR LOW-EMISSION VEHICLES AND CLEAN FUELS

SEPTEMBER 27 AND 28, 1990

Staff's Suggested Changes to the Proposed  
Low-Emission Vehicles and Clean Fuels Regulations

The Proposed Regulations for Low-Emission Vehicles and Clean Fuels Staff Report, Technical Support Document, and Public Comments Document were released by the Air Resources Board staff ("staff") on August 13, 1990. Based on numerous public comments received on these documents and the regulations contained therein, the staff is suggesting the following modifications to the proposed low-emission vehicles and clean fuels regulations for consideration by the Air Resources Board ("Board") at this hearing.

I. Low-Emission Vehicles Regulations

1. Balancing Emission Average Shortfalls

Section affected: Title 13, Section 1960.1

The period for making-up deficits in manufacturer's fleet average emissions would be revised from one to three years to provide added flexibility in the early years of the program. The period of balancing deficits would revert again to one year after the 1998 model year when the program is well underway, and more options for compliance would be available to manufacturers.

2. Certification Fuel Specifications

(a). In order to align certification fuel requirements for low-emission vehicles with evaporative emission standards recently adopted by the Board, the use of a certification gasoline based on the specifications of Phase II gasoline will be specified for certification of 1995 and later low-emission vehicles.

(b). The Reid Vapor Pressure of the certification gasoline would be lowered to 7.8 psi for certifying 1992 model year vehicles.

(c). The specifications of the certification diesel would be revised to more closely match the new commercial diesel fuel specifications adopted by the Board in 1989.

### 3. Small Volume Manufacturers

The regulation would require small volume manufacturers which sell fewer than 3000 vehicles per year to comply with fleet average standards in the year 2000. The criteria on which the small volume requirements would apply would be revised to be based on the average annual vehicle sales of the manufacturer during the 1989 through 1991 model years.

### 4. In-Use Compliance Requirements

Sections affected: Title 13, Section 1960.1

The in-use compliance requirements of the proposed regulation would be revised to be consistent with current and recently adopted regulations. In-use compliance testing would be limited to passenger cars and light-duty trucks with fewer than 75,000 miles and to medium-duty vehicles with fewer than 90,000 miles.

### 5. Other Revisions

There are also a number of less substantive revisions to the vehicle regulation:

(a). The non-methane organic gas definition would be revised to incorporate the organic gases emitted by diesel-fueled vehicles which have greater than twelve carbon atoms.

(b). The non-methane hydrocarbon test procedure would be replaced with the more recent procedure adopted in 1989.

(c). The test procedure for determining mid-range hydrocarbons, SOP MLD No. 103A, would be replaced with an updated version.

## II. Clean Fuels Regulation

### 1. Determining the Number of Retail Gasoline Outlets Required to be Equipped to Dispense Each Clean Fuel

(a). A new subsection would be inserted into the proposed regulation to require the Executive Officer to reduce the total number of retail

gasoline outlets that must be equipped to dispense compressed natural gas (CNG) to account for the CNG already provided at retail by independent suppliers of clean fuel. The outlets provided voluntarily by these independent suppliers would satisfy part of the demand for CNG and reduce the number of retail gasoline outlets that would need to be equipped for CNG. The Executive Officer would have to determine the number of such independent CNG outlets, at least 12 months before the beginning of the year for which the determination is being made.

For the Executive Officer to count an independent supplier's retail CNG outlet against the statewide need for such outlets, the CNG outlet must meet the following criteria:

- (1) be owned or leased by an independent supplier of clean fuel;
- (2) meet the design criteria established in the proposed regulation (sections 2330 and 2332);
- (3) for outlets in the South Coast AQMD, the outlet would have to have been installed by December 1, 1992;
- (4) for outlets outside the South Coast AQMD, the outlet would have to have been installed by December 1, 1995; and
- (5) be in operation at least 13 months prior to the beginning of the year in which the outlet would be counted.

Such outlets could not be constructively allocated to an owner/lessor of a retail gasoline outlet.

Sections affected: 2334(b)(1), 2334(b)(2), 2334(b)(3) [all new],  
and 2334(c)

(b). A new section would be added to the proposed regulation to allow up to 6 months relief from the retail outlet and availability requirements due to unforeseen and reasonably unavoidable shutdown of CNG equipment, if certain criteria are met.

(c). The proposed regulation contains a method for calculating the total statewide number of new retail gasoline outlets required to be equipped to dispense a designated clean fuel in a particular year. The method requires that the number of new outlets for the year be determined by subtracting the total annual incremental number of retail outlets for the previous year from the total required number of retail outlets for the new year. The phrase "total annual incremental number" would be replaced by

"total required retail outlets" to use consistent terminology. The effect is the same--the number of new outlets needed equals the difference between the previous year's cumulative total and the new year's cumulative total.

Section affected 2334(c)

(d). The equation for determining the number of required retail gasoline outlets that must be equipped to dispense a clean fuel involves the use of several clean fuel volume inputs. A provision would be added to clarify that all clean fuel volumes would be expressed as gasoline equivalent gallons. A gasoline equivalent gallon is the amount of a non-gasoline fuel needed to equal the amount of energy in one gallon of gasoline. Units of non-gasoline fuels would be adjusted according to the "Volumetric Energy Conversion Factors" shown in the proposed regulation (renumbered section 2343).

Section affected 2334(a)

2. Substitute Clean Fuels

(a). The proposed regulation requires a proponent of a substitute fuel to make several demonstrations to the Board to qualify the fuel as a substitute for the primary clean fuel. The proponent is required to demonstrate that emissions of four toxic compounds (benzene, 1,3-butadiene, formaldehyde, and acetaldehyde) from vehicles fueled with the substitute fuel are no greater than from vehicles fueled with the primary clean fuel. This provision would be deleted and replaced with the requirement that the toxic potency-weighted emissions of the four toxic compounds from vehicles fueled with the substitute fuel is in the aggregate no greater than the aggregated toxic-weighted emissions of the four compounds from the same vehicles fueled with the primary clean fuel.

For a substitute fuel that could be used in any vehicles other than those low-emission vehicles certified on the primary clean fuel, a similar change would be made. For emissions of the same four toxic compounds, the proponent would be required to demonstrate no increase in the aggregate toxic-potency-weighted emissions from vehicles operating on the substitute fuel as compared with the same vehicles operating on their customary fuel.

Sections affected: 2345(a)(1), 2345(a)(2), and 2345(a)(3)

(b). The proposed regulation does not allow a substitute fuel to be used to satisfy the distribution and retail availability requirements for the primary clean fuel until the beginning of the next quarter after the effective date of the Board's designation of the substitute fuel by regulation. This provision would be changed to allow the substitute fuel to be used immediately after the effective date of the action.

Sections affected: 2345(c) and 2345(c)(2)

(c). Under the proposed regulation, a substitute clean fuel that can be used in vehicles other than those certified on the original (or "primary") clean fuel must be distributed in volumes greater than that required for the primary clean fuel. This is to assure that the equivalent of the minimum assigned volume for the primary fuel is ultimately dispensed into low-emission vehicles certified on that fuel. We propose a modification to allow gasoline suppliers an alternative to providing greater volumes of the substitute fuel. The gasoline supplier could choose to submit a marketing plan demonstrating that the distribution of a specified volume of the substitute fuel (at least as much on an energy equivalent basis as the required volume for the primary fuel) will result in the dispensing of sufficient quantities to vehicles certified on the original clean fuel. If the Executive Officer approves the plan, the gasoline supplier could comply by following the marketing plan and distributing the specified volume of the substitute clean fuel in the quarter.

Section affected: 2345(c)(2)

NOTE: The Test Procedure for Evaluating the Emission Impacts of Substitute Fuels or New Clean Fuels (as presented in the Proposed Regulations for Low-Emission Vehicles and Clean Fuels Technical Support Document, Appendix B-3) would also be revised to correspond with these suggested revisions to the substitute clean fuel provisions.

3. Compressed Natural Gas (CNG) Credits

The proposed regulation reflects the staff's previous intent to allow only utilities to generate credits for providing the CNG used in vehicles. Under this provision, a utility could generate credits by providing CNG to a retail outlet; the retail outlet owner/lessor who installed the CNG dispensing equipment and actually delivered the CNG to vehicles would not be able to generate credits. This provision would be changed to allow the owner/lessor of a CNG outlet that distributes CNG directly to vehicles to claim the credits that could then be used to satisfy other requirements, banked for future use, or sold.

Section affected: 2311(b)

4. Notification to Gasoline Suppliers and Affected Retail Gasoline Outlet Owners/Lessors

The proposed regulation requires the Executive Officer to notify gasoline suppliers of the minimum assigned volumes of each clean fuel they must distribute. The Executive Officer must also notify major gasoline suppliers (in the South Coast AQMD in 1994 through 1996) and owners/lessors of retail gasoline outlets (statewide from 1997 on) of the minimum number of retail gasoline outlets that each must equip to dispense each clean fuel in

the year. These provisions would be expanded to include in each notice a summary of how the values shown in the notice were derived. The notice of the minimum number of retail gasoline outlets required to be equipped to dispense a clean fuel would also include the basis for the estimate of how many low-emission vehicles will be certified on the clean fuel.

Sections affected: 2303(c)(1), 2303(c)(2), 2335(c), and 2337(d)

#### 5. Minimum Fill Rate for Gaseous Clean Fuels at Retail Gasoline Outlets

The proposed regulation requires that retail gasoline outlets equipped to dispense designated clean fuels in gaseous form be able to provide a minimum of 4 hours of high volume operation with an average fill rate of at least 600 standard cubic feet per minute (scfm). This provision was not intended to require a 600 scfm compressor for each gaseous clean fuel, but rather a 600 scfm fill rate. To clarify this intent, the phrase "an average fill rate of at least 600 scfm" would be deleted and replaced with "per day". By requiring 4 hours of high volume operation per day, the staff's intent is that the gaseous fuel dispensing equipment be designed such that a low-emission vehicle may be filled as quickly with the gaseous fuel as with gasoline.

Sections affected: 2330 and 2332

#### 6. De Minimus Levels of Low-Emission Vehicles Certified on a Clean Fuel

The proposed regulation provides that both the clean fuel distribution and retail availability requirements apply for a particular year only if the Executive Officer estimates that the number of low-emission vehicles certified on the clean fuel and operated in the state at any time in the year will exceed the de minimus levels of 10,000 for 1994 through 1996 (intended to include only vehicles operated in the South Coast AQMD) and 20,000 for 1997 on. This provision would be changed to eliminate the two tier approach to de minimus levels; the level would now be 20,000 low-emission vehicles statewide certified on the clean fuel in any year from 1994 on. Instead of estimating the total number of low-emission vehicles that would be certified on the clean fuel at any time in the year, the Executive Officer would estimate the number of vehicles expected to be operation as of September 30 of the year.

Sections affected: 2303(c)(3), 2335(d), and 2337(e)

#### 7. Vehicle Conversion Credit

The definition of "vehicle conversion" would be clarified to allow only those vehicles not certified to a low-emission standard to be eligible for conversion. To qualify for vehicle conversion credit, a gasoline or diesel

fueled vehicle would still have to be modified to be capable of meeting low-emission vehicle exhaust standards using a designated clean fuel or compressed natural gas.

Section affected: 2300(26)

8. Determining Each Gasoline Supplier's Market Share Factor

The proposed regulation states that the market share factor for each gasoline supplier shall be used to calculate the volume of each clean fuel that the gasoline supplier must distribute each quarter. The Executive Officer must determine the market share factor based on the volume of gasoline distributed for use in motor vehicles by both the individual gasoline supplier and all of the gasoline suppliers in the state. The date by which the Executive Officer must determine each gasoline supplier's market share factor for each year would be changed from November 1 of previous year to September 1 of the previous year.

Sections affected: 2303(b)(1) and 2303(b)(2)

9. Determining the Volume of Each Clean Fuel to be Distributed by Each Supplier

The proposed regulation details the method by which the Executive Officer would determine the minimum assigned volume of a clean fuel that each gasoline supplier would be required to distribute in a quarter. That method is based on multiplying the total statewide demand volume for the clean fuel by the gasoline supplier's market share factor. The proposed regulation uses the total demand volume, but the staff's intent was to use the total required volume (a fraction of the demand volume). The method would be changed to reflect the total statewide required volume of the designated clean fuel as the basis for the calculation, rather than the total demand volume. This change would make the regulation consistent with the staff's original intent.

Sections affected: 2303(c)(1) and 2303(c)(2)

10. Miscellaneous, Nonsubstantial Changes

Other nonsubstantial changes would also be made to improve clarity or correct errors. These changes would include:

- additional citations of relevant state law;
- for gaseous fuels, most references to gallons and standard cubic feet would be changed to therms;
- revisions of terminology and references to other sections to assure internal consistency;

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider Adoption of and Amendments to Regulations Regarding Reformulated Gasoline: Phase I Gasoline Specifications (Deposit Control Additives and Lead)

Agenda Item No.: 90-15-1

Public Hearing Date: September 28, 1990

Issuing Authority: Air Resources Board

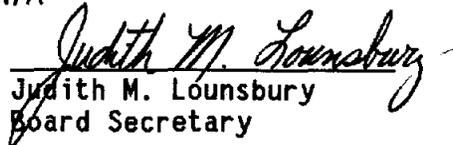
Comment: As originally proposed, this rulemaking included proposed regulations establishing several new standards for motor vehicle gasoline--a more stringent Reid vapor pressure ("RVP") standard of 7.8 pounds per square inch (psi) during the RVP season, elimination of lead in all motor vehicle gasoline except that used in construction equipment and implements of husbandry, and requirements for deposit control additives which would prevent and reduce deposits in engine components. Collectively, these constitute the ARB's "Phase I Specifications for Reformulated Gasoline."

In order to expedite the effective date of the RVP regulations, the Executive Officer adopted them in Executive Order G-608 prior to adoption of the remaining regulatory actions. The RVP regulations were approved by the Office of Administrative Law on May 6, 1991. This Response covers the remaining regulatory actions pertaining to deposit control additives in motor vehicle gasoline (adoption of Title 13, California Code of Regulations, section 2257) and to the lead content of gasoline (amendments to 13 C.C.R. sections 2252, 2253.2 and 2254, and adoption of 13 C.C.R. section 2253.4). These regulatory actions were adopted by Executive Order G-626.

No comments were received identifying any significant environmental issues pertaining to the deposit control additives or lead regulations. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

  
Judith M. Lounsbury  
Board Secretary

Office of the Secretary

Date:

5/30/91

AUG 2 1991

RESOURCES DIVISION

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider Adoption of and Amendments to Regulations  
Regarding Reformulated Gasoline: Phase I Gasoline Specifications

Agenda Item No.: 90-15-1

Public Hearing Date: September 27, 1990

Issuing Authority: Air Resources Board

Comment: As originally proposed, this rulemaking included proposed regulations establishing several new standards for motor vehicle gasoline--a more stringent Reid vapor pressure ("RVP") standard of 7.8 pounds per square inch (psi) during the RVP season, elimination of lead in all motor vehicle gasoline except that used in construction equipment and implements of husbandry, and requirements for deposit control additives which would prevent and reduce deposits in engine components. Collectively, these constitute the ARB's "Phase 1 Specifications for Reformulated Gasoline."

In order to expedite the effective date of the RVP regulations, the Executive Officer adopted them in Executive Order G-608 prior to adoption of the remaining regulatory actions. This Response covers only the regulatory actions pertaining to gasoline RVP: amendments to section 2251, and adoption of sections 2251.5 and 2262, Title 13, California Code of Regulations (the "RVP regulations").

No comments were received identifying any significant environmental issues pertaining to the RVP regulations. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

*Patricia Hitchcock for*  
Judith M. Lounsbury  
Board Secretary

Date:

3/22/91

RECEIVED BY  
Office of the Secretary

MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-59

September 28, 1990

Agenda Item No: 90-15-1

WHEREAS, Health and Safety Code sections 39600 and 39601 authorize the Air Resources Board (the Board) to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Health and Safety Code section 43018(a), enacted by the California Clean Air Act of 1988, directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date;

WHEREAS, Health and Safety Code section 43018(b) directs the Board no later than January 1, 1992 to take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, by December 31, 2000, a reduction of reactive organic gases (ROG) of at least 55 percent and a 15 percent reduction in the emissions of oxides of nitrogen (NOx) from motor vehicles, and the maximum feasible reductions in particulates (PM), carbon monoxide (CO), and toxic air contaminants from vehicular sources;

WHEREAS, Health and Safety Code section 43018(c) provides that in carrying out section 43018, the Board shall adopt standards and regulations which will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including but not limited to specification of vehicular fuel composition;

WHEREAS, Health and Safety Code section 43018(d) directs the Board to adopt a schedule in which (i) workshops on the adoption of regulations governing Reid vapor pressure (RVP) are held not later than January 31, 1990 and a hearing to adopt an RVP regulation is held not later than November 15, 1990, and (ii) workshops on the adoption of regulations governing detergent content shall be held not later than January 31, 1991 and a hearing to consider adoption of a regulation on detergent content is held not later than November 15, 1991;

WHEREAS, Health and Safety Code section 43830 directs the Board to establish, by regulation, maximum standards for the volatility of gasoline at nine pounds per square inch (psi) RVP as determined by the American Society of Testing and Materials (ASTM) Test D 323-58 or by an appropriate test determined by the Board, giving full consideration to topography and climatic conditions, provided that until October 1, 1993, any blend of gasoline of at least 10 percent ethyl alcohol shall not result in a violation of any RVP regulation of the Board unless the gasoline in the blend exceeds the maximum standard in the regulation;

WHEREAS, Chapter 932 of Statutes 1990 (Assembly Bill 3555, Sher), effective January 1, 1991, amends Health and Safety Code section 43830 to direct the Board to adopt a gasoline RVP standard of nine psi or less;

WHEREAS, the Board has previously adopted: (i) Title 13, California Code of Regulations (CCR), section 2251, which limits the RVP of motor vehicle gasoline to 9 psi in specified smog season summer months in specified air basins; (ii) 13 CCR section 2253, which imposes a quarterly average lead content standard for leaded gasoline of 0.8 gm/gal (with a per batch limit of 0.8 gm/gal for regular gasoline and 1.1 gm/gal for premium with provisions for offsetting), and prohibits the sale of gasoline represented as unleaded which has a lead content exceeding 0.05 gm/gal, which has had lead purposefully added to it, or which has a phosphorus content exceeding 0.005 gm/gal; (iii) 13 CCR section 2254, which prohibits adding manganese or manganese compounds in unleaded gasoline, and (iv) 13 CCR section 2252, which limits the sulfur content of unleaded gasoline to 300 parts per million (ppm);

WHEREAS, the Board's staff has conducted several workshops regarding regulations for reformulated gasoline and has developed a program for the establishment of reformulated gasoline regulations in two phases, Phase 1 involving specifications for lower RVP, deposit control additives, and lead content, and Phase 2 involving more comprehensive regulations planned to be proposed for consideration by the Board at a September, 1991 hearing;

WHEREAS, the Board's staff has conducted multiple workshops, before and after January 31, 1990, regarding the proposed Phase 1 reformulated gasoline specifications;

WHEREAS, the staff has proposed the adoption and amendment of regulations which would, starting January 1, 1992:

Limit the RVP of motor vehicle gasoline sold during the RVP season to 7.8 psi; maintain the existing RVP control periods except for adding May to the San Diego Air Basin control period, including the Northeast Plateau Air Basin, and starting the periods a month earlier for gasoline being transferred from a refinery or import facility; define gasoline to include mixtures of alcohol with more than 50 percent fuel commonly or commercially known or sold as gasoline and alcohol, and exempt gasoline containing at least 10 percent ethanol from the RVP limit as long as the base gasoline meets the 7.8 psi standard and Health and Safety Code section 43830 provides for such treatment; identify optional test methods for determining RVP; during the first two years, authorize variances which allow a RVP as high as 9 psi if specified findings are made; and clarify the applicability of the limits to sales during the start and end of the RVP season;

Require the use of deposit control additives in motor vehicle gasoline by mandating that gasoline be certified to meet specified performance criteria for reducing and preventing deposits on port fuel injectors, carburetors, and intake valves when tested in accordance with specified test procedures, or by alternative test procedures where appropriate; and

Prohibit the sale of gasoline to which lead has been purposefully added, or which has a lead content exceeding 0.05 g/gal, for use in any motor vehicles except farm equipment and special construction equipment; and prohibit starting January 1, 1994 the sale of motor vehicle gasoline not represented as unleaded, except that used in farm equipment and special construction equipment;

WHEREAS, the proposal would be effected by the adoption of Title 13, California Code of Regulations, sections 2251.5, 2253.4, and 2257, and by amendments to sections, 2251, 2252, 2253.2, and 2254, as set forth in Attachments A, B, and C;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts and alternatives or feasible mitigation measures to the proposed action are available which would substantially reduce or avoid such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

It is appropriate for reformulated gasoline regulations to be considered in two phases; the regulations approved herein can be implemented in the 1992 timeframe and are supported by adequate data to project expected emissions reductions and the associated energy, economic, and environmental impacts; more comprehensive regulations can be more effectively defined after consideration of the results of the substantial body of testing and data collection occurring at the present time;

The state and national health-based ambient air quality standards for ozone, carbon monoxide (CO), and PM10 are regularly and significantly exceeded in many areas of California, most severely in the South Coast Air Basin;

Motor vehicles contribute more than half the emissions in California of reactive organic gases (ROG) and oxides of nitrogen (NOx), the precursors of ozone formation;

Reducing the RVP of gasoline used in motor vehicles reduces ROG evaporative emissions from the vehicles; the new RVP regulation approved herein is expected to reduce statewide ROG emissions from motor vehicles by approximately 80 tons per day in 1992;

Based on currently available information, limiting the RVP of gasoline to 7.8 psi during the RVP control periods when evaporative emissions are highest and climatological conditions are most conducive to ozone formation will result in a favorable combination of vehicular emission reductions and minimal impacts on vehicle performance, and such limits can be achieved in the short-term, by January 1, 1992;

The modifications, set forth in Attachment D hereto, to the originally proposed text of the RVP regulations are necessary and appropriate to provide additional flexibility in meeting the requirements and determining compliance; the adoption of the automated test method for optional use in the new and existing RVP regulations will enable the use of accurate and easy-to-use instruments which produce results equivalent to those achieved with ASTM Method D 323-58;

The use of deposit control additives in gasoline can reduce motor vehicle emissions of hydrocarbons, CO and NOx;

The deposit control additives regulation approved herein will assure that appropriate deposit control additives are present in gasoline in concentrations sufficient to effectively reduce and prevent deposits in port fuel injectors, carburetors, and intake valves;

The deposit control additives regulation approved herein is conservatively estimated to result in 1992 in statewide emission reductions of about 3 tons per day of hydrocarbons, about 30 tons per day of CO, and about 2 tons per day of NOx, and is also expected to result in motor vehicle performance benefits including maintaining vehicle fuel economy, engine power output, and engine driveability;

The modifications, set forth in Attachment D hereto, to the proposed deposit control additives regulation are appropriate to streamline the certification process; present data indicates that the port fuel injector cleanliness test is likely sufficient to demonstrate adequate performance in preventing and reducing carburetor deposits;

The use of lead in motor vehicle gasoline results in vehicular emissions of lead and of ethylene dichloride (EDC) and ethylene dibromide (EDB), which are used in conjunction with lead in gasoline; the adverse health effects of leaded gasoline are well known and lead exposure affects key enzymes in the production of red blood cells and can cause damage to the central nervous system; EDC and EDB have been identified by the Board as toxic air contaminants;

The regulation approved herein prohibiting the use of lead in most motor vehicle gasoline is expected to reduce statewide emissions of lead, EDC and EDB by approximately 1 ton per day each in 1992;

It is necessary to provide for exemptions in the lead regulations for farm equipment and special construction equipment because such vehicles could suffer valve-seat damage when operated on unleaded gasoline under certain conditions;

The regulations approved herein prohibiting the sale of most motor vehicle gasoline not represented as unleaded starting January 1, 1994, and amending the current sulfur, phosphorus, and manganese restrictions on unleaded gasoline so that they apply to gasoline represented as unleaded, are expected to reduce statewide

emissions of sulfur oxides by about 5 tons per day in 1994, and to assure minimal emissions of phosphorus and manganese from motor vehicles;

The regulations approved herein are technologically feasible within the applicable timeframes; the provisions regarding gasoline represented as unleaded will allow refiners two additional years to comply with the sulfur content limit of 300 ppm for unleaded gasoline;

The RVP regulation approved herein has an estimated cost-effectiveness of \$1.10 to \$1.90 per pound of volatile organic compounds reduced, the deposit control additives regulation approved herein has an estimated cost-effectiveness of \$0.50 per pound of criteria pollutant reduced, and the regulatory actions pertaining to lead in gasoline have an estimated cost-effectiveness of \$2.00 per pound of pollutant reduced; these cost-effectiveness ratios are within the range of other control measures adopted to reduce emissions of these pollutants and expected to be reasonably necessary to achieve the ambient air quality standards in California;

The regulations approved herein are necessary and appropriate to attain and maintain the state and national ambient air quality standards identified above and to reduce exposures to toxic air contaminants;

The economic impacts of the regulations approved herein are warranted in light of the public health benefits associated with the regulations; and

The RVP and deposit control additive regulations are not expected to have any significant adverse environmental impacts; the proposed lead regulations may result in significant adverse environmental impacts resulting from slight emission increases at those refineries that need additional processing equipment to enable compliance; the permit requirements of the air pollution control districts are expected substantially to mitigate such impacts; to the extent such impacts are not fully mitigated they would be outweighed by the greater overall emissions reductions resulting from the approved regulations.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the adoption of Title 13, California Code of Regulations, sections 2251.5, 2253.4, and 2257, and the amendments to sections, 2251, 2252, 2253.2, and 2254, as set forth in Attachments A, B, and C hereto, with the modifications set forth in Attachment D hereto including the adoption of Title 13, California Code of Regulations, section 2262.

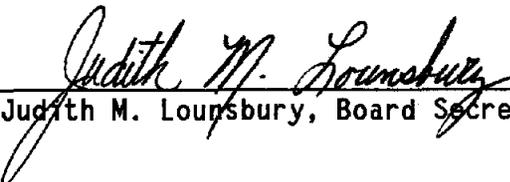
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the regulatory changes set forth in Attachments A, B and C, with the modifications set forth in Attachment D, after making them available to the public for a period of fifteen days, with such further modifications as may be appropriate in light of written comments submitted, provided that the

Executive Officer shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted in light of supplemental written comments received.

BE IT FURTHER RESOLVED that the Board endorses the program for the development of Phase 2 reformulated gasoline regulations which would define the "cleanest" possible gasoline to achieve maximum reductions in ozone-forming potential and emissions of criteria and toxic air contaminants at the lowest cost to the consumer; the Board urges the oil industry to cooperate fully with the Board's staff in the joint cooperative program to collect information on the properties of gasoline produced for sale in California; and the Board directs the Executive Officer to continue developing a comprehensive regulatory proposal for Phase 2 reformulated gasoline with appropriate public input, and to schedule a public hearing in September, 1991 for the Board to consider the adoption of such regulations with an ultimate implementation date targeted for the 1995-1996 time period.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to work with industry in further analyzing the need for a carburetor cleanliness test as an effective indicator of deposit control additive effectiveness; the Executive Officer is directed to propose the addition of a carburetor cleanliness test to the deposit control additive certification procedures if new data indicate such a separate test is necessary to demonstrate adequate performance in preventing and reducing carburetor deposits.

I hereby certify that the above is a true and correct copy of Resolution 90-59, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-60

October 11, 1990

Agenda Item No.: 90-16-1

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature in 1988 enacted the California Clean Air Act of 1988 (Stats. 1988, ch. 1568) to address the problem of air pollution in California;

WHEREAS, in the California Clean Air Act the Legislature declared that attainment of the Board's health-based ambient air quality standards is necessary to protect public health, particularly of children, older people, and those with respiratory diseases, and directed that these standards be attained at the earliest practicable date;

WHEREAS, section 41712 of the Health and Safety Code directs the Board to adopt by January 1, 1992 regulations to achieve the maximum feasible reduction in reactive organic compounds emitted by consumer products, if the Board determines that adequate data exists for it to adopt the regulations, and if the regulations are technologically and commercially feasible and necessary;

WHEREAS, following a November 8, 1989 public hearing, the Board approved a regulation to reduce volatile organic compound (VOC) emissions from antiperspirants and deodorants, Title 17, California Code of Regulations, sections 94500-94506 (the "antiperspirant regulation");

WHEREAS, following a June 15, 1990 public hearing, the Board approved a regulation for reducing VOC emissions from consumer products in the Bay Area Air Quality Management District, Title 17, California Code of Regulations, sections 94520-94527 (the "Bay Area regulation");

WHEREAS, the Bay Area regulation was designed to meet the requirements of a court order issued on January 10, 1990 by the United States District Court for the Northern District of California (the "Court Order"), and was also designed to satisfy the provisions of an agreement with the Bay Area Air Quality Management District (BAAQMD) under which the Board agreed to achieve, by February 1, 1993, a three ton per day reduction in consumer product VOC emissions in the BAAQMD (the "BAAQMD Agreement");

WHEREAS, staff has proposed a statewide regulation to reduce VOC emissions from consumer products in California, Title 17, California Code of Regulations, sections 94507-94517 (the "statewide regulation");

WHEREAS, to provide consistency with the provisions of the proposed statewide regulation, staff has proposed modifications to the antiperspirant regulation;

WHEREAS, because the proposed statewide regulation will comply with the provisions of the Court Order and BAAQMD Agreement, the Bay Area regulation is no longer necessary and staff has proposed that it be repealed;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

Consumer products represent one of the few remaining emission sources that have not been controlled, and control of these emissions is necessary in order to attain and maintain national and state ambient air quality standards;

Emissions from all forms of consumer products are expected to increase steadily in the future unless they are controlled effectively;

VOC emissions from consumer products contribute to concentrations of ozone and PM10 in the state;

The national and state ambient air quality standards for these pollutants are violated in the many areas of the state, and over 90 per cent of the state's population currently lives in areas that are nonattainment for these pollutants;

The proposed regulations will result in a significant reduction in VOC emissions from consumer products, and concomitant reductions in ozone and PM10 levels;

The proposed regulations will achieve a total emissions reduction of approximately 45 tons per day in California by 1998;

The proposed regulations will achieve an emissions reduction of at least three tons per day in the BAAQMD by January 1, 1993, and will therefore comply with the provisions of the Court Order and the BAAQMD Agreement;

Because the proposed regulations will comply with the provisions of the Court Order and BAAQMD Agreement, the Bay Area regulation is no longer necessary;

It is appropriate to amend the antiperspirant regulation in order to provide consistency with the provisions of the proposed statewide regulation;

The cost-effectiveness ratios for reducing emissions from consumer products through the proposed VOC limits are within the range of other control measures adopted to reduce emissions of these pollutants;

There exists adequate data to support the adoption of the emission limits and other requirements contained in the proposed regulations;

The proposed regulations are necessary to attain and maintain the state and national ambient air quality standards;

The reporting requirements of the proposed regulations which apply to small businesses are necessary for the health, safety, and welfare of the people of the state;

For each product category, consumer products currently exist which meet the standards of the proposed regulations;

The proposed regulations are technologically and commercially feasible; and

WHEREAS, the Board further finds that:

The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action will not have any significant adverse impact on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves sections 94503.5, 94506.5, and 94507-94517, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby approves amendments to sections 94504, 94505, and 94506, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby approves the repeal of Article 3, Consumer Products in the Bay Area Air Quality Management District, sections 94520-94526, Title 17, California Code of Regulations, as set forth in Attachment A hereto;

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to repeal sections 94520-94526, Title 17, California Code of Regulations, and to adopt sections 94503.5, 94504, 94505, 94506, 94506.5, and 94507-94517, Title 17, California Code of Regulations, after making them available to the

public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

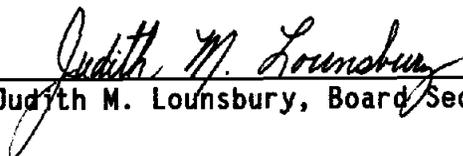
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to consult with the consumer product manufacturers who must achieve the future effective VOC limits specified in the Table of Standards for hairsprays, single phase aerosol air fresheners, engine degreasers, and nail polish remover, to provide biennial reports (beginning in 1992) on their progress to the Board, and in these reports to identify any significant problems and propose any regulatory modifications that may be appropriate; the regulated public and other interested parties shall be consulted in the preparation of such reports and shall be provided with an opportunity to make oral and written comments to the Board in conjunction with the reports.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to gather additional data on the feasibility of a five per cent VOC standard for laundry prewash (all other forms) and bathroom and tile cleaners, and to return to the Board in 1991 if the data indicates that modification of the standard is necessary.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to study the issue of whether a longer sell-through period is necessary for small volume retailers of consumer products, and to report to the Board in 1991 on whether the regulations should be amended to specify a longer sell-through period or other special provisions for small volume stores.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to survey the amount of VOC emissions from charcoal lighter fluid in the state, and to report to the Board in 1991 on whether it may be appropriate to adopt a regulatory standard for charcoal lighter fluid.

I hereby certify that the above is a true and correct copy of Resolution 90-60, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of a Statewide Regulation For Reducing Volatile Organic Compound Emissions from Consumer Products

Agenda Item No.: 90-16-1

Public Hearing Date: October 11, 1990

Response Date: December 28, 1990

Issuing Authority: Air Resources Board

Comment: The Board received comments alleging that certain significant adverse environmental effects could result from the adoption of the proposed regulations. One commenter stated that adoption of the regulations might increase the rate of global warming, because the regulations would allow the use of substitute aerosol propellants with some global warming potential. A few commenters also suggested that the proposed volatile organic compound (VOC) standards might result in more air pollution, not less, because: (1) products reformulated to meet the standards may be less efficacious than existing products, thereby resulting in greater product use and more VOC emissions, and (2) reformulated products might use VOCs with greater photochemical reactivity, thereby causing increased ozone formation.

Finally, some commenters suggested that the one-year "sell-through" period [section 94509(c)] could result in negative environmental impacts if retailers chose to dispose of noncomplying products that remained on the shelves at the end of the one-year period. It was alleged that such disposal could result in a one-time increase in solid waste and a corresponding increase in VOC emissions from products that were sent to landfills.

Response: The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action will not have a significant adverse impact on the environment. The Board has summarized and responded to all comments from the public, including comments raising environmental issues, in the "Final Statement of Reasons for Rulemaking, including Summary of Comments and Agency Response". Each potential environmental impact is also briefly discussed below.

### Global Warming Impacts

With respect to global warming impacts, the regulations would allow hydrofluorocarbon compounds (HFCs) to be used as substitute propellants for the currently used hydrocarbon propellants. HFCs are "greenhouse gases" that can contribute to global warming. If industry finds that HFCs are technically suitable for use as propellants, and chooses to use these compounds, it is possible that there may be an extremely slight increase in global warming as a result of this regulation.

However, the Board has determined that any increase in global warming which might occur as a result of this regulatory action is so small that it will not constitute a significant adverse impact on the environment. At most, HFC emissions would be a few tons a day compared to 100 million tons a day of carbon dioxide, the gas which is the primary contributor to the greenhouse effect. In addition, there are mitigating factors which will serve to reduce global warming impacts. This regulatory action will result in some reduction in ground level ozone. Since ozone itself is a compound with some global warming potential, the ozone reduction would partially offset any global warming impact from increased use of HFCs. There are also some aerosol consumer products that are still legally allowed to use chlorofluorocarbon (CFC) propellants. CFCs have as high as 15 times the global warming potential of HFCs, and also cause the depletion of stratospheric ozone. If industry is successful in reformulating aerosols to use HFC compounds as propellants, the use of chlorofluorocarbon compounds may be eliminated in those applications where CFCs are still used. Therefore, the Board believes that any global warming impact as a result of this regulation is likely to be nonexistent or perhaps environmentally positive.

### Impacts from reformulated products

There is no credible evidence that reformulated products as a class will be less efficacious than existing products. The basis for this conclusion is contained in the Staff Report, the Technical Support Document, and the responses to numerous comments in the Final Statement of Reasons. In addition, the regulation will result in a 45 percent reduction in VOCs that are contained in the product categories for which standards are specified. Even if some reformulated products are less efficacious than some existing products, it is not reasonable to believe that any reduction in efficacy would come even remotely close to offsetting the significant VOC reductions that will be achieved by the regulation. With regard to the reactivity issue, the response to Comment #22 explains why the Board does not believe that California's overall ozone problem would worsen if manufacturers choose to use more "reactive" VOCs in reformulated products. The Board has therefore determined that no significant environmental

impacts will result from the reformulation of consumer products to meet VOC standards specified in the regulation.

Impacts from the one-year "sell-through" period

The Board has determined that no significant environmental impacts will result from the one year sell-through period. The basis for this conclusion is set forth on pages 46-48 of the Staff Report, and the response to Comments #69-71 in the Final Statement of Reasons which are incorporated herein by reference.

CERTIFIED:

Pat Hutchins

Board Secretary

Date:

August 12, 1991

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-61

October 11, 1990

Agenda Item No.: 90-16-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, section 39605 of the Health and Safety Code authorizes the Board to provide assistance to air pollution control and management districts;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) and declared that it is necessary that the state ambient air quality standards be attained by the earliest practicable date to protect the public health, particularly the health of children, older people, and those with respiratory diseases;

WHEREAS, in order to attain these standards, the Act in section 40910 of the Health and Safety Code mandates a comprehensive program of emission reduction measures and planning requirements for the state and local air pollution control districts ("districts") in areas where the standards are not attained;

WHEREAS, the Act in section 40910 of the Health and Safety Code directs districts to endeavor to attain and maintain state ambient air quality standards by the earliest practicable date;

WHEREAS, the Act in section 40911 of the Health and Safety Code requires each district that is nonattainment for ozone, carbon monoxide, nitrogen dioxide or sulfur dioxide to prepare and submit to the Board by no later than June 30, 1991 a plan for attaining those standards;

WHEREAS, the Act in section 40913(a) of the Health and Safety Code requires each district plan to consider present and projected maximum ambient contributions, the distribution and frequency of violations, and the anticipated effectiveness of available and potential control measures;

WHEREAS, the Act in section 40914(b) of the Health and Safety Code allows the districts to employ an alternative emission reduction strategy upon an adequate demonstration that the alternative strategy is more or as effective as districtwide five percent annual reductions;

WHEREAS, the Act in sections 40918, 40919 and 40920 of the Health and Safety Code requires the Board to determine the date by which districts are expected to attain standards so that they can be classified as having moderate, serious or severe air quality problems;

WHEREAS, the Board is required to review district attainment plans pursuant to section 41500 and must determine whether the attainment date specified in

the plan represents the earliest practicable date and whether the measures contained in the plan are sufficient to achieve and maintain state and national ambient air quality standards;

WHEREAS, the Act in section 41503(c) of the Health and Safety Code requires the Board, where a district is unable to specify an attainment date, to concur that projecting an attainment date is not feasible, and to determine whether the plan contains every feasible control strategy or measure to ensure progress toward attainment;

WHEREAS, the Act in section 41503.1 of the Health and Safety Code allows the Board to approve an attainment plan which achieves less emission reductions than five percent per year, if the Board determines that the equivalent air quality improvement will be achieved through an alternative level of emission reductions;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public workshop was held on September 7, 1990, to assist staff in developing the guidance document for estimating emissions reductions needed for attainment and determining area classifications;

WHEREAS, in consideration of the guidance document prepared by staff and of the written comments and the testimony presented by the public and the staff, the Board finds that:

1. District plans must, to the extent feasible with existing resources and technical tools, provide an estimate of the emission reductions needed to attain and maintain state and national ambient air quality standards;
2. District plans need, to the extent feasible with existing resources and technical tools, identify the time needed to attain state and national ambient air quality standards;
3. Many districts will not have adequate models available in time for inclusion in their 1991 plans and need guidance on how to address the requirements of the Act regarding attainment demonstrations;
4. Districts with adequate modeling capabilities will benefit from additional guidance on how to use those models to make attainment demonstrations;
5. Districts may desire to use an alternative emission reduction strategy in lieu of reducing districtwide emissions by an average of five percent per year, and will benefit from guidance on how to determine if an alternative emission reduction strategy is equal to or more effective as the reduction of districtwide emissions by an average of five percent per year;
6. The 1991 plans must identify the date by which the district expects to attain state and national ambient air quality standards, or must identify the work that will be performed to provide this information on an expeditious schedule;

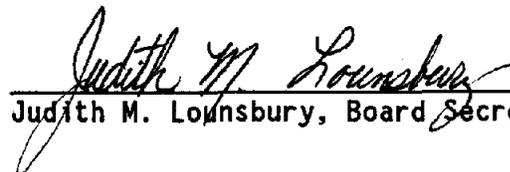
Resolution 90-61

7. The proposed guidance identifies methods that districts can employ to meet the requirements of the Act related to attainment demonstrations, but does not prevent the districts from employing alternative techniques that are equally valid and consistent with the requirements of the Act; and
8. Approval of the guidance document will not have adverse impacts on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the guidance document "Guidance on Estimating Emission Reductions Needed to Attain State Standards and for Determining Area Classifications in Response to the California Clean Air Act" and directs the Executive Officer to transmit the document to districts and other interested parties for their information.

BE IT FURTHER RESOLVED that the Board will rely upon the guidance document, in addition to other relevant information provided by districts and interested parties, when evaluating district plans for compliance with the requirements of the California Clean Air Act.

I hereby certify that the above is a true and correct copy of Resolution 90-61, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of a Regulatory Amendment  
Identifying Trichloroethylene (TCE) as a Toxic Air Contaminant

Agenda Item No.: 90-17-1

Public Hearing Date: October 12, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: Pat Hutchens for  
Judith M. Lounsbury  
Board Secretary

Date: January 18, 1991

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-62

October 12, 1990

Agenda Item No.: 90-17-1

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to do such acts and to adopt such regulations as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the Board by law;

WHEREAS, Chapter 3.5 (commencing with section 39650) of Part 2 of Division 26 of the Health and Safety Code establishes procedures for the identification of toxic air contaminants by the Board;

WHEREAS, section 39655 of the Health and Safety Code defines a "toxic air contaminant" as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health;

WHEREAS, section 39662 of the Health and Safety Code directs the Board to list, by regulation, substances determined to be toxic air contaminants, and to specify for each substance listed a threshold exposure level, if any, below which no significant adverse health effects are anticipated;

WHEREAS, in California, trichloroethylene is emitted from many activities including degreasing operations, painting and coating, adhesive formulations, and polyvinyl chloride production; and trichloroethylene is not naturally removed or detoxified in the atmosphere at a rate that would significantly reduce the resulting public exposure;

WHEREAS, pursuant to the request of the Board, the Department of Health Services (DHS) evaluated the health effects of trichloroethylene in accordance with section 39660 of the Health and Safety Code;

WHEREAS, DHS concluded in its evaluation that trichloroethylene is causally associated with cancer in humans; that health effects other than cancer are not expected to occur at existing or expected ambient levels of trichloroethylene; that based on the upper 95 percent confidence limit of potency, the estimated range of lifetime (70 year) excess lung cancer mortality risk from continuous exposure to  $1 \mu\text{g}/\text{m}^3$  of atmospheric trichloroethylene is from  $8 \times 10^{-7}$  to  $1 \times 10^{-6}$ ; that the DHS' best estimate for the unit risk for TCE is  $2 \times 10^{-6} (\mu\text{g}/\text{m}^3)^{-1}$ ;

WHEREAS, for the reasons set forth in its evaluation, DHS treats trichloroethylene-induced carcinogenesis as a nonthreshold phenomenon because DHS found no evidence that there is a carcinogenic threshold level for trichloroethylene;

WHEREAS, upon receipt of the DHS evaluation, staff of the Board prepared a report including and in consideration of the DHS evaluation and recommendations and in the form required by section 39661 of the Health and Safety Code and, in accordance with the provisions of that section, made the

report available to the public and submitted it for review to the Scientific Review Panel (SRP) established pursuant to section 39670 of the Health and Safety Code;

WHEREAS, in accordance with section 39661 of the Health and Safety Code, the SRP reviewed the staff report, including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based, considered the public comments received regarding the report, and on April 16, 1990 adopted, for submittal to the Board, findings which included the following:

1. Trichloroethylene has been identified as an animal carcinogen and should be regarded as a potential human carcinogen.
2. Trichloroethylene is emitted into the air by a variety of stationary sources in California. It is emitted indoors and can give rise to concentrations approximately 5 times higher than outdoors.
3. Based on its gas-phase reactivity with hydroxyl radicals, trichloroethylene has an atmospheric lifetime estimated to range from 4 to 15 days.
4. Approximately 20 million people in California represented by the toxics air monitoring network are estimated to be exposed to a population-weighted mean trichloroethylene concentration of 0.22 parts per billion (ppb).
5. Adverse health effects other than cancer are not known to occur at predicted concentrations of trichloroethylene in ambient outdoor air.
6. Based on available scientific information, a trichloroethylene exposure level below which carcinogenic effects are not expected to occur cannot be identified.
7. Based on an interpretation of available scientific evidence, DHS staff estimated the range of lifetime excess cancer risk from exposure to 0.19 ppb ( $1 \mu\text{g}/\text{m}^3$ ) of atmospheric trichloroethylene based on the upper 95 percent confidence limit is from  $4.2_5 \times 10^{-6}/\text{ppb}$  to  $5.3 \times 10^{-5}/\text{ppb}$ . Based on available data,  $1.1 \times 10^{-5}/\text{ppb}$  is the most plausible estimate of the upper limit of risk. These upper bound excess lifetime risks are health-protective estimates; the actual risk may well be below these values.
8. Exposure to the statewide mean ambient concentration (weighted by population) of 0.22 ppb for a population of 20 million people represented by the toxics air monitoring network, could result in up to 41 excess lifetime cancers, based on the DHS' best estimate for unit risk. Assuming that this applies to the California state population of 28 million, this could result in up to 56 excess lifetime cancers, based on the DHS' best estimate for unit risk.
9. The conclusions are based on limited animal data. As a result, the numbers cited here are subject to a significant degree of uncertainty.

WHEREAS, the SRP found the staff report to be without serious deficiency, and the SRP agreed with the staff recommendation that trichloroethylene should be listed by the Air Resources Board as a toxic air contaminant, and

found that, based on available scientific information, the trichloroethylene exposure level below which carcinogenic effects are not expected to occur cannot be identified;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of Government Code;

WHEREAS, in consideration of the staff report, including DHS' evaluation and recommendations, the available evidence, the findings of the SRP, and the written comments and public testimony it has received, the Board finds that:

There is strong evidence that trichloroethylene is an animal carcinogen and should be regarded as a potential human carcinogen;

Health effects other than cancer are not anticipated at existing or expected trichloroethylene exposure levels in ambient outdoor air;

The DHS and the SRP agree that the most plausible estimate of the upper bound of the overall unit risk is  $1.1 \times 10^{-5}$  ppb;

There is not sufficient available scientific evidence to support the identification of a threshold exposure level for trichloroethylene;

Trichloroethylene is an air pollutant which, because of its carcinogenicity, may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Board regulations, that this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE BE IT RESOLVED, that the Board adopts the proposed regulatory amendment to section 93000, Titles 17 and 26, California Code of Regulations, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of Resolution 90-62, as adopted by the Air Resources Board.

*Pat Hutchins for*  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of Amendments to Abrasive  
Blasting Regulations

Agenda Item No.: 90-18-1

Public Hearing Date: November 8, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified:

*Judith M. Lounsbury*  
Judith M. Lounsbury  
Board Secretary

Date:

3/18/91

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RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-63

November 8, 1990

Agenda Item No.: 90-18-1

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Section 41900 of the Health and Safety Code requires the Board to adopt air pollution standards for sandblasting operations;

WHEREAS, the California Code of Regulations, Title 17, Part III, Chapter 1, Subchapter 6 establishes visible emission standards and performance standards governing emissions from abrasive blasting operations and the characteristics of abrasives used in dry blasting;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board's regulations need to be restructured so as to clarify and simplify restrictions on the use of abrasives and to devise an alternative certification test procedure which would allow certification of very fine materials that cannot meet current standards;

WHEREAS, the Board finds that its regulations on sandblasting need to be revised to extend the requirement for the use of a certified abrasive to all dry blasting conducted within a permanent building, to accordingly eliminate the obsolete opacity standard applied to the use of uncertified abrasives, to apply a 40 percent opacity standard to all permissible outdoor blasting rather than allowing the use of certified abrasives with a 40 percent opacity standard or the use of uncertified abrasives with a 20 percent opacity standard for dry unconfined blasting, to implement a more restrictive requirement that abrasive blasting operations conducted within a permanent building meet a 20 percent opacity standard regardless of the abrasive or abrasive blasting method used, to extend the annual certification requirement to a biennial certification requirement, to add an alternative certification test method that can be used in lieu of the current before-blast test method if the abrasive fails the before-blast test and to add a "cut-point for fineness" criterion which would allow the reuse

of spent certified abrasives that pass the alternative test method requirements but which cannot pass the No. 70 US Standard sieve requirement for reuse of spent abrasives;

WHEREAS, the Board finds that the amendments herein are appropriate to implement the provisions of Sections 41900, 41902, 41904 and 41905, Health and Safety Code;

WHEREAS, the Board finds that the proposed "Visible Emission Evaluation Test Method for Selected Abrasives Used in Permissible Dry Outdoor Blasting" is an appropriate alternative to the current before blasting certification requirement for fine abrasive material; and

WHEREAS, the Board further finds that adoption of the regulations and incorporated test methods set forth in Attachments A and B will not have a significant adverse environmental impact and may have a significant beneficial impact.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby amends Sections 92000 - 92540, Title 17, California Code of Regulations, as set forth in Appendix A hereto.

I hereby certify that the above is a true and correct copy of Resolution 90-63, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of New Regulations  
Establishing a Roadside Smoke and Emission Control System Inspection  
Program for In-Use Heavy-Duty Diesel and Gasoline-Powered Vehicles

Agenda Item No.: 90-18-2

Public Hearing Date: November 8, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: Pat Hutchens  
Pat Hutchens  
Board Secretary

Date: 7/24/91

**RECEIVED BY**  
**Office of the Secretary**

**JAN 21 1993**

**RESOURCES AGENCY OF CALIFORNIA**

State of California  
AIR RESOURCES BOARD

Resolution 90-64

November 8, 1990

Agenda Item No.: 90-18-2

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in Section 43000 of the Health and Safety Code, the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and, in Sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility of systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, in Section 43000.5, the Legislature has declared that the burden for achieving needed reductions in vehicle emissions should be distributed equitably among various classes of vehicles, including heavy-duty vehicles, to accomplish improvements in both the emissions level and in-use performance;

WHEREAS, Section 43013 of the Health and Safety Code authorizes the Board to adopt in-use performance standards and regulations to control air pollution from motor vehicles, which the Board has found to be necessary, cost-effective, and technologically feasible;

WHEREAS, Section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction from vehicular sources to accomplish the attainment of State ambient air quality standards by the earliest practicable date through achieving the maximum feasible reductions in mobile source emissions, including particulates;

WHEREAS, Section 44011.6 of the Health and Safety Code directs the Board to develop, as expeditiously as possible, a test procedure for the detection of excessive smoke emissions from heavy-duty diesel motor vehicles and visual or functional inspection procedures to determine the presence of tampering or defective emissions control systems in heavy-duty diesel- or gasoline-powered motor vehicles and to prohibit the use of these vehicles until such time as the owner corrects every specified deficiency;

WHEREAS, Section 44011.6 of the Health and Safety Code directs the Board to prohibit by regulation the use in California of heavy-duty motor vehicles which are determined to have excessive smoke emissions or other emission-related defects;

WHEREAS, Section 44011.6 of the Health and Safety Code authorizes the Board to cite owners of motor vehicles who violate regulations adopted pursuant to that Section;

WHEREAS, owners of motor vehicles who are cited may be liable for a civil penalty of not more than fifteen hundred dollars (\$1500) per day for each day that the vehicle is in violation or a lesser amount for expeditious correction of violations;

WHEREAS, Section 44011.6 of the Health and Safety Code further requires an additional three hundred dollar (\$300) penalty to be deposited in the Diesel Emissions Reduction Fund for each citation that is issued with the exception of school buses cited for the first time;

WHEREAS, the staff has proposed the addition of Sections 2180 through 2187 to Title 13, California Code of Regulations to implement the excessive smoke emissions test procedure and emission control systems inspections of heavy-duty commercial motor vehicles;

WHEREAS, the regulations proposed by the staff set forth the responsibilities of the driver and inspector, the heavy-duty diesel vehicle smoke opacity test procedure, the opacity standards for the smoke opacity test, emission control system inspection procedures for heavy-duty diesel and gasoline-powered vehicles, refusal to submit to the test procedure inspection constitutes a violation of the regulations, procedures for clearing citations through demonstration of correction or post-repair test inspections, and procedures for the release of vehicles removed from service;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternative or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the Board finds that:

Excessive smoke emissions from heavy-duty diesel powered motor vehicles contribute significantly to the serious air pollution problem in this state;

Particulates from excessive heavy-duty diesel powered motor vehicles are a significant source of air contaminants;

Attainment of the State ambient air quality standards cannot be accomplished by the earliest practicable date without reduction of excessive heavy-duty diesel vehicles smoke emissions;

Effective in-use inspection and maintenance programs presently do not exist in the State for heavy-duty diesel-powered vehicles;

A test procedure for detection of excessive smoke emissions from heavy-duty diesel motor vehicles and air emission control system inspection for diesel- and gasoline-powered heavy-duty vehicles can contribute to a significant reduction in air pollution in this state;

Smoke emissions of forty percent (40%) or higher from heavy-duty diesel vehicles certified at a level of thirty-five (35) percent peak opacity or less and operating on the highways within the State of California are excessive;

Smoke emissions of fifty-five percent (55%) or higher from other heavy-duty diesel vehicle operating on the highways within the State of California are excessive;

It is necessary to require heavy-duty diesel engine manufacturers to submit engine identification and smoke certification data for engines certified to levels above thirty-five (35%) percent peak opacity;

It is further necessary for the effective enforcement of the proposed program to require that refusal by a driver or owner to submit to the test or inspection procedures constitutes a violation of the test or inspection procedure;

The reduced penalty schedule should encourage correction of violations in an expeditious manner;

A phase-in of the penalty schedule for those found to be in violation of the regulations but who make every effort to expeditiously repair their vehicle during the initial year of the program's operation permits an equitable period of adjustment to the program's requirements and achievement of air quality benefits; and

It is necessary and appropriate to adopt the proposed regulations in order to fulfill the mandates of Health and Safety Code Section 44011.6.

WHEREAS, The Board further finds that adoption of the regulations set forth in Attachment A will not have a significant adverse environmental impact and may have a significant beneficial impact.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves Sections 2180 through 2187, Title 13, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Sections 2180 through 2187, Title 13, California Code of Regulations, as set forth in Attachment A, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such



State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues and  
Statement of Overriding Considerations**

Item: Public Hearing to Consider the Adoption of Revision to the Designation of Areas in California as Attainment, Nonattainment, or Unclassified for State Ambient Air Quality Standards.

Agenda Item No.: 90-18-3

Public Hearing Date: November 8, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

Certified:

*Judith M. Lounsbury*  
Judith M. Lounsbury  
Board Secretary

Date:

5/19/91

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Office of the Secretary

MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-65

November 8, 1990

Agenda Item No.: 90-18-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) declaring that it is necessary that the state ambient air quality standards be attained by the earliest practicable date to protect the public health, particularly the health of children, older people, and those with respiratory diseases;

WHEREAS, in order to attain these standards, the Act mandates a comprehensive program of emission reduction measures and planning requirements for the state and the local air pollution control districts ("districts") in areas where the standards are not attained;

WHEREAS, the Act directs the Board in section 39608(a) of the Health and Safety Code, in consultation with the districts, to identify and classify, on or before September 30, 1989, each air basin as attainment, nonattainment, or unclassified on a pollutant-by-pollutant basis pursuant to criteria established by the Board under section 39607(e) of the Health and Safety Code;

WHEREAS, the Act in section 39608(c) of the Health and Safety Code also requires the Board to review the designations annually and update them as new information becomes available;

WHEREAS, pursuant to section 39607(e) the Board adopted sections 70300-70306, Title 17, California Code of Regulations, establishing criteria for the designations, and subsequently approved amendments to those criteria;

WHEREAS, on June 9, 1989, the Board approved the initial area designations which are contained in sections 60200-60209, Title 17, California Code of Regulations;

WHEREAS, in consultation with the districts and in consideration of comments received from public agencies, industry representatives, and interested persons, staff has prepared proposed revisions to the area designations for a number of specific areas of the state for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, hydrogen sulfide, and visibility reducing particles;

WHEREAS, the proposed revisions of the area designations are based on the amended criteria contained in sections 70300-70306, Title 17, California Code of Regulations;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code and the Board has considered the testimony presented by interested persons and the staff; and

WHEREAS, the Board finds that:

The proposed revisions to the area designations comply with requirements of section 39608 of the Health and Safety Code;

The proposed revisions to the area designations listed in sections 60200-60209 of Title 17 of the California Code of Regulations are consistent with the designation criteria as amended by the Board in sections 70300-70306 of Title 17 of the California Code of Regulations;

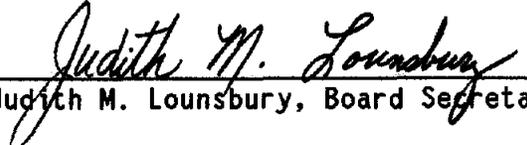
This regulatory action will not have a significant economic impact on any public agency, small business, or private persons or business other than small business; and

This regulatory action will not have a significant adverse impact on the environment. In fact, it should ultimately result in environmental benefits because it is part of multi-step program designed to achieve and maintain the state ambient air quality standards.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves amendments to sections 60200-60209, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt amendments to sections 60200 through 60209 of Title 17 of the California Code of Regulations, after making them available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that it is warranted.

I hereby certify that the above is a true and correct copy of Resolution 90-65, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-66

November 8, 1990

Agenda Item No.: 90-18-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, ch. 1568) declaring that it is necessary that the state ambient air quality standards be attained by the earliest practicable date to protect the public health, particularly the health of children, older people, and those with respiratory diseases;

WHEREAS, the Act directs the Board in section 39607(f) of the Health and Safety Code to evaluate, in consultation with the districts, air quality-related indicators that may be used to measure or estimate progress in the attainment of state standards and establish a list of approved indicators;

WHEREAS, the Board staff has presented a plan, set forth in attachment A hereto, for approving air quality-related indicators;

WHEREAS, the Board staff has provided opportunities for public comment and considered such comments in preparing the proposed plan;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing has been held and the Board has considered the testimony presented by interested persons and the staff;

WHEREAS, the Board finds that:

The proposed plan for approving air quality-related indicators, including the proposed criteria contained in the plan and the proposed process for listing indicators, is consistent with the law and the goals and objectives of the Board;

The criteria in the proposed plan are necessary to establish a basis for the evaluation of air quality-related indicators in accordance with the direction of the Legislature.

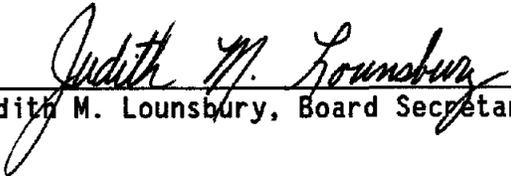
The criteria in the proposed plan assure that indicators approved and listed in the future will promote the expeditious attainment of state standards in a cost effective manner;

This non-regulatory action will not have a significant adverse impact on the environment. In fact, it should ultimately result in environmental benefits because it is part of a multi-step program designed to achieve and maintain the state ambient air quality standards; and

The process for listing indicators includes the participation of the districts and the public in the development and listing of indicators suitable for the mission of approved indicators as delineated by the Legislature.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby endorses the proposed plan for approving air quality-related indicators, including the criteria for approving indicators and the process for listing indicators contained therein, set forth in attachment A hereto.

I hereby certify that the above is a true and correct copy of Resolution 90-66, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-67

December 14, 1990

Agenda Item: 90-20-2

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 solicited research proposal, Number 1800-159, entitled "Remote Sensing and In-Use Emissions of Motor Vehicles," has been submitted by the University of Denver;

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:

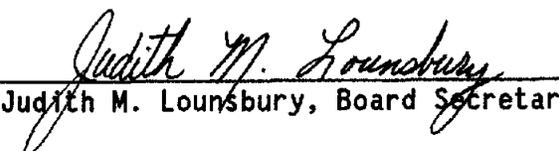
Proposal Number 1800-159, entitled "Remote Sensing and In-Use Emissions of Motor Vehicles," submitted by the University of Denver, for a total amount not to exceed \$329,393.

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 1800-159, entitled "Remote Sensing and In-Use Emissions of Motor Vehicles," submitted by the University of Denver, for a total amount not to exceed \$329,393.

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 in an amount not to exceed \$329,393.

I hereby certify that the above is a true and correct copy of Resolution 90-67, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

90-68  
Dropped  
No Resolution

State of California  
AIR RESOURCES BOARD

Resolution 90-69

November 8, 1990

Agenda Item No.: 91-1-5

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, an unsolicited research proposal, Number 1801-159 entitled "Measurement and Chemical Characterization of Vapor-Phase Mutagens in Source Emissions and Ambient Air," has been submitted by the University of California, Davis;

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:

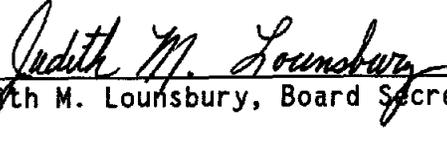
Proposal No. 1801-159 entitled "Measurement and Chemical Characterization of Vapor-Phase Mutagens in Source Emissions and Ambient Air," submitted by the University of California, Davis, for a total amount not to exceed \$59,998.

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 No. 1801-159 entitled "Measurement and Chemical Characterization of Vapor-Phase Mutagens in Source Emissions and Ambient Air," submitted by the University of California, Davis, for a total amount not to exceed \$59,998.

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 in an amount not to exceed \$59,998.

I hereby certify that the above is a true and correct copy of Resolution 90-69, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-70

November 8, 1990

Agenda Item No.: 91-1-5

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, an unsolicited research proposal, Number 1798-159 entitled "Monitoring of Pesticides in Air," has been submitted by the California State University, Fresno;

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:

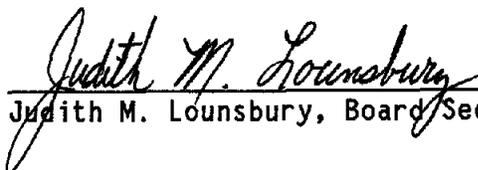
Proposal No. 1798-159 entitled "Monitoring of Pesticides in Air," submitted by the California State University, Fresno, for a total amount not to exceed \$149,061.

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 No. 1798-159 entitled "Monitoring of Pesticides in Air," submitted by the California State University, Fresno, for a total amount not to exceed \$149,061.

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 in an amount not to exceed \$149,061.

I hereby certify that the above is a true and correct copy of Resolution 90-70, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-71

November 8, 1990

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, an unsolicited research proposal, Number 1796-159 entitled "Experimental Studies of Atmospheric Reactivities of Volatile Organic Compounds," has been submitted by the University of California, Riverside;

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 1796-159, entitled "Experimental Studies of Atmospheric Reactivities of Volatile Organic Compounds," submitted by the University of California, Riverside, for a total amount not to exceed \$231,141.

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 1796-159, entitled "Experimental Studies of Atmospheric Reactivities of Volatile Organic Compounds," submitted by the University of California, Riverside, for a total amount not to exceed \$231,141.

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 in an amount not to exceed \$231,141.

I hereby certify that the above is  
a true and correct copy of  
Resolution 90-71, as adopted by the  
Air Resources Board.

*Pat Hutchless for*  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-72

November 8, 1990

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, an unsolicited research proposal, Number 1802-159 entitled "Analysis of SCAQS NO<sub>2</sub> and NO<sub>x</sub> Measured by the Luminex Technique," has been submitted by Unisearch Associates Inc.;

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 1802-159, entitled "Analysis of SCAQS NO<sub>2</sub> and NO<sub>x</sub> Measured by the Luminex Technique," submitted by Unisearch Associates Inc., for a total amount not to exceed \$9,632.

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 1802-159, entitled "Analysis of SCAQS NO<sub>2</sub> and NO<sub>x</sub> Measured by the Luminex Technique" submitted by Unisearch Associates Inc., for a total amount not to exceed \$9,632.

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 in an amount not to exceed \$9,632.

I hereby certify that the above is a true and correct copy of Resolution 90-72, as adopted by the Air Resources Board.

*Pat Hatchers for*  
\_\_\_\_\_  
Jude Lounsbury, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 90-73

November 8, 1990

Agenda Item No. 91-1-5

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, an unsolicited research proposal, Number 1793-158 entitled "Experimental Investigation of the Atmospheric Chemistry of Aromatic Hydrocarbons and Long-Chain Alkanes," has been submitted by the University of California, Riverside;

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:

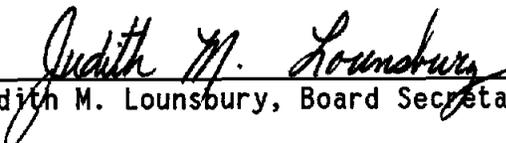
Proposal Number 1793-158, entitled "Experimental Investigation of the Atmospheric Chemistry of Aromatic Hydrocarbons and Long-Chain Alkanes," submitted by the University of California, Riverside, for a total amount not to exceed \$199,887.

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 1793-158, entitled "Experimental Investigation of the Atmospheric Chemistry of Aromatic Hydrocarbons and Long-Chain Alkanes," submitted by the University of California, Riverside, for a total amount not to exceed \$199,887.

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 in an amount not to exceed \$199,887.

I hereby certify that the above is a true and correct copy of Resolution 90-73, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of a Regulatory Amendment  
Identifying Vinyl Chloride as a Toxic Air Contaminant

Agenda Item No.: 90-19-1

Public Hearing Date: December 13, 1991

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified:

*Judith M. Lounsbury*  
Judith M. Lounsbury  
Board Secretary

Date:

3/18/91

RECEIVED BY  
Office of the Secretary

MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-74

December 13, 1990

Agenda Item No.: 90-19-1

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to do such acts and to adopt such regulations as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the Board by law;

WHEREAS, Chapter 3.5 (commencing with section 39650) of Part 2 of Division 26 of the Health and Safety Code establishes procedures for the identification of toxic air contaminants by the Board;

WHEREAS, section 39655 of the Health and Safety Code defines "toxic air contaminant" as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health;

WHEREAS, section 39662 of the Health and Safety Code directs the Board to list, by regulation, substances determined to be toxic air contaminants, and to specify for each substance listed a threshold exposure level, if any, below which no significant adverse health effects are anticipated;

WHEREAS, in California, vinyl chloride is emitted from sources such as landfills, publicly-owned treatment works, and polyvinyl chloride production and fabrication facilities; and vinyl chloride is not naturally removed or detoxified in the atmosphere at a rate that would significantly reduce the resulting public exposure;

WHEREAS, pursuant to the request of the Board, the Department of Health Services (DHS) evaluated the health effects of vinyl chloride in accordance with section 39660 of the Health and Safety Code;

WHEREAS, the DHS concluded in its evaluation that vinyl chloride is causally associated with cancer in humans; that health effects other than cancer are not expected to occur at existing or expected ambient levels of vinyl chloride; that, based on the upper 95% confidence limit of potency, the estimated range of lifetime (70-year) excess cancer risk from continuous exposure to 1 ppbv of atmospheric vinyl chloride is from  $2.5 \times 10^{-5}$  to  $20 \times 10^{-5}$ ; that the DHS best estimate for the unit risk for vinyl chloride is  $20 \times 10^{-5}$  ppb<sup>-1</sup>;

WHEREAS, for the reasons set forth in its evaluation, the DHS treats vinyl chloride-induced carcinogenesis as a nonthreshold phenomenon because the DHS found no evidence that there is a carcinogenic threshold level for vinyl chloride;

WHEREAS, upon receipt of the DHS evaluation, the staff of the Board prepared a report, including and in consideration of the DHS evaluation and recommendations, in the form required by section 39661 of the Health and Safety Code and, in accordance with the provisions of that section, made the report available to the public and submitted it for review to the Scientific Review Panel (SRP) established pursuant to section 39670 of the Health and Safety Code;

WHEREAS, in accordance with section 39661 of the Health and Safety Code, the SRP reviewed the staff report, including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based, considered the public comments received regarding the report, and on October 19, 1990 adopted, for submittal to the board, findings which included the following:

1. There is strong evidence that exposure to vinyl chloride results in animal and human carcinogenicity. The United States Environmental Protection Agency (USEPA) assigned vinyl chloride to Group A of its classification scheme for carcinogens. In explaining its Group A category, the EPA states, "This group is used only when there is sufficient evidence from epidemiologic studies to support a causal association between exposure to the agents and cancer." The International Agency for Research on Cancer (IARC) assigned vinyl chloride to Group 1 of its classification scheme for carcinogens. In introducing its list of Group 1 carcinogens which included vinyl chloride, the IARC states, "The Working Group concluded that the following agents are carcinogenic to humans." Based on available scientific data, the Panel agrees with the EPA's and the IARC's classification of vinyl chloride as a human carcinogen.
2. Based on available scientific information, the DHS staff found no evidence of a vinyl chloride exposure level below which no carcinogenic effects are anticipated.
3. Based on the interpretation of available scientific evidence, the DHS staff estimated that the upper 95 percent confidence limits on the lifetime risk of cancer from vinyl chloride ranged from  $2.5 \times 10^{-6}$  ppb<sup>-1</sup> to  $20 \times 10^{-6}$  ppb<sup>-1</sup>. The DHS staff identified the best estimate of vinyl chloride cancer unit risk as the top of the upper confidence limits range,  $20 \times 10^{-6}$  ppb<sup>-1</sup> or  $7.8 \times 10^{-6}$  (ug/m<sup>3</sup>)<sup>-1</sup>. Table 1 compares the best estimate of vinyl chloride cancer unit risk with those of other compounds recently reviewed by the SRP.

<u>Compound</u>	<u>TABLE 1</u> <u>Unit Risk (ppb<sup>-1</sup>)</u>	<u>Unit Risk (ug/m<sup>3</sup>)<sup>-1</sup></u>
Vinyl chloride	20 x 10 <sup>-5</sup>	7.8 x 10 <sup>-5</sup>
Chloroform	2.6 x 10 <sup>-5</sup>	5.3 x 10 <sup>-6</sup>
Trichloroethylene	1.1 x 10 <sup>-5</sup>	2 x 10 <sup>-6</sup>
Inorganic arsenic	particulate	3.3 x 10 <sup>-3</sup>
Methylene chloride	3.5 x 10 <sup>-6</sup>	1 x 10 <sup>-6</sup>

Upper bound excess lifetime risks are health-protective estimates; the actual risk may well be below these values.

4. Landfills, publicly-owned treatment works, and polyvinyl chloride producers and fabricators are the major identified sources of vinyl chloride emissions in California's outdoor air.
5. Based on its gas-phase reactivity with hydroxyl radicals, vinyl chloride's estimated tropospheric lifetime ranges from 1.6 to 3.9 days.
6. Vinyl chloride has not been detected by the ARB's statewide ambient toxic air contaminant monitoring network. However, vinyl chloride has been detected in the ambient air near emission sources such as landfills.
7. The limited monitoring conducted in the Landfill Gas Testing Program which began in 1987 was designed to identify landfill sites that pose a potential risk to public health. Preliminary findings show that vinyl chloride concentrations ranging from the detection limit of 106 ppbv to 72,000 ppbv were detected in the internal gas of 160 (47 percent) out of the 340 landfills at which internal gas testing was performed. 24-hour averaged ambient vinyl chloride concentrations ranging from the detection limit of 2 ppbv to 15 ppbv were detected at 24 (10 percent) out of the 251 landfills at which ambient monitoring was performed.  
  
The limited testing conducted was designed to be used for screening purposes. For that reason, vinyl chloride may be present in the ambient air at additional landfills, but was not detected in the one to three days of ambient testing specified in the testing guidelines for the Program. Further interpretation of the data from specific landfill sites must also consider factors such as how the testing was carried out, along with location, size, and proximity to sensitive receptors.
8. Ambient vinyl chloride data from perimeter monitoring by the South Coast Air Quality Management District (SCAQMD) at two landfills in 1986 and 1987 were used in a model to estimate population-weighted exposures near the sites. These exposure estimates were based on ambient outdoor data and do not include any possible elevated indoor exposures that may occur inside homes near the landfills. The cancer risk from vinyl chloride exposure to people residing in the vicinity of the landfills may be determined using the DHS's best estimate of vinyl chloride

cancer unit risk of  $20 \times 10^{-5} \text{ppb}^{-1}$  (see Finding 3 above) and the modeled population-weighted exposure estimates.

- a. Population-weighted exposure for maximally exposed individuals living immediately adjacent to the landfills (at the fence line) was estimated to range from an annual average of approximately 0.6 to 9 ppbv vinyl chloride at OII Landfill and from approximately 2 to 10 ppbv at BKK Landfill.
  - b. Modeled estimates of exposure (not population-weighted) for 0 to 6,000 people living close to OII and for 0 to 2,500 people living close to BKK are included to provide an idea of the predicted exposure levels and risk directly downwind from the landfills. According to the model, 0 to 6,000 people near OII may have been exposed to annual average vinyl chloride concentrations of at least 3 ppbv and 0 to 2,500 people near BKK may have been exposed to annual average concentrations of at least 7 ppbv. Using the DHS's best estimate of cancer unit risk, 0 to 4 or more cancers were estimated to occur among the 6,000 people living closest to OII; and 0 to 4 or more cancers were estimated to occur among the 2,500 people living closest to BKK.
  - c. Population-weighted exposure results were calculated for the people living within a 41 square-kilometer area (or, approximately 25 square-mile area) of each landfill. For OII Landfill, approximately 4 million people may have been exposed to average annual concentrations ranging from 0.004 to 0.06 ppbv. For BKK Landfill, approximately 2 million people may have been exposed to annual average concentrations ranging from 0.08 to 0.34 ppbv. Using the DHS's best estimate of cancer unit risk, 4 to 48 cancers were estimated for the 4 million people living within approximately 25 square miles of OII; and 32 to 136 cancers were estimated for the 2 million people living within approximately 25 square miles of BKK.
9. The limited data available indicate that the vast majority of homes have very low, often undetectable, indoor vinyl chloride concentrations. However, grab samples collected by the South Coast Air Quality Management District (SCAQMD) in 1985 showed concentrations ranging from 8 to 100 ppbv inside a few homes near OII Landfill mentioned in Finding 8. Current indoor concentrations in the homes studied by the SCAQMD in 1985 are expected to be lower because of the subsequent installation of a landfill gas collection and flare system. In order to test this idea, additional indoor air monitoring at homes adjacent to the landfill is being considered.

Since vinyl chloride is not typically detected in indoor air, exposure through this route is not expected to significantly contribute to overall risk, except in the vicinity of certain landfills.

10. Non-carcinogenic health effects are not known to occur at: 1) the highest recorded 24-hour average outdoor concentration in California

(15 ppbv) (see Finding 7), 2) the estimated outdoor average annual vinyl chloride concentrations (see Findings 6 and 8), or 3) the highest recorded vinyl chloride concentration from the air inside a California home (100 ppbv) (see Finding 9).

11. Prior to 1975, vinyl chloride monomer levels as high as 20 ppmw were found in food packaged in vinyl chloride polymer containers or materials. In 1986, the Food and Drug Administration (FDA) proposed to limit the maximum amount of residual vinyl chloride monomer in rigid and semi-rigid food containers to 10 ppbw and the maximum amount of vinyl chloride monomer allowed in polymeric coatings and films which contact food to 5 ppbw. According to an FDA official, the regulation was not promulgated because it was believed that monomer stripping processes leave no residue of vinyl chloride monomer. There is no further information available on the levels of vinyl chloride in food containers and packaging. The exposure estimates in Finding 8 do not account for potential exposure from polymeric food packaging.

In California, surface water and ground water from public water systems are generally free of vinyl chloride. Since it is not typically detected in drinking water, exposure through this route is not expected to significantly contribute to the cancer burden attributed to vinyl chloride.

12. Because vinyl chloride was identified as a hazardous air pollutant under Section 112 of the United States Clean Air Act, identification of vinyl chloride as a toxic air contaminant is required by California Health and Safety Code Section 39655.
13. Based on all available scientific evidence, including consistent animal and human studies and the small range of dose extrapolation (from the animal studies), we conclude that the data are overwhelming that vinyl chloride is a toxic air contaminant.

WHEREAS, the SRP found the staff report to be without serious deficiency, and the SRP agreed with the staff recommendation that vinyl chloride should be listed by the Air Resources Board as a toxic air contaminant, and found that, based on available scientific information, the vinyl chloride exposure level below which carcinogenic effects are not expected to occur cannot be identified;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of Government Code;

WHEREAS, in consideration of the staff report, including the DHS' evaluation and recommendations, the available evidence, the findings of the SRP, and the written comments and public testimony it has received, the Board finds that:

There is strong evidence that vinyl chloride is a human carcinogen;

Health effects other than cancer are not anticipated at existing or expected vinyl chloride exposure levels in ambient outdoor air;

The DHS and the SRP agree that the most plausible estimate of the upper bound of the overall vinyl chloride cancer unit risk is  $20 \times 10^{-5}$  ppb<sup>-1</sup>;

There is not sufficient available scientific evidence to support the identification of a threshold exposure level for vinyl chloride;

Vinyl chloride is an air pollutant which, because of its carcinogenicity, may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Board regulations, that this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE BE IT RESOLVED, that the Board adopts the proposed regulatory amendment to section 93000, Titles 17 and 26, California Code of Regulations, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of Resolution 90-74, as adopted by the Air Resources Board.

  
\_\_\_\_\_  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider the Adoption of a Regulatory Amendment  
Identifying Chloroform as a Toxic Air Contaminant

Agenda Item No.: 90-19-2

Public Hearing Date: December 13, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified:

*Patricia Hutchens for*  
Judith M. Lounsbury  
Board Secretary

Date:

3/22/91

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MAY 7 1991

RESOURCES AGENCY OF CALIFORNIA

State of California  
AIR RESOURCES BOARD

Resolution 90-75

December 13, 1990

Agenda Item No.: 90-19-2

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to do such acts and to adopt such regulations as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the Board;

WHEREAS, Chapter 3.5 (commencing with Section 39650) of Part 2 of Division 26 of the Health and Safety Code establishes procedures for the identification of toxic air contaminants by the Board;

WHEREAS, Section 39655 of the Health and Safety Code defines a "toxic air contaminant" as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health;

WHEREAS, Section 39662 of the Health and Safety Code directs the Board to list, by regulation, substances determined to be toxic air contaminants, and to specify for each substance listed a threshold exposure level, if any, below which no significant adverse health effects are anticipated;

WHEREAS, in California, chloroform is emitted from many activities including chlorination of swimming pools and drinking water, bleaching of pulp at pulp and paper mills, pharmaceutical manufacturing, laboratory usage, flouorocarbon 22 production, publicly owned treatment works, cooling towers, domestic use of laundry bleach, combustion of leaded gasoline, air stripping towers, perchloroethylene production and contamination of chlorinated products; and chloroform is not naturally removed or detoxified in the atmosphere at a rate that would significantly reduce the resulting public exposure;

WHEREAS, pursuant to the request of the Board, the Department of Health Services (DHS) evaluated the health effects of chloroform in accordance with Section 39660 of the Health and Safety Code;

WHEREAS, DHS concluded in its evaluation that chloroform is causally associated with cancer in humans; that health effects other than cancer are not expected to occur at existing or expected ambient levels of chloroform; that based on the upper 95 percent confidence limit of potency, the estimated range of lifetime (70 year) excess lung cancer mortality risk from continuous exposure to 1 part per-billion (ppb) of atmospheric chloroform is from  $2.9 \times 10^{-6}$ /ppb to  $9.8 \times 10^{-5}$ /ppb and that, based on available data,  $2.6 \times 10^{-5}$ /ppb is the most plausible estimate of the upper bound of the overall unit risk;

WHEREAS, based on the best estimate of  $2.6 \times 10^{-5}$ /ppb and a population weighted outside exposure of .03 ppb, the DHS staff estimates that the excess carcinogenic risk from a 70-year lifetime exposure to ambient outdoor chloroform to be approximately 1 case per million persons exposed;

WHEREAS, for the reasons set forth in its evaluation, DHS treats chloroform-induced carcinogenesis as a nonthreshold phenomenon because DHS found no evidence that there is a carcinogenic threshold level for chloroform;

WHEREAS, upon receipt of the DHS evaluation, staff of the Board prepared a report including and in consideration of the DHS evaluation and recommendations and in the form required by Section 39661 of the Health and Safety Code and, in accordance with the provisions of that section, made the report available to the public and submitted it for review to the Scientific Review Panel (SRP) established pursuant to Section 39670 of the Health and Safety Code;

WHEREAS, in accordance with Section 39661 of the Health and Safety Code, the SRP reviewed the staff report, including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based, considered the public comments received regarding the report, and on August 14, 1990 adopted, for submittal to the Board, findings which include the following:

1. Chloroform has been identified as an animal carcinogen and should be regarded as a possible human carcinogen;
2. Chloroform is emitted into the air by a variety of stationary sources in California. It is emitted indoors and can give rise to concentrations that are greater than outdoor concentrations;
3. Based on its gas-phase reactivity with hydroxyl radicals, chloroform has an atmospheric lifetime estimated to range from 150 to 230 days;
4. Approximately 20 million people in California represented by the ARB toxics monitoring network (out of the 28 million total California population) are estimated to be exposed outdoors to a population-weighted mean chloroform concentration of 0.03 parts per billion (ppb);
5. Adverse health effects other than cancer are not known or expected to occur at predicted concentrations of chloroform in ambient outdoor air;
6. Based on available scientific information, a chloroform exposure level below which carcinogenic effects are not expected to occur cannot be identified with certainty;

7. Based on an interpretation of available scientific evidence, DHS staff estimated the range of unit risk (exposure to 1 ug/m (.21 ppb)) based on the upper 95% confidence limit is from  $2.9 \times 10^{-6}$  /ppb to  $9.8 \times 10^{-5}$  /ppb. Based on available data,  $2.6 \times 10^{-5}$  /ppb is the best estimate of potency as a unit risk. These upper bound excess lifetime risks are health protective estimates; the actual risk may well be below these values;
8. Inhalation exposure to a statewide mean ambient outdoor concentration (weighted by population) of 0.03 ppb for a population of 20 million people could result in up to 16 excess lifetime cancers, based on the DHS' best estimate for unit risk. Assuming that this applies to the California state population of 30 million, this could result in up to 24 excess lifetime cancers, based on the DHS' best estimate for unit risk;
9. Indoor inhalation exposures are greater than outdoor exposures and significantly contribute to risk beyond the estimated outdoor risk;
10. Chloroform in drinking water may contribute more to the overall risk from chloroform exposure than chloroform in ambient air. The risk from ingestion equals  $3.5 \times 10^{-5}$ . This corresponds to 35 excess cancer cases per 1 million people per lifetime based on average drinking water consumption; and
11. The numbers cited here are subject to a significant degree of uncertainty, because chloroform's mechanism of carcinogenicity has not been identified;

WHEREAS, the SRP found the staff report to be without serious deficiency, and the SRP agreed with the staff recommendation that chloroform should be listed by the Air Resources Board as a toxic air contaminant, and found that, based on available scientific information, the chloroform exposure level below which carcinogenic effects are not expected to occur cannot be identified;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available;

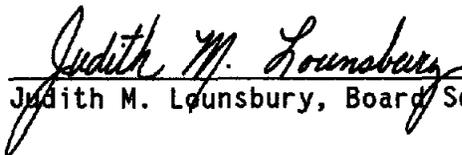
WHEREAS, a public hearing and other administrative proceedings have been held in accordance with provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of Government Code;

WHEREAS, in consideration of the staff report, including DHS' evaluation and recommendations, the available evidence, the findings of the SRP, and the written comments and public testimony it has received, the Board finds that:

1. Chloroform has been identified as an animal carcinogen and should be regarded as a possible human carcinogen;
2. Health effects other than cancer are not anticipated at existing or expected chloroform exposure levels in ambient outdoor air;
3. Indoor air exposures range from outdoor levels up to approximately ten times greater than that of outdoor exposures;
4. The DHS and the SRP agree that the most plausible estimate of the upper bound of the overall unit risk is  $2.6 \times 10^{-5}$ /ppb;
5. Chloroform is an air pollutant which, because of its carcinogenicity, may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health and is therefore a toxic air contaminant;
6. There is not sufficient available scientific evidence to support the identification of a threshold exposure level for chloroform; and
7. Pursuant to the requirements of the California Environmental Quality Act and Board regulations, this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE BE IT RESOLVED, that the Board hereby identifies chloroform as a toxic air contaminant and adopts the proposed regulatory amendment to Section 93000, Titles 17 and 26, California Code of Regulations, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of Resolution 90-75, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

**Response to Significant Environmental Issues**

Item: Public Hearing to Consider Adoption of and Amendments to Regulations  
Limiting the Aromatic Hydrocarbon Content of Motor Vehicle Diesel  
Fuel

Agenda Item No.: 90-19-3

Public Hearing Date: December 13, 1990

Issuing Authority: Air Resources Board

Comment: No comments were received identifying any significant  
environmental issues pertaining to this item. The staff report  
identified no adverse environmental effects.

Response: N/A

Certified: Pat Hutchens  
Pat Hutchens  
Board Secretary

Date: October 17, 1991

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**JAN 21 1993**  
**RESOURCES AGENCY OF CALIFORNIA**

State of California  
AIR RESOURCES BOARD

Resolution 90-76

December 13, 1990

Agenda Item No.: 90-19-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the Board) to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Health and Safety Code section 43013 authorizes the Board to adopt and implement motor vehicle fuel specifications for the control of air contaminants which the Board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of Division 26 of the Health and Safety Code;

WHEREAS, Health and Safety Code sections 43018(a) and (b) direct the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date, and direct the Board no later than January 1, 1992 to take whatever actions are necessary, cost effective, and technologically feasible in order to achieve, not later than December 31, 2000, specified reductions in the emissions of air pollutants from vehicular sources, including the emissions of oxides of nitrogen (NOx) and particulate matter (PM);

WHEREAS, following a hearing on November 17, 1988, the Board approved and subsequently adopted Title 13, California Code of Regulations, section 2256, which establishes a basic statewide aromatic hydrocarbon limit for motor vehicle diesel fuel of 10 percent by volume, starting October 1, 1993, with a less stringent 20% standard for small refiners and a temporary 20% standard for independent refiners;

WHEREAS, section 2256(g) contains provisions intended to enable diesel fuel producers and importers to comply with the regulation with a set of diesel fuel specifications of their choosing if they can demonstrate that the alternative specifications result in the same emission benefits as the 10 percent aromatic standard (or, in the case of small refiners, the 20 percent standard);

WHEREAS, section 2256(g) identifies a test procedure for comparative testing of a prototype (candidate) fuel and a reference fuel representative of potential 10 percent aromatics diesel fuel, involving back-to-back tests using a specified heavy-duty diesel engine; identifies the statistical methodology to be used in comparing the emissions of NOx, PM, and the soluble organic fraction of the particulate matter ("SOF") resulting from

the two fuels; and establishes a process for certifying formulations of diesel fuel that satisfy the regulatory criteria;

WHEREAS, the staff has proposed amendments to section 2256(g) which include changes to the statistical methods used to compare the candidate and reference fuels, clarifying and expanding the procedures for applying for certification of a candidate fuel, requiring the comparison of emissions of the polycyclic aromatic hydrocarbon (PAH) component of the PM emissions, and specifying the effect of the amendments on any diesel fuel formulation certified prior to the effective date of the amendments;

WHEREAS, at the public hearing to consider this matter the staff has proposed modifications to various elements of the originally-proposed amendments;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts and alternatives or feasible mitigation measures to the proposed action are available which would substantially reduce or avoid such impacts;

WHEREAS, the Board has considered the impact of the proposed regulations on the economy of the state;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

Emissions from diesel-powered motor vehicles contribute to ambient concentrations of ozone, nitrogen dioxide, PM10, nitric acid and visibility reducing particles, and increase cancer risk to exposed persons;

The national and/or state ambient air quality standards for ozone, nitrogen dioxide, PM10 and visibility are violated in California;

Reducing the aromatic hydrocarbon content of motor vehicle diesel fuel reduces emissions of NOx (a precursor of ozone) and particulate matter from diesel-powered motor vehicles;

The statistical methodology in existing section 2256(g) for comparing emissions resulting from the candidate and reference fuels does not adequately minimize the likelihood that a candidate fuel with unacceptably higher emissions than the reference fuel will be approved;

The statistical methodology in the amendments approved herein will help assure that candidate fuels having unacceptably

higher emissions than the reference fuel will be disapproved, while also assuring that fuels that do have equivalent emissions to the reference fuel can be certified;

The provisions in the amendments approved herein which pertain to the application, test, and certification procedures are necessary and appropriate to assure the sound and uniform consideration of candidate fuels;

The provisions in the amendments approved herein pertaining to the amendments' effect on any diesel fuel formulation certified prior to the effective date of the amendments are necessary to assure that section 2256(g) does not result in the approval of a candidate fuel that can have a permanent adverse impact on the emissions reductions expected from the underlying regulation;

Requiring a separate comparison of PAH emissions from the candidate and reference fuels is not necessary at this time to provide adequate consideration of the potential toxic effects of the two fuels;

Section 2256 as modified by the amendments approved herein continues to be technologically feasible and to have a cost-effectiveness within the range of other control measures adopted to reduce emissions of NOx and PM; and

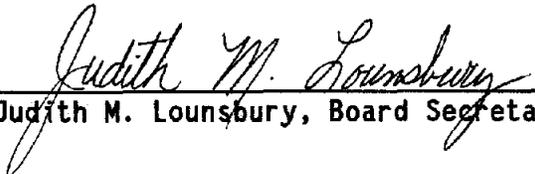
The amendments approved herein are not expected to result in any significant adverse environmental impacts which were not identified and addressed in the rulemaking approving section 2256; to the extent that any additional processing and associated changes at refineries would be required because of the decreased likelihood that a candidate fuel having unacceptably higher emissions than the reference fuel may be certified, the adverse effects of any increases in refinery emissions of sulfur dioxide and NOx not otherwise mitigated would be outweighed by the benefits of reductions in diesel vehicle NOx and PM emissions resulting from the amendments.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the amendments to Title 13, California Code of Regulations, section 2256 set forth in Attachment A hereto, with the modifications contained in Attachment B hereto omitting Attachment 1, and with further modifications, including conforming revisions to the test protocol deemed appropriate by the Executive Officer, to allow the use of only hot start exhaust emission tests provided a minimum of twenty hot start tests are conducted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to prepare a text of amendments to Title 13, California Code of Regulations, section 2256 reflecting and showing the modifications approved herein, and to adopt the modified amendments after making them available to the public

for a period of fifteen days, with such further modifications as may be appropriate, provided that the Executive Officer shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted in light of supplemental written comments received.

I hereby certify that the above is a true and correct copy of Resolution 90-76, as adopted by the Air Resources Board.

  
Judith M. Lounsbury  
Judith M. Lounsbury, Board Secretary

TO COMMISSIONER  
AIR RESOURCES BOARD  
SACRAMENTO, CALIF.  
JULY 1, 1976

90-77

Dropped

No Resolution

90-78  
Missing  
No Resolution

State of California  
AIR RESOURCES BOARD

Resolution 90-79

December 13, 1990

Agenda Item No.: 90-19-6

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Sections 87300-87302 of the Government Code authorize and require the Board to adopt a Conflict of Interest Code containing certain specified provisions;

WHEREAS, the Board has established a Conflict of Interest Code in Sections 95000-95007, Title 17, California Code of Regulations;

WHEREAS, the Board's Conflict of Interest Code incorporates by reference the Standard Conflict of Interest Code established by the Fair Political Practices Commission (FPPC) in Section 18730, Title 2, California Code of Regulations, designates the Board and staff positions which involve the making or participation in the making of decisions which may foreseeably have a material effect on financial interests, and establishes disclosure categories which specify the kinds of financial interests that must be reported by the various designated employees;

WHEREAS, since the last formal amendment of the Board's Conflict of Interest Code, the Air Resources Board has added new positions and a new advisory committee, and has reorganized its staff and their duties;

WHEREAS, Board staff has proposed amendments to Sections 95000 through 95006, Title 17, California Code of Regulations, which would (1) add to the Board's list of designated employees new positions which have been created and delete positions which no longer exist; (2) add the Modeling Advisory Committee to those who are subject to disclosure requirements; (3) amend the language to reflect the reorganization of staff; and (4) add the Contracts Manager, the procurement officers and the Regional Administrative Officer to those positions in the Administrative Services Division that are subject to disclosure requirements;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

1. The amendments to Sections 95000 through 95007, Title 17, California Code of Regulations, set forth in Attachment A appropriately reflect additions and changes to the designated disclosure categories of the Board's conflict of interest regulations consistent with the requirements of applicable law; and
2. The amendments set forth in Attachment A meet the requirements of Sections 87300-87313 of the Government Code.

THEREFORE, BE IT RESOLVED that the Board hereby amends and adopts Sections 95000-95007, Title 17, California Code of Regulations, as set forth in Attachment A hereto.

I hereby certify that the above is a true and correct copy of Resolution 90-79, as adopted by the Air Resources Board.

  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-80

December 13, 1990

Agenda Item No.: 90-20-1

WHEREAS, section 39000 declares that the people of the State of California have a primary interest in the quality of the physical environment in which they live, and that this physical environment is being degraded by the waste and refuse of civilization polluting the atmosphere, thereby creating a situation which is detrimental to the health, safety, welfare, and sense of well-being of the people of California;

WHEREAS, section 39003 of the Health and Safety Code charges the Air Resources Board ("Board") with coordinating efforts to attain and maintain ambient air quality standards;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Board to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000.5 of the Health and Safety Code, the Legislature found and declared that despite significant reductions in vehicle emissions in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent attainment of the state standards, but in some cases, to result in worsening of air quality;

WHEREAS, section 43013 authorizes the Board to adopt standards and regulations for the control of contaminants for off-road sources, including utility engines;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to achieve the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to accomplish the attainment of state standards at the earliest possible date, and to hold hearings to consider adoption of regulations for utility engines by November 1991;

WHEREAS, the Federal District Court for the Northern District of California in the consolidated cases of Citizens for a Better Environment et al. v. George Deukmejian, et al. and Sierra Club v. Metropolitan Transportation Commission, Case Nos. C89-2044 TEH and C89-2064 TEH (hereinafter referred to as the "CBE litigation"), found the Board and the Bay Area Air Quality Management District liable for failing to adopt and implement a regulation for utility engines under the 1982 State Implementation Plan and ordered

such agencies to adopt a regulation for utility engines in the Bay Area by January 7, 1991;

WHEREAS, section 39515 and 39516 provide that the Board may delegate any duty to the Executive Officer which the Board deems appropriate and that any power, duty, purpose, function, or jurisdiction which the Board may lawfully delegate shall be conclusively presumed to have been delegated to the Executive Officer unless the Board has expressly reserved such authority onto itself;

WHEREAS, the staff has proposed adoption of regulations under Title 13, California Code of Regulations Section 2400, et seq. and procedures and documents to be incorporated by reference therein for 1994 and subsequent model utility and lawn and garden equipment engines, including emission standards, test procedures, emission control labels and specifications, emission control system warranties, enforcement procedures, and compliance testing;

WHEREAS, the Board has considered the effects of the proposed standards on the economy of the state;

WHEREAS, the Federal Clean Air Act, as amended in 1990, recently became effective, and section 209(e) of that Act requires that the ARB receive authorization from the Administrator of the Environmental Protection Agency (EPA) to adopt and enforce standards relating to the control of emissions from nonroad engines or vehicles;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with Section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

Despite advances in reducing emissions from motor vehicles, California still has the most severe air pollution problems in the United States;

It is now necessary, because of these serious pollution problems, to attempt to achieve emissions reductions from sources such as utility and lawn and garden equipment engines, which have previously been unregulated;

The proposed utility and lawn and garden equipment engine regulations are necessary, cost-effective, and

technologically feasible to carry out the purposes of the California Clean Air Act;

The proposed regulations for utility and lawn and garden equipment engines will result in emissions reductions that will help attain and maintain national and ambient air quality standards for ozone, carbon monoxide and nitrogen dioxide;

In authorizing the Board to adopt regulations for utility and lawn and garden equipment engines, the Legislature intended such regulations to be fully enforceable; and

The proposed regulations and procedures for emission control labels, warranties, enforcement procedures, and compliance testing are necessary to adequately enforce regulations establishing emission standards and test procedures that will reduce emissions for utility and lawn and garden equipment engines and will in and of themselves help to reduce emissions from such sources.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves Sections 2400-2407, Title 13, California Code of Regulations, "California Exhaust Emission Standards and Test Procedures for 1994 and Subsequent Model Year Utility and Lawn and Garden Equipment Engines," "California New Utility and Lawn and Garden Equipment Engine Compliance and Quality-Audit Test Procedures," and "California Utility and Lawn and Garden Equipment Engine Emission Control Label Specifications," as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Sections 2400-2407, Title 13, California Code of Regulations, "California Exhaust Emission Standards and Test Procedures for 1994 and Subsequent Model Year Utility and Lawn and Garden Equipment Engines," "California New Utility and Lawn and Garden Equipment Engine Compliance and Quality-Audit Test Procedures," and "California Utility and Lawn and Garden Equipment Engine Emission Control Label Specifications," after making it available to the public for a period of 15 days provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations approved herein will not cause the California emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards; that California needs such standards to meet compelling and extraordinary conditions within the State; that the standards and accompanying enforcement procedures are not inconsistent with the

Federal Clean Air Act, as amended; and that the regulations raise no new issues affecting previous waiver determinations of the Administrator of EPA.

BE IT FURTHER RESOLVED that the Executive Officer shall forward the regulations approved herein to the Administrator of EPA with a request that California be given authorization to adopt and enforce such regulations.

BE IT FURTHER RESOLVED that the Board delegates to the Executive Officer to incorporate technical revisions as needed to the "California Exhaust Emission Standards and Test Procedures for 1994 and Subsequent Model Year Utility and Lawn and Garden Equipment Engines."

BE IT FURTHER RESOLVED that the Board directs staff to consult with industry through workshops and report back to the Board in 1994 and 1996 on the status of compliance with the 1999 standards, Sections 2400-2407 and the incorporated documents therein.

I hereby certify that the above is a true and correct copy of Resolution 90-80, as adopted by the Air Resources Board.

*Judith M. Lounsbury*  
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Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-81

December 14, 1990

Agenda Item No.: 91-1-5

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911;

WHEREAS, a solicited research proposal, Number 220-39 entitled "Studies to Determine Long-Term Health Effects of Acidic Atmospheres," has been submitted by New York University Medical Center;

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

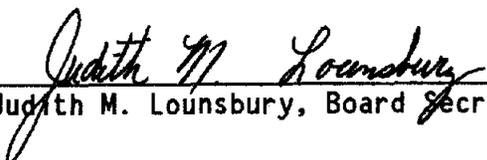
Proposal Number 220-39, entitled "Studies to Determine Long-Term Health Effects of Acidic Atmospheres," submitted by New York University, for a total amount not to exceed \$609,432.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 220-39, entitled "Studies to Determine Long-Term Health Effects of Acidic Atmospheres," submitted by New York University, for a total amount not to exceed \$609,432.

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 in an amount not to exceed \$609,432.

I certify that the above is a true and correct copy of Resolution 90-81, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-82

December 14, 1990

Agenda Item No.: 91-1-5

WHEREAS, the Air Resources Board has been directed to design and implement a comprehensive program of research and monitoring of acid deposition in California pursuant to Health and Safety Code Sections 39900 through 39911;

WHEREAS, a solicited research proposal, Number 221-39 entitled "Studies to Determine Long-Term Health Effects in Acidic Atmospheres," has been submitted by University of California, Irvine;

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

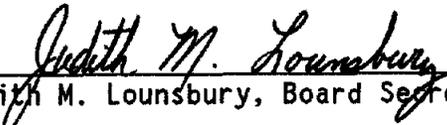
Proposal Number 221-39, entitled "Studies to Determine Long-Term Health Effects in Acidic Atmospheres," submitted by University of California, Irvine, for a total amount not to exceed \$490,000.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 221-39, entitled "Studies to Determine Long-Term Health Effects in Acidic Atmospheres," submitted by University of California, Irvine, for a total amount not to exceed \$490,000.

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 in an amount not to exceed \$409,000.

I hereby certify that the above is a true and correct copy of Resolution 90-82, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-83

December 14, 1990

Agenda Item No.: 91-1-5

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 39900 through 39911;

WHEREAS, an unsolicited research proposal, Number 222-40, entitled "Watershed Biogeochemical Processes Affecting Surface Waters in the Sierra Nevada, with Emphasis on Snow Melt Episodes", has been submitted by the University of California, Santa Barbara;

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

WHEREAS, the Scientific Advisory Committee on Acid Deposition has reviewed and recommends for funding:

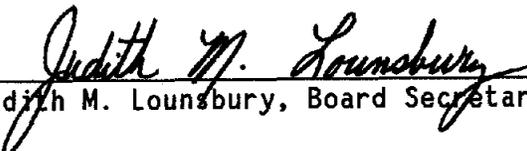
Proposal Number 222-40, entitled "Watershed Biogeochemical Processes Affecting Surface Waters in the Sierra Nevada, with Emphasis on Snow Melt Episodes", submitted by the University of California, Santa Barbara, for a total amount not to exceed \$352,659.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39904, hereby accepts the recommendation of the Scientific Advisory Committee on Acid Deposition and approves the following:

Proposal Number 222-40, entitled "Watershed Biogeochemical Processes Affecting Surface Waters in the Sierra Nevada, with Emphasis on Snow Melt Episodes", submitted by the University of California, Santa Barbara, for a total amount not to exceed \$352,659.

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 in an amount not to exceed \$352,659.

I hereby certify that the above is a true and correct copy of Resolution 90-83, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-84

December 14, 1990

Agenda Item No.: 91-1-5

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 solicited research proposal, Number 1794-159 entitled "Determination of Usage Patterns and Emissions for Propane/LPG", has been submitted by Freeman, Sullivan & Co.;

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:

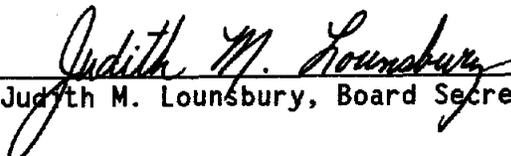
Proposal Number 1794-159 entitled "Determination of Usage Patterns and Emissions for Propane/LPG", submitted by Freeman, Sullivan & Co., for a total amount not to exceed \$37,960.

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 1794-159 entitled "Determination of Usage Patterns and Emissions for Propane/LPG", submitted by Freeman, Sullivan & Co., for a total amount not to exceed \$37,960.

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 in an amount not to exceed \$37,960.

I hereby certify that the above is a true and correct copy of Resolution 90-84, as adopted by the Air Resources Board.

  
Judith M. Lounsbury, Board Secretary

State of California  
AIR RESOURCES BOARD

Resolution 90-85

December 14, 1990

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, an unsolicited research proposal, Number 1797-159 entitled "Biodegradation Technology for VOC Removal from Airstreams; Phase 1: Performance Verification" has been submitted by the University of California, Davis;

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:

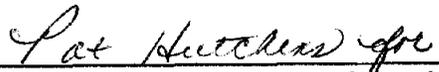
Proposal No. 1797-159 entitled "Biodegradation Technology for VOC Removal from Airstreams; Phase 1: Performance Verification" submitted by the University of California, Davis, for a total amount not to exceed \$53,178.

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 No. 1797-159 entitled "Biodegradation Technology for VOC Removal from Airstreams; Phase 1: Performance Verification" submitted by the University of California, Davis, for a total amount not to exceed \$53,178.

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 in an amount not to exceed \$53,178.

I hereby certify that the above is a true and correct copy of Resolution 90-85, as adopted by the Air Resources Board.

  
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Jude Lounsbury, Board Secretary