State of California

AIR RESOURCES BOARD

Resolution 88-25
April 7, 1988

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 1570-138, entitled "Evaporative Emissions Running Loss Determination," has been submitted by the National Institute for Petroleum and Energy Research; 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 1570-138, entitled "Evaporative Emissions Running Loss Determination," submitted by the National Institute for Petroleum and Energy Research, for a total amount not to exceed $50,000.

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 1570-138, entitled "Evaporative Emissions Running Loss Determination," submitted by the National Institute for Petroleum and Energy Research, for a total amount not to exceed $50,000.

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 $50,000.

I hereby certify that the above is a true and correct copy of Resolution 88-25, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 2
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1570-138 entitled "Evaporative Emissions Running Loss Determination."

RECOMMENDATION: Adopt Resolution 88-25 approving Proposal No. 1570-138 for an amount not to exceed $50,000.

SUMMARY: This proposal was received in response to the ARB's Request for Proposals on Innovative Control Technology. This is the second of three proposals recommended for funding in response to this RFP.

The National Institute for Petroleum and Energy Research (NIPER) proposes to investigate running loss emissions from selected motor vehicles operated under conditions representative of those in California. Running loss emissions are evaporative emissions from a vehicle while it is being driven. Such emissions have been shown to be a significant fraction of the total vehicular hydrocarbon emissions and they are not presently controlled, measured or taken into account in emission inventories.

Vehicles would be operated on a chassis dynamometer within an environmental chamber, with intake air and exhaust ducted to and from the vehicle. The hydrocarbon build-up in the chamber would be quantified and related to the test cycle. Specific emission sources on the vehicle would be identified, and their relative significance would be established. Options for control of running loss emissions would be investigated and assessed.

Running loss emissions, which only recently have been characterized by NIPER, could account for a significant portion of the disparity between the

BUDGET SUMMARY

National Institute for Petroleum and Energy Research

"Evaporative Emissions Running Loss Determination"

BUDGET ITEMS:

Salaries	$13,753	
Benefits	4,194	
Travel	785	
Consultants	-0-	
Other Costs*	3,500	
TOTAL, Direct Cost		$22,232
TOTAL, Indirect Cost		27,768
	TOTAL PROJECT COST	$50,000

*Includes dynamometer supplies, gases, instrument components, vehicle lease, printing and miscellaneous.

State of California

AIR RESOURCES BOARD

Resolution 88-26
April 7, 1988

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 1595-138, entitled "Formaldehyde Emission Control Technology For Methanol-Fueled Vehicles," has been submitted by Southwest Research Institute;

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

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

> Proposal Number 1595-138, entitled "Formaldehyde Emission Control Technology For Methanol-Fueled Vehicles," submitted by Southwest Research Institute, for a total amount not to exceed $299,097.

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 1595-138, entitled "Formaldehyde Emission Control Technology for Methanol-Fueled Vehicles," submitted by Southwest Research Institute, for a total amount not to exceed $299,097.

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 $299,097.

I hereby certify that the above is a true and correct copy of Resolution 88-26, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 3
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1595-138 entitled "Formaldehyde Emission Control Technology for Methanol-Fueled Vehicles."

RECOMMENDATION: Adopt Resolution 88-26 approving Proposal No. 1595-138 for an amount not to exceed $299,097.

SUMMARY: The purpose of this study is to address the ARB's goal of evaluating the use of clean fuels as a future air pollution control strategy. Specifically, the objective of this study is to develop and test the durability of emission control systems capable of reducing formaldehyde emissions from methanol-fueled vehicles. The target level for formaldehyde emissions reduction is the same concentration level currently emitted by gasoline-fueled vehicles, without adversely affecting control of criteria pollutants. The control systems will be developed for four vehicles, including two dedicated methanol fuel and two flexible fuel vehicles. Following development of the control systems, the vehicles would be provided to the ARB staff for 100,000-mile durability testing.

The contractor is Southwest Research Institute and the principal investigator is Mr. Harry Dietzmann.

BUDGET SUMMARY

Southwest Research Institute

"Formaldehyde Emission Control Technology
For Methanol-Fueled Vehicles."

BUDGET ITEMS:

Salaries	$64,089	
Benefits	24,995	
Travel	1,700	
Supplies	16,285	
Other Costs*	61,500	
TOTAL, Direct Cost		$168,569
TOTAL, Indirect Cost		130,528
	TOTAL PROJECT COST	$299,097

*Of this amount, $60,000 is for the purchase of four methanol-fueled vehicles that will be delivered to the ARB for long-term durability testing and which will be the property of the State at the conclusion of this study.

State of California

AIR RESOURCES BOARD

Resolution 88-27
April 7, 1988

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 1566-137R entitled "Hydroxynitro-PAH and Other PAH Derivatives in California's Atmosphere and Their Contribution to Ambient Mutagenicity," 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 1566-137R, entitled "Hydroxynitro-PAH and Other PAH Derivatives in California's Atmosphere and Their Contribution to Ambient Mutagenicity," submitted by the University of California, Riverside, for a total amount not to exceed $273,609.

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 1566-137R, entitled "Hydroxynitro-PAH and Other PAH Derivatives in California's Atmosphere and Their Contribution to Ambient Mutagenicity," submitted by the University of California, Riverside, for a total amount not to exceed $273,609.

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 $273,609.

I hereby certify that the above is a true and correct copy of Resolution 88-27, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 4
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1566-137R entitled "Hydroxynitro-PAH and Other PAH Derivatives in California's Atmosphere and Their Contribution to Ambient Mutagenicity"

RECOMMENDATION: Adopt Resolution 88-27 approving Proposal No. 1566-137R for funding in an amount not to exceed $273,609 (two year effort)

SUMMARY:

Polycyclic aromatic hydrocarbons (PAHs) are candidate toxic air contaminants of great concern throughout California. The objectiive of this study is to identify and quantify the concentrations of PAHs in the atmosphere, in both the particle and vapor phases, that contribute to the mutagenicity and carcinogenicity of the atmosphere. PAHs emitted from combustion sources and transformed in a smoggy atmosphere to more highly polar compounds exhibit direct-acting mutagenic properties in the Ames short-term bioassay. To date, only about 10 percent of the responsible compounds have been identified.

Although the atmospheric chemistry of aromatic compounds and the PAHs is still not well understood with respect to reaction products formed under atmospheric conditions, University of California investigators have now identified the process that produce many of them.

The successful identification and quantification of these compounds will allow their carcinogenic

BUDGET SUMMARY

University of California, Riverside

"Hydroxynitro-PAH and Other PAH Derivatives in California's Atmosphere and Their Contribution to Ambient Mutagenicity

BUDGET ITEMS:

Salaries	$163,807	
Benefits	42,036	
Supplies	19,742	
Other Costs*	17,400	
Travel	5,750	
TOTAL, Direct Cost		$248,735
TOTAL, Indirect Cost		24,874
	TOTAL PROJECT COST	$273,609

*Maintenance of analytical systems, report preparation

State of California

AIR RESOURCES BOARD

Resolution 88-29
April 7, 1988

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 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," has been submitted by Radian 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 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," submitted by Radian Corporation, for a total amount not to exceed $49,995.

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 to proceed with the proposed research project and approves the following:

> Proposal Number 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," submitted by Radian Corporation, for a total amount not to exceed $49,995, provided that a minimum of 25 percent of the total amount be funded by sources other than the Air Resource Board.

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 $37,496.

I hereby certify that the above is a true and correct of Resolution 88-29, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 5
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1582-138 entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices"

RECOMMENDATION: Adopt Resolution 88-29 approving Proposal No. 1582-138 for an amount not to exceed $49,995.

SUMMARY: This proposal was received in response to the ARB's Request for Proposals on Innovative Control Technology. This is the third of three proposals recommended for funding in response to this RFP.

Radian proposes to demonstrate the applicability of membrane technology as a preconcentrating step for other conventional volatile organic compound (VOC) control devices such as carbon adsorption or incineration. The advantage of using the membrane as a preconcentrator is reduction of the size and cost of the conventional control device. Use of membranes may make conventional control devices more cost-effective and more readily applicable to sources of VOC that have concentrations too low for practical application of conventional emission control technology.

Specifically, Radian proposes to test several combinations of VOC/membrane materials on a bench-scale and use the resulting data to develop preliminary conceptual system designs. With these conceptual designs, Radian would provide cost estimates for both the capital and operating costs of the membrane assisted system, and compare these costs to the costs of systems which do not utilize the VOC preconcentrator.

BUDGET SUMMARY

Radian Corporation

"Evaluation of Membrane Materials as
Innovative Volatile Organic Control Devices"

BUDGET ITEMS:

Salaries	$14,193	
Benefits	-0-	
Travel	1,600	
Consultants	-0-	
Other Costs*	5,460	
TOTAL, Direct Cost		$21,253
TOTAL, Indirect Cost		28,742
	TOTAL PROJECT COST	$49,995

*Includes standard gases, miscellaneous supplies, printing and mail.

State of California

AIR RESOURCES BOARD

Resolution 88-29
April 7, 1988

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 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," has been submitted by Radian 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 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," submitted by Radian Corporation, for a total amount not to exceed $49,995.

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 1582-138, entitled "Evaluation of Membrane Materials as Innovative Volatile Organic Control Devices," submitted by Radian Corporation, for a total amount not to exceed $49,995.

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 $49,995.

I hereby certify that the above is a true and correct copy of Resolution 88-29, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

BUDGET SUMMARY

Radian Corporation

"Evaluation of Membrane Materials as
Innovative Volatile Organic Control Devices"

BUDGET ITEMS:

Salaries	$14,193	
Benefits	-0-	
Travel	1,600	
Consultants	-0-	
Other Costs*	5,460	
TOTAL, Direct Cost		$21,253
TOTAL, Indirect Cost		28,742
	TOTAL PROJECT COST	$49,995

*Includes standard gases, miscellaneous supplies, printing and mail.

State of California

AIR RESOURCES BOARD

Resolution 88-30
April 7, 1988

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 1592-138, entitled "Hydrocarbon Emissions from Vegetation Found in California's Central Valley," 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:

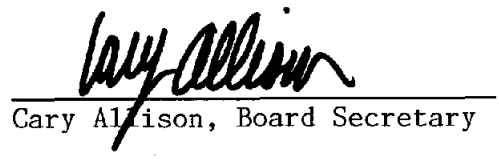
> Proposal Number 1592-138, entitled "Hydrocarbon Emissions from Vegetation Found in California's Central Valley," submitted by the University of California, Riverside, for a total amount not to exceed $169,983.

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 1592-138, entitled "Hydrocarbon Emissions from Vegetation Found in California's Central Valley," submitted by the University of California, Riverside, for a total amount not to exceed $169,983.

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 $169,983.

I hereby certify that the above is a true and correct copy of Resolution 88-30, as adopted by the Air resources Board.



Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 6
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1592-138 entitled "Hydrocarbon Emissions from Vegetation Found in California's Central Valley"

RECOMMENDATION: Adopt Resolution 88-30 approving Proposal No. 1592-138 for an amount not to exceed $169,983.

SUMMARY: The purpose of this project is to determine experimentally the emission rates and chemical composition of organic gases from types of vegetation that are most likely to affect oxidant formation in the Central Valley.

The University of California, Riverside, would obtain sunlight- and temperature-dependent, speciated hydrocarbon emissions data for thirty of the most important agricultural crops and natural species of vegetation in the Central Valley. UCR would also determine the corresponding leaf biomass of the plant specimens whose hydrocarbon emission fluxes are measured. These data will be obtained in a form directly applicable to the reactive organic gas emissions inventory for the Central Valley.

Data from this study will be used to upgrade the ARB's Emission Inventory in order to improve the reliability of air quality strategies developed for the Central Valley. This project would complement the Board's efforts through the Joint Powers Agency to improve capabilities for ozone modeling in the Central Valley.

The contractor would be the University of California at Riverside and the principal investigator would be Dr. Arthur M. Winer.

BUDGET SUMMARY

University of California, Riverside

"Hydrocarbon Emissions from Vegetation
Found in California's Central Valley"

BUDGET ITEMS:

Salaries	$108,600	
Benefits	29,555	
Travel	2,150	
Consultants	-0-	
Other Costs*	14,370	
TOTAL, Direct Cost		$154,675
TOTAL, Indirect Cost		15,308
	TOTAL PROJECT COST	$169,983

*Supplies including chromatography equipment, gas standards, elution gases, fittings, pipe, pots, fertilizer, etc. Equipment including sensors, gas mixing system, calibration and shop charges.

State of California

AIR RESOURCES BOARD

Resolution 88-31
April 7, 1988

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 1596-138, entitled "Study of Economic Incentives to Control Photochemically Reactive Organic Compound Emissions From Consumer Products," has been submitted by ICF Technology, Incorporated;

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 1596-138, entitled "Study of Economic Incentives to Control Photochemically Reactive Organic Compound Emissions From Consumer Products," submitted by ICF Technology, Incorporated, for a total amount not to exceed $106,318.

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 1596-138, entitled "Study of Economic Incentives to Control Photochemically Reactive Organic Compound Emissions From Consumer Products," submitted by ICF Technology, Incorporated, for a total amount not to exceed $106,318.

I hereby certify that the above is a true and correct copy of Resolution 88-31, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 7
DATE: April 7, 1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No.1596-138 titled "Study of Economic Incentives to Control Photochemically Reactive Organic Compound Emissions From Consumer Products"

RECOMMENDATION: Adopt Resolution 88-31 approving Proposal No. 1596-138 for an amount not to exceed $106,318.

SUMMARY: The purpose of this project is to assist the Board in evaluating the feasibility of economic incentives to reduce emissions from sources which cannot be effectively controlled through direct regulation.

Certain consumer products contain solvents which evaporate into the air upon product use and which substantially contribute to formation of ozone. Efforts by the ARB and local districts to control solvents in such products (e.g., paints) using direct regulation have reduced emissions only slightly in the last decade. Population and economic growth have and will continue to cause increased product use and associated emissions. A more effective approach than direct regulation seems to be needed.

This project investigates and evaluates economic incentives as a potentially effective approach to control emissions from solvents. In particular, this study would select one consumer product category to use as a "test case" for designing economic incentives. Researchers would identify potentially viable approaches to using economic incentives, and would determine, for the most promising approaches: expected emissions reductions, cost effectiveness,

State of California

AIR RESOURCES BOARD

Resolution 88-32
April 7, 1988

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 1599-138, entitled "Activity Patterns of California Children: A Micro-behavioral Approach," has been submitted by University of California, Berkeley; 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 1599-138, entitled "Activity Patterns of California Children: A Micro-behavioral Approach," submitted by University of California, Berkeley, for a total amount not to exceed $199,995.

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 1599-138, entitled "Activity Patterns of California Children: A Micro-behavioral Approach," submitted by University of California, Berkeley, for a total amount not to exceed $199,995.

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 $199,995.

I hereby certify that the above is a true and correct copy of Resolution 88-32, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 88-5-3(b) 8
DATE: April 7,1988

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1599-138 entitled "Activity Patterns of California Children: A Micro-behavioral Approach"

RECOMMENDATION: Adopt Resolution 88-32 approving Proposal No. 1599-138 for an amount not to exceed $199,995.

SUMMARY: Realistic health risk assessments for air pollutants require representative data on activity patterns of Californians. Because children are inherently more sensitive and more exposed than adults to many toxic substances, characterization of children's activity patterns is very important for making realistic exposure or dose estimates. However, existing data on children are inadequate because they apply only to limited population subgroups or employ inappropriate methodology.

The purpose of this study is to obtain statistically representative information with respect to the time California's children under 12 years of age spend in various locations and activities. A random sample of households will be selected and detailed activity and location data will be obtained by phone interviews of children, the most knowledgeable adult, or both, depending on the child's age. Interviewers will help the interviewer develop a 24-hour "diary" and ask supplemental questions regarding pollutant exposures. The methods will be pre-tested and checked for parental recall bias. The study will begin in July 1988 and last for two years. Principal investigators are Dr. James A. Wiley and Dr. John P. Robinson of the University of California, Berkeley.

This study will provide information necessary for realistic dose estimates--and consequently, improved public health risk estimates--for both criteria pollutants and toxic air contaminants in California. This study will complement an ongoing, ARB-sponsored study of adult and adolescent activity patterns. It will also help meet high-priority data needs identified by ARB's Indoor Air Quality Five-year Study Plan and the National Academy of Sciences.

BUDGET SUMMARY

University of California, Berkeley

"Activity Patterns of California Children:
A Micro-behavioral Approach"

BUDGET ITEMS:

Salaries	$114,149	
Benefits	27,008	
Supplies	11,907	
Travel	100	
Other Costs*	28,650	
TOTAL, Direct Cost		$181,814
TOTAL, Indirect Cost		18,181
	TOTAL PROJECT COST	$199,995

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* Other costs specific to survey: telephone ($12,650), computer time and processing ($10,700), computer programming ($5,300).

State of California
AIR RESOURCES BOARD

Resolution 88-33

April 7, 1988

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 unsolicited research proposal, Number 1601-138, entitled "Monitoring Community Exposure and Responses to Hydrogen Sulfide," has been submitted by the Lake County Air Quality Management District.

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 1601-138, entitled "Monitoring Community Exposure and Responses to Hydrogen Sulfide," submitted by the Lake County Air Quality Management District for a total amount not to exceed $57,925.

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 1601-138, entitled "Monitoring Community Exposure and Responses to Hydrogen Sulfide," submitted by the Lake County Air Quality Management District, for a total amount not to exceed $57,925.

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 $57,925.

I hereby certify that the above is a true and correct copy of Resolution 88-33, as adopted by the Air Resources Board.

Cary Allison, Board Secretary