State of California

AIR RESOURCES BOARD

Resolution 89-2
January 12, 1989

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 1627-143, entitled "Improvement of Procedures for Evaluating Photochemical Models," 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 1627-143, entitled "Improvement of Procedures for Evaluating Photochemical Models," submitted by Radian Corporation, for a total amount not to exceed $49,953.

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 1627-143, entitled "Improvement of Procedures for Evaluating Photochemical Models," submitted by Radian Corporation, for a total amount not to exceed $49,953.

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 $49,953.

I hereby certify that the above is a true and correct copy of Resolution 89-2, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 89-1-2(b) 2
DATE: January 12, 1989

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1611-141 entitled "Chronic Toxicity of Mixed Air Pollutants: Oxidant, Acid and Fine Particles"

RECOMMENDATION: Adopt Resolution 89-3 approving Proposal No. 1611-141 for an amount not to exceed $398,835.

SUMMARY

Current ambient air quality standards, which are based largely on the effects of one- or two-hour exposures, may not be sufficiently stringent to protect people against the adverse health effects of longer exposures. This study, which uses a rodent model, is designed to help identify the mechanisms by which prolonged exposures produce damage in the lung.

The investigators will expose rats to complex mixtures of air pollutants common to the Los Angeles area to determine how their respiratory systems are affected by prolonged exposures to these mixtures. The study has been designed to maximize the information obtained about the effects of similar exposures on people. The concentrations of oxidant (as ozone), acid, and particles in the atmospheres and the durations of exposure mimic human exposures at heavily polluted sites in the Los Angeles area. The effects to be assessed can either be observed directly in humans or are analogous to expected effects on humans.

ITEM NO.: 89-1-2(b) 3
DATE: January 12, 1989

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1614-142R entitled "Field Verification of Yield Losses from Ambient Ozone to Cotton (Gossypium hirsutum) in the San Joaquin Valley"

RECOMMENDATION: Adopt Resolution 89-4 approving Proposal No. 1614-142R for an amount not to exceed $187,371.

SUMMARY: The Air Resources Board Program in Crop Loss Assessment has produced estimates of statewide yield losses to agricultural crops due to ozone exposure. To confirm the validity of the estimation equations at diverse sites, under the full range of field conditions, this study will: compare model predictions of ozone induced yield losses with actual yield losses in cotton at four representative fields in the San Joaquin Valley; and assess the relative yields of two major cotton cultivars over a range of ambient oxidant levels.

This study will provide information on the yield loss response of cotton, under field conditions, to the wide range of ambient oxidant levels which occur in the San Joaquin Valley. This information will be useful in validating crop loss assessment efforts and in supporting regulatory activities to protect agriculture from adverse air pollution impacts. The study will be a cooperative one involving county

State of California

AIR RESOURCES BOARD

Resolution 89-3
January 12, 1989

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: Oxidant, Acid and Fine Particles," 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: Oxidant, Acid and Fine Particles," submitted by the University of California, Irvine, for a total amount not to exceed $398,835.

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: Oxidant Acid and Fine Particles," submitted by the University of California, Irvine, for a total amount not to exceed $398,835.

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 $398,835.

I hereby certify that the above is a true and correct copy of Resolution 89-3, as adopted by the Air Resources Board.

Cary Allison

Cary Allison, Board Secretary

State of California

AIR RESOURCES BOARD

Resolution 89-4
January 12, 1989

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 1614-142R, entitled "Field Verification of Yield Losses from Ambient Ozone to Cotton (Gossypium hirsutum) in the San Joaquin Valley," 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 1614-142R, entitled "Field Verification of Yield Losses from Ambient Ozone to Cotton (Gossypium hirsutum) in the San Joaquin Valley," submitted by the University of California, Riverside, for a total amount not to exceed $187,371.

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 1614-142R, entitled "Field Verification of Yield Losses from Ambient Ozone to Cotton (Gossypium hirsutum) in the San Joaquin Valley," submitted by the University of California, Riverside, for a total amount not to exceed $187,371.

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 $187,371.

I hereby certify that the above is a true and correct copy of Resolution 89-4, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

ITEM NO.: 89-1-2(b) 4
DATE: January 12, 1989

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 1630-142 entitled "Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds"

RECOMMENDATION: Adopt Resolution 89-5 approving Proposal No. 1630-142 for an amount not to exceed $40,000.

SUMMARY: The purpose of this project is to provide information on indoor pollutant concentrations and source emissions for use in ARB's indoor exposure assessments.

Lawrence Berkeley Laboratory (LBL) will conduct an extensive literature review of indoor concentration data and indoor emissions data, including examination of data bases not available through library search programs, such as the National Aeronautics and Space Administration's materials data base. LBL will also evaluate indoor emissions measurement methods and will recommend measurement protocols for future indoor emissions.

The information obtained regarding existing data will be used by ARB staff to develop the indoor exposure assessments required under Health and Safety Code Section 39660.5 as part of the Toxic Air Contaminants Program's identification process. Information obtained regarding indoor source emissions data gaps and measurement methods will be used to guide future ARB research related to indoor sources and emissions.

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AIR RESOURCES BOARD

Resolution 89-5
January 12, 1989

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 1630-142, entitled "Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds," has been submitted by the Lawrence Berkeley Laboratory, U.S. Department of Energy; and

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

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

> Proposal Number 1630-142, entitled "Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds, Phase I," submitted by the Lawrence Berkeley Laboratory, U.S. Department of Energy, for a total amount not to exceed $40,000;

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 1630-142, entitled, "Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds, Phase I," submitted by the Lawrence Berkeley Laboratory, U.S. Department of Energy, for a total amount not to exceed $40,000.

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 $40,000.

I hereby certify that the above is a true and correct copy of Resolution 89-5, as adopted by the Air Resources Board.

Cary Allison, Board Secretary