

State of California
AIR RESOURCES BOARD

Resolution 79-5
February 20, 1979

WHEREAS, an unsolicited research Proposal No. 809-68 entitled "The Effects of Present and Potential Air Pollution on Important San Joaquin Valley Crops" has been submitted by the University of California at Riverside to the Air Resources Board; and

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

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

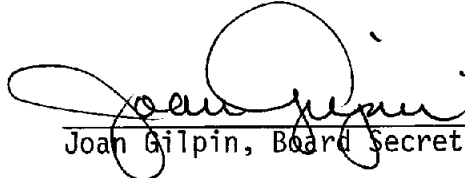
Proposal No. 809-68 entitled "The Effects of Present and Potential Air Pollution on Important San Joaquin Valley Crops" submitted by the University of California at Riverside for an amount not to exceed \$95,000;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board under the powers and authority granted by the Health and Safety Code, Section 39705, hereby accepts the recommendation of the Research Screening Committee and approves the following proposal:

Proposal No. 809-68 entitled "The Effects of Present and Potential Air Pollution on Important San Joaquin Valley Crops" submitted by the University of California at Riverside, for an amount not to exceed \$95,000,

and authorizes the Executive Officer to initiate administrative procedures and to execute all necessary documents and contracts for the research effort proposed in an amount not to exceed \$95,000.

I certify that the above is a true
and correct copy of Resolution 79-5
as passed by the Air Resources Board.


Joan Gilpin, Board Secretary

ITEM NO: 79-3-3b
DATE: February 20, 1979

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No. 809-68 entitled "The Effects of Present and Potential Air Pollution on Important San Joaquin Valley Crops" submitted by the University of California, Riverside.

RECOMMENDATION: Adopt Resolution No. 79-5 approving research proposal 809-68 for funding in an amount not to exceed \$95,000.

SUMMARY: The objectives of this research program are to: (1) determine the effect of present air pollution (primarily oxidant) on Thompson Seedless grapes and alfalfa hay; (2) assess the possible benefit to these two crops of lowering present air pollution levels in the San Joaquin Valley; (3) determine the effect of increased ozone (O_3) and sulfur dioxide (SO_2) levels in the Valley alone and in combination upon alfalfa; and (4) determine the difference in phytotoxicity, if any, between O_3 and ambient oxidant (primarily O_3).

The alfalfa study will involve the exposure of two varieties of alfalfa to; (1) 100-percent carbon filtered air alone and with added SO_2 ; (2) 100 percent carbon filtered air with added O_3 at two different levels; (3) ambient air without chambers; and (4) ambient air chambers with and without added SO_2 . The grape study will consist of three treatments: (1) ambient air; (2) 100-percent carbon-filtered air within chambers; and (3) ambient air within chambers.

The field chamber and field growth facility that will be used approximate very closely actual field conditions in the San Joaquin Valley. Adequate plant replication is incorporated, which should allow the investigator to detect 5- to 10-percent yield differences with 90 percent confidence. Since both crops are perennials, the intent is to carry out controlled exposures for at least two growing seasons. However, a report will be submitted after the first year's results are determined, and a decision will be made at that time as to whether to continue or not into a second year.

State of California

AIR RESOURCES BOARD

Resolution 79-6

February 20, 1979

WHEREAS, an unsolicited research Proposal Number 806-68 entitled, "Evaluation and Development of Procedures for Determination of Sulfuric Acid, Total Particle-Phase Acidity and Nitric Acid in Ambient Air--Phase II", has been submitted by the California Department of Health Services, Air and Industrial Hygiene Laboratory to the Air Resources Board; and

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

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

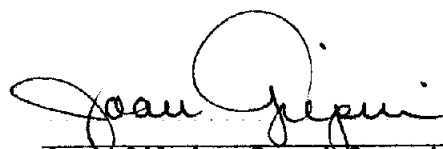
Proposal Number 806-68 entitled, "Evaluation and Development of Procedures for Determination of Sulfuric Acid, Total Particle-Phase Acidity and Nitric Acid in Ambient Air--Phase II", submitted by the California Department of Health Services, Air and Industrial Hygiene Laboratory for an amount not to exceed \$62,000;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board under the powers and authority granted by the Health and Safety Code, Section 39705, hereby accepts the recommendation of the Research Screening Committee and approves the following proposal:

Proposal Number 806-68 entitled, "Evaluation and Development of Procedures for Determination of Sulfuric Acid, Total Particle-Phase Acidity and Nitric Acid in Ambient Air--Phase II", submitted by the California Department of Health Services, Air and Industrial Hygiene Laboratory for an amount not to exceed \$62,000,

and authorizes the Executive Officer to initiate administrative procedures and to execute all necessary documents and contracts for the research effort proposed in an amount not to exceed \$62,000.

I certify that the above is a true and correct copy of Resolution 79-6 as passed by the Air Resources Board.



Joan Gilpin, Board Secretary

State of California
AIR RESOURCES BOARD

ITEM NO: 79-3-3b
DATE: February 20, 1979

ITEM: Research Proposal No. 806-68 entitled

"Evaluation and Development of Procedures for Determination of Sulfuric Acid, Total Particle-Phase Acidity and Nitric Acid in Ambient Air--Phase II."

RECOMMENDATION: Adopt Resolution 79-6 approving Research Proposal No. 806-68 for funding in an amount not to exceed \$62,000.

SUMMARY:

California's significant harm level for airborne sulfate of $25\mu\text{g}/\text{m}^3$ 24-hour average, is based upon total water-soluble sulfate in high-volume filter samples. Such sulfate may include ammonium sulfate, ammonium acid sulfate, sulfuric acid as well as various metal and mixed metal-ammonium salts. Some of these are relatively harmless (e.g., calcium sulfate), while others appear relatively hazardous (e.g., sulfuric acid and ammonium acid sulfate). In part, the rationale for setting the California standard is based on the presumption that a significant mechanism for formation of the total water-soluble sulfate, as currently measured, involves sulfuric acid as an important constituent; but the actual levels in the atmosphere may vary substantially. As yet, no technique has been accorded general acceptance for determining sulfuric acid concentrations.

There exists a need for a validated technique to monitor sulfuric acid. Similarly, there exists the need for a validated technique for the measurement of nitric acid.

During the first phase of this project, which is currently nearing completion, the proponent has developed and refined methods for measuring sulfates, nitrates, sulfuric acid and nitric acid in the gaseous and particulate phase in the ambient air. Under Phase II of this project the investigators will perform a field study to accurately measure sulfate, nitrate, sulfuric acid and nitric acid in the South Coast Air Basin. This information will be of value in augmenting our understanding the atmospheric processes by which these pollutants are formed and transported in the atmosphere. The data gathered will provide important input to air quality simulation models for secondary aerosol formation and will provide important background information for the development of strategies for controlling secondary aerosols.

State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

ITEM: Public Hearing to Consider Adoption of Chapter 26, Air Quality, Health, Welfare, Social, Economic, and Energy Effects as a Revision to the State Implementation Plan (SIP).

Public Hearing Date: March 21, 1979


Response Date: May 4, 1979

Issuing Authority: Executive Officer

Comment: N/A

Response: The staff responded to the various concerns raised at the hearing, however, these issues were not environmental issues.

CERTIFIED:


Joan Gilpin
Board Secretary

DATE: May 15, 1979

Memorandum

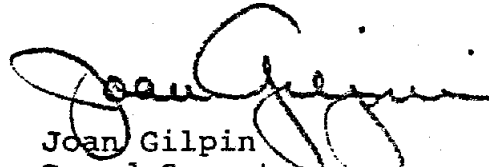
To : Huey E. Johnson
Secretary
Resources Agency

Date : May 30, 1979

Subject: Filing of Notice of
Decision for the
Air Resources Board

From : **Air Resources Board**

Pursuant to Title 17, Section 60007(b) and in compliance with Air Resources Board certification under Section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notices of decision and response to environmental comments raised during the comment period.



Joan Gilpin
Board Secretary

Attachments

Resolution No. 79-8
79-9
79-11
79-12
79-13
79-14
79-15
79-27
79-29