

ITEM NO.: 1
DATE: July 13, 1989

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No. 1673-145B entitled
"Perform Ozone and PM Case Study Analyses"

RECOMMENDATION: Adopt Resolution 89-63 approving Proposal No.
1673-145B for an amount not to exceed \$24,992.

SUMMARY: This is one of several studies to analyze and interpret the data from the 1987 Southern California Air Quality Study (SCAQS). This and other related projects will provide an analysis of the SCAQS data base by methods other than gridded, source-oriented models. Issues related to the Board's regulatory needs will be addressed.

This research effort will describe in detail the three-dimensional evolution of two ozone episodes and three PM episodes, including the transport and transformation processes that lead to maximum pollutant concentrations in the South Coast Air Basin.

The results of this project will improve the technical basis for design and assessment of air pollution control strategies in Los Angeles.

The contractor for this study will be Sonoma Technology Inc., and the principal investigator will be Dr. Paul T. Roberts.

State of California

AIR RESOURCES BOARD

Resolution 89-63

July 13, 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 1673-145B entitled "Perform Ozone and PM Case Study Analyses," 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:

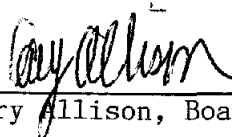
Proposal Number 1673-145B, entitled "Perform Ozone and PM Case Study Analyses," submitted by Sonoma Technology Inc., for a total amount not to exceed \$24,992.

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 1673-145B, entitled "Perform Ozone and PM Case Study Analyses," submitted by Sonoma Technology Inc., for a total amount not to exceed \$24,992.

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 \$24,992.

I hereby certify that the above
Is a true and correct copy of
Resolution 89-63, as adopted
the Air Resources Board.



Cary Allison, Board Secretary

B U D G E T S U M M A R Y

Sonoma Technology Inc.

"Perform Ozone and PM Case Study Analyses"

DIRECT COSTS

1. Labor	\$ 7,633	
2. Consultants & Subcontracts	-0-	
3. Equipment	-0-	
4. Travel & Subsistence	135	
5. Computer Usage	700	
6. Reproduction	500	
7. Mail & Phone	200	
8. Supplies	-0-	
9. Other	-0-	
<u>Total Direct Costs</u>		\$ 9,168

INDIRECT COSTS *

Includes Labor Overhead, Employee Benefits,
Material Overhead, General and
Administrative Expense and Fee, or Profit

		<u>\$15,824</u>
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<u>TOTAL PROJECT COSTS</u>		\$24,992
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*No federal audit within the preceding 12 months. Rates are comparable to those of other firms of similar size and type that have DCAA-approved overhead rates.

ITEM NO.: 2
DATE: July 13, 1989

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No.1690-147 entitled "Analysis of the 1987 Southern California Air Quality Study (SCAQS) Atmospheric Tracer Data"

RECOMMENDATION: Adopt Resolution 89-64 approving Proposal No. 1690-147 for an amount not to exceed \$77,660.

SUMMARY: The major objective of this project is to analyze SF₆ and perfluorocarbon tracer data collected during the SCAQS study. The investigator will test the ability of wind models to correctly simulate the transport of pollutants in the basin. In addition, retention time of tracers in the study area will be used to evaluate the importance of day-to-day carryover of pollutants in the basin.

This information is needed to identify emission control measures that would bring the South Coast Air Basin into attainment of Federal and State ambient air quality standards.

The contractor is the California Institute of Technology, and the principal investigator is Dr. Fred Shair.

State of California

AIR RESOURCES BOARD

Resolution 89-64

July 13, 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 1690-147, entitled "Analysis of the 1987 Southern California Air Quality Study (SCAQS) Atmospheric Tracer Data," has been submitted by the California Institute of Technology for a total amount not to exceed \$77,660; 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 1690-147, entitled "Analysis of the 1987 Southern California Air Quality Study (SCAQS) Atmospheric Tracer Data", submitted by the California Institute of Technology for a total amount not to exceed \$77,660.

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 1690-147, entitled "Analysis of the 1987 Southern California Air Quality Study (SCAQS) Atmospheric Tracer Data", submitted by the California Institute of Technology for a total amount not to exceed \$77,660

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 \$77,660.

I hereby certify that the above
Is a true and correct copy of
Resolution 89-64, as adopted by
the Air Resources Board.


Cary Allison, Board Secretary

B U D G E T S U M M A R Y

Resolution 89-64

"Analysis of the 1987 Southern California Air Quality Study
(SCAQS)

Atmospheric Tracer Data"

California Institute of Technology

DIRECT COSTS

1. Labor	\$ 35,088
2. Equipment	\$ 7,180
3. Travel and Subsistence	\$ 500
4. Supplies	\$ 2,000*

Total Direct Costs \$44,768

INDIRECT COSTS & BENEFITS

Includes Labor Overhead, Employee
Benefits, Material Overhead, General
& Administrative Expense \$32,892

TOTAL PROJECT COST \$77,660

* Supplies:

Expendable supplies for computer, computer graphics, preparation
of software and reports.

ITEM NO.: 3

DATE: July 13, 1989

State of California

AIR RESOURCES BOARD

ITEM: Research Proposal No. 182-30 entitled "Long-term Studies of Lakes and Watersheds in the Sierra Nevada: Patterns and Processes of Surface Water Acidification".

RECOMMENDATION: Adopt Resolution 89-65 approving Proposal No. 182-30 for an amount not to exceed \$399,996.

SUMMARY: The purpose of this study is to determine the impacts of acid deposition on high-elevation watersheds throughout the Sierra Nevada. This 30-month study calls for the continued monitoring of deposition and surface waters, in addition to the characterization of the processes that allow watersheds to neutralize incoming acids. This study is designed to help the Board set deposition standards to protect dilute lakes and streams from damage due to acid deposition.

This research and monitoring project includes continued monitoring of five watersheds studied as part of the Kapiloff Program. The five-year plan for the Atmospheric Acidity Protection Program (AAPP) calls for the collection of long-term data at existing sites and the addition of two sites located in the northern Sierra Nevada. Sampling of rain, snow, lake and stream biology, chemistry and geology will take place on a regular schedule at each site.

The results of this project will improve our understanding of the natural variation in lakes and their watersheds and how episodic acidification may affect surface water chemistry and biological populations. This study will be coupled to other planned AAPP studies to collect data to be used in modeling the response of dilute waters to acid deposition.

State of California

AIR RESOURCES BOARD

Resolution 89-65
July 13, 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 39900 through 39911; and

WHEREAS, an unsolicited research proposal, Number 182-30 entitled "Long-term Studies of Lakes and Watersheds in the Sierra Nevada: Patterns and Processes of Surface Water Acidification", has been submitted by the 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:

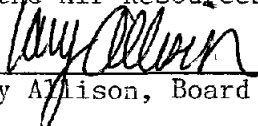
Proposal Number 182-30, entitled "Long-term Studies of Lakes and Watersheds in the Sierra Nevada: Patterns and Processes of Surface Water Acidification", submitted by the University of California, Santa Barbara, for a total amount not to exceed \$399,996.

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 182-30, entitled "Long-term Studies of Lakes and Watersheds in the Sierra Nevada: Patterns and Processes of Surface Water Acidification", submitted by the University of California, Santa Barbara, for a total amount not to exceed \$399,996.

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 \$399,996.

I hereby certify that the above
is a true and correct copy of
Resolution 89-65, as adopted
by the Air Resources Board.


Cary Allison, Board Secretary

B U D G E T S U M M A R Y

University of California, Santa Barbara

"Long-term Studies of Lakes and Watersheds in the Sierra Nevada:
Patterns and Processes of Surface Water Acidification"

DIRECT COSTS

1. Labor	\$ 177,331	
2. Consultants & Subcontracts	-0-	
3. Equipment	\$ 43,300 ¹	
4. Travel & Subsistence	\$ 34,565 ²	
5. Computer Usage	\$ 11,025	
6. Reproduction/Publication	\$ 2,100	
7. Mail & Phone	\$ 3,500	
8. Field Supplies	\$ 23,455 ³	
9. Lab Supplies	\$ 21,720 ⁴	
10. Other	\$ 9,000 ⁵	
<u>Total Direct Costs</u>		\$325,996

INDIRECT COSTS

Includes Labor Overhead, Employee Benefits,
Material Overhead, General and
Administrative Expense \$ 74,000

TOTAL PROJECT COSTS \$399,996

- 1 Equipment: electronic data loggers; humidity and radiation sensors; pH and conductivity meters; sampler for spectrophotometer; IC columns and pump; rain gauges; oxygen meter
- 2 Travel & Subsistence: Mileage and per diem to seven study sites in the Sierra Nevada over a 30 month period.
- 3 Field supplies: electronic data loggers accessories (including power supplies, housings, readers and memory), meteorological instruments, temperature probes, pumps and nets.
- 4 Lab supplies: pH and conductivity electrodes, attachments for IC, bottles, filters, pipettes, reagents.
- 5 Aerial photos, helicopter transport of equipment, etc.