

**State of California
AIR RESOURCES BOARD**

Resolution 01-20
June 28, 2001

Agenda Item No.: 01-5-6

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 research proposal, number 2495-220, entitled "Children's Microenvironmental and Personal Pollutant Exposures for SB 25 with NAP Health Status Survey", has been submitted by the University of California, Los Angeles;

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 2495-220 entitled "Children's Microenvironmental and Personal Pollutant Exposures for SB 25 with NAP Health Status Survey", submitted by the University of California, Los Angeles, for a total amount not to exceed \$399,464.

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 2495-220 entitled "Children's Microenvironmental and Personal Pollutant Exposures for SB 25 with NAP Health Status Survey", submitted by the University of California, Los Angeles, for a total amount not to exceed \$399,464.

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, and as described in Attachment A, in an amount not to exceed \$399,464.

I hereby certify that the above is a true and correct copy of Resolution 01-20, as adopted by the Air Resources Board.

Marie Kavan, Clerk of the Board

ATTACHMENT A

“Children’s Microenvironmental and Personal Pollutant Exposures for SB 25 with NAP Health Status Survey”

Background

The Children’s Environmental Health Program is defined in the Health and Safety Code Section 39617.5 (part of Senate Bill 25, Escutia, 1999). This Section requires the ARB to conduct enhanced neighborhood monitoring in six communities in California, and to prepare a report on whether the current statewide monitoring system provides data adequate to determine exposures of infants and children to air pollutants. To obtain comprehensive data on the levels of children’s exposure to air pollutants, the ARB must conduct indoor and outdoor sampling and personal exposure measurements at locations where children spend a significant amount of time in the selected communities. The six communities have been selected and the Monitoring and Laboratory Division is measuring, or plans to measure, air pollutants near schools identified in each community. The proposed project would obtain the required indoor and personal concentration data.

Objective

The primary objective of this project is to obtain data on children’s indoor and personal exposures to air pollutants in three of the SB 25 communities. A second objective is to assess the health status of children at each site.

Methods

In each community, pollutant measurements will be made indoors in three locations at a school, at one outdoor site on the school grounds, and in one home near the school. A total of 13 weeks of measurements will be made over three seasons. Measured pollutants will include volatile organic compounds, formaldehyde, and particle mass, with particle analysis for elemental and organic carbon. Carbon monoxide and nitrogen dioxide levels will be measured in real time. Twenty-five children in each community will wear badges to measure their exposure to volatile organic compounds. Additionally, a health questionnaire will be administered to children from each community to determine their health status, primarily their incidence of asthma and allergy, in support of ARB’s Neighborhood Assessment Program (NAP).

Expected Results

This study will provide data on pollutant concentrations in microenvironments where children spend a significant portion of their time. Since the school sites in each community have been selected based on proximity to major industrial sources or freeways, the results will be representative of locations with potentially elevated exposures.

Significance to the Board

This study will significantly increase our knowledge of children’s exposures to air pollutants in areas with potentially elevated pollution. The study will provide valuable

information so that the ARB can identify differences between children's actual exposures to air pollutants and the levels measured at network monitoring sites, as required by Health and Safety Code Section 39617.5.

Contractor: University of California, Los Angeles, School of Public Health, Environmental Health Sciences

Contract Period: 24 months

Principal Investigator: Steven D. Colome, Sc.D.

Contract Amount: \$399,464

Cofunding: None

Basis for Indirect Cost Rate: The State and UC System have agreed to a ten percent indirect cost rate.

Past Experience with this Principal Investigator: Dr. Steve Colome has conducted previous satisfactory work for the ARB.

Prior Research Division Funding to University of California, Los Angeles:

Year	2000	1999	1998
Funding	\$717,744	\$0	\$668,945

BUDGET SUMMARY

University of California, Los Angeles

“Children’s Microenvironmental and Personal Pollutant Exposures for SB 25 with NAP Health Status Survey”

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$197,542
2.	Subcontractors	\$ 0
3.	Equipment	\$ 82,293 ⁽¹⁾
4.	Travel and Subsistence	\$ 12,670
5.	Electronic Data Processing	\$ 0
6.	Reproduction/Publication	\$ 3,600
7.	Mail and Phone	\$ 3,600
8.	Supplies	\$ 15,822
9.	Analyses	\$ 53,450 ⁽²⁾
10.	Miscellaneous	<u>\$ 4,800</u>
	Total Direct Costs	\$ 373,777

INDIRECT COSTS

1.	Overhead	\$ 25,687
2.	General and Administrative Expenses	\$ 0
3.	Other Indirect Costs	\$ 0
4.	Fee or Profit	<u>\$ 0</u>
	Total Indirect Costs	<u>\$ 25,687</u>

TOTAL PROJECT COSTS

\$ 399,464

(1) A substantial investment in equipment is needed to complete the study protocol. The primary costs are for sampling pumps and sampling heads to complete five sets of monitoring ensembles used for collecting simultaneous samples. Equipment costs also include six real-time carbon monoxide monitors.

(2) Costs include analysis of 170 passive badges for volatile organic compounds, 170 samples for particulate matter mass, 85 samples for elemental and organic carbon, 85 samples for formaldehyde, and 25 canisters for volatile organic compounds. Individual prices are standard charges for these matrices.