State of California
AIR RESOURCES BOARD

RESEARCH PROPOSAL

Resolution 08-2

January 24, 2008

Agenda Item No.: 08-1-2

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 2642-258, entitled "Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington - Contract Augmentation" has been submitted by Desert 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 2642-258, entitled "Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington - Contract Augmentation" has been submitted by Desert Research Institute; for a total amount not to exceed $40,223.

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 2642-258, entitled "Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington - Contract Augmentation" has been submitted by Desert Research Institute; for a total amount not to exceed $40,223.

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 $40,223.

I hereby certify that the above is a true and correct copy of Resolution 08-2, as adopted by the Air Resources Board.

Lori Andreoni

Lori Andreoni, Clerk of the Board

ATTACHMENT A

"Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington - Contract Augmentation"

Background

ARB is currently funding the Desert Research Institute (DRI) to conduct environmental monitoring in the Harbor Community of Wilmington in the Los Angeles metropolitan area. The original contract, for which this augmentation is requested, was to evaluate the use of a low cost monitoring technique, saturation monitoring by passive sampling, to characterize neighborhood-level exposures to air pollutants of the community which is of interest to Environmental Justice advocates due to its low socioeconomic status (SES) and proximity to multiple stationary and mobile sources in this highly industrialized area. The low cost of passive diffusive samplers employed in the project allows for higher resolution and more extended spatial and temporal coverage than traditional monitoring. The project is progressing successfully towards providing a refined representation of the spatial and temporal variations for a range of selected air pollutants (NO_X, VOCs, PM2.5, black carbon, etc.) in the area. The project is part of a broader program, the Harbor Community Monitoring Study (HCMS), consisting of three distinct, but coordinated studies being carried out to evaluate the spatial variations in concentrations of toxic air contaminants (TACs) and their co-pollutants within the communities adjacent to the Ports of Los Angeles and Long Beach.

Objective

The requested augmentation would complement the ongoing project to achieve the following ultimate objectives:

1) Collecting spatially resolved data in order to identify hot spots of selected pollutants, their magnitude and spatial extent, and relative importance compared to a regional background.
2) Collecting data of sufficient spatial and temporal resolution to allow comparison with fine-scale modeling results.
3) Demonstrating the use of low-cost monitoring technologies such as passive monitors.

Methods

There are four requested augmentation tasks to the original project:

1) Provide regional comparison/reference air quality data by adding a sampling location outside the existing Harbor Community Monitoring Study area.
2) Extend continuous monitoring at four key locations in close proximity to known emission sources to cover the anticipated fall/winter traffic peak season to better capture the seasonal variability and temporal patterns in pollutant concentrations.
3) Compensate homeowners and private businesses for helping set up the monitoring stations in their properties.
4) Implement several changes in sampling and laboratory practices to maintain high quality data of integrity despite unexpected equipment problems.

Expected Results

The original project with the augmentation is intended to collect extensive spatial and temporal data to identify hotspots of selected pollutants in Wilmington and determine the concentration gradient in areas primarily impacted by stationary as well as mobile

and area sources. The data set collected from this project will be combined with SES data for EJ analysis and allows comparisons with existing emission inventory and dispersion modeling results. The outcome of this project is expected to improve our understanding of actual exposure level at an EJ community and the methodology developed from this project is expected to be applicable to other EJ communities.

Significance to the Board
The results of this project will provide the ARB, other regulatory agencies, and researchers with improved and more up-to-date database for assessing exposure levels in EJ communities and lead to more scientifically sound control plans and strategies.

Contractor:
Desert Research Institute

Contract Period:
36 months

Principal Investigator (PI):
Eric M. Fujita, D. Env., Principal Investigator
Barbara Zielinska, Ph.D., Co-Principal Investigator

Contract Amount:
$40,223

Basis for Indirect Cost Rate:
The State and the Desert Research Institute have agreed to a federally approved 69% indirect cost rate. A lower rate of ten percent for Task 3: Compensation and fees for site access was recommended and approved by the Research Screening Committee.

Past Experience with this Principal Investigator:
Both the Principal and Co-Principal Investigators are well qualified for conducting this field study. Dr. Eric Fujita is a Research Professor at the DRI and has over 24 years of experience in managing and conducting air quality studies. He is the principal author of the field study plans for the 2000 Central California Ozone Study and 1997 Southern California Ozone Study (SCOS97-NARSTO). He has conducted similar studies in Houston and Mexicali, Mexico. Dr. Barbara Zielinska is also a Research Professor and the Director of the Organic Analytical Laboratory at DRI and has over twenty years of experience in the collection and analysis of trace atmospheric organic compounds.

Prior Research Division Funding to DRI:

Year	2007	2006	2005
Funding	$0	$0	$475,451

BUDGET SUMMARY

Desert Research Institute

Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington - Contract Augmentation

DIRECT COSTS AND BENEFITS			
1.	Labor and Employee Fringe Benefits	$ 12,458	
2.	Subcontractors	$ 0	
3.	Equipment	$ 0	
4.	Travel and Subsistence	$ 780	
5.	Electronic Data Processing	$ 0	
6.	Reproduction/Publication	$ 0	
7.	Mail and Phone	$ 0	
8.	Supplies	$ 0	
9.	Analyses	$ 5,966	
10.	Miscellaneous	$ 5,190	
	Total Direct Costs		$24,394
INDIRECT COSTS			
1.	Overhead	$ 15,829	
2.	General and Administrative Expenses	$ 0	
3.	Other Indirect Costs	$ 0	
4.	Fee or Profit	$ 0	
	Total Indirect Costs		$15,829
TOTAL PROJECT COSTS			**$40,223**