

# RESEARCH PROPOSALS

*January 24, 2008*

California Environmental Protection Agency



Air Resources Board

# Development of a California-Specific Intermodal Freight Transport Model

University of Delaware  
Professor James Corbett  
\$199,937 (24 months)

**Objective:** A model of the movement of goods into California's ports and through the State's highway and rail systems.

**Expected Results:** A Geographic Information System (GIS) compatible model to 1) quantify emissions, 2) evaluate tradeoffs, and 3) identify optimal freight movement strategies.

# Environmental Justice Saturation Monitoring of Selected Pollutants in Wilmington

*Contract Augmentation*

**Desert Research Institute**

**Augmentation Amount \$40,223**

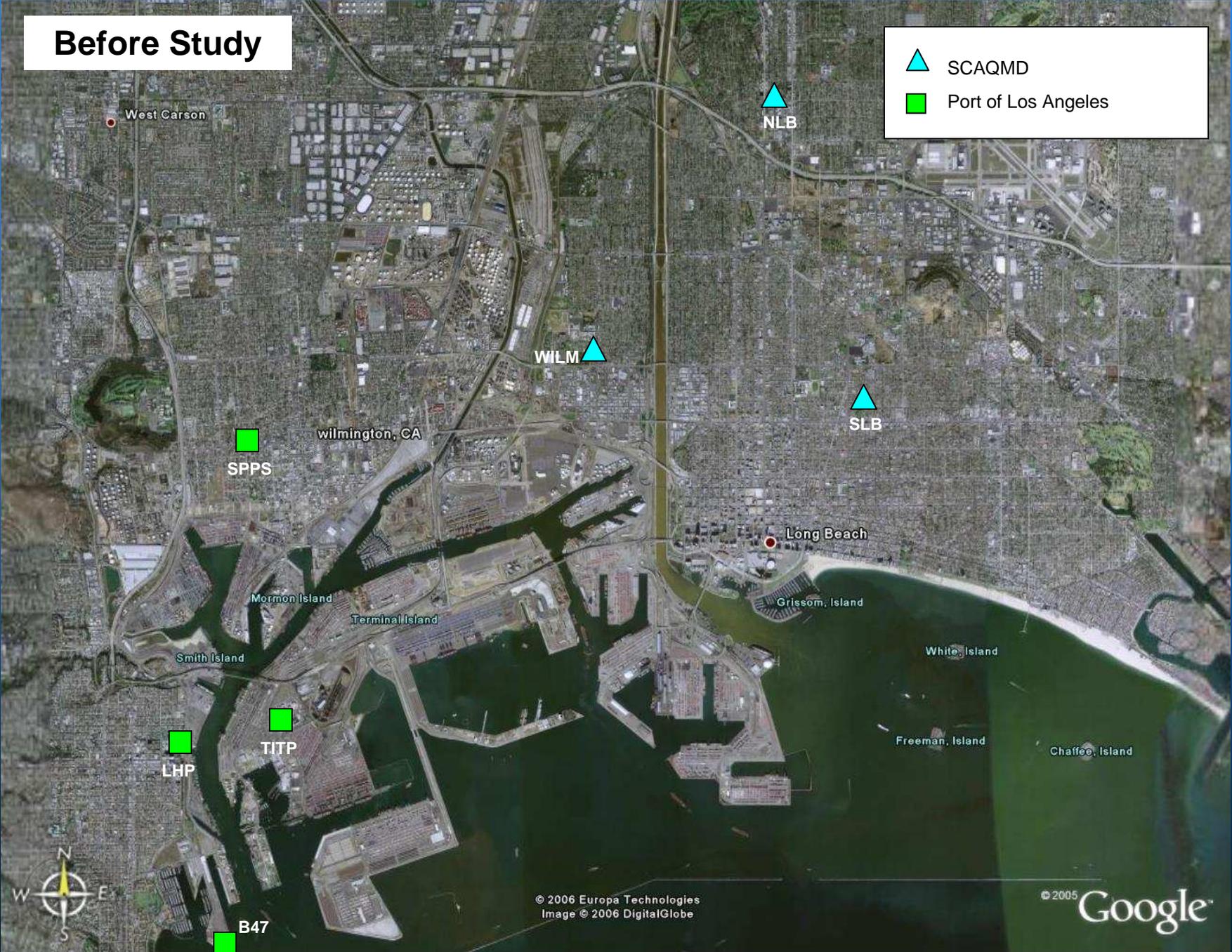
**Total contract \$515,674  
(36 months)**

**Objective:** Expand sampling effort in port communities to better characterize “hotspot” air pollution exposures and compare to regional levels.

**Expected Results:** Actual exposures in an EJ community and a methodology that can be applied to other neighborhoods.

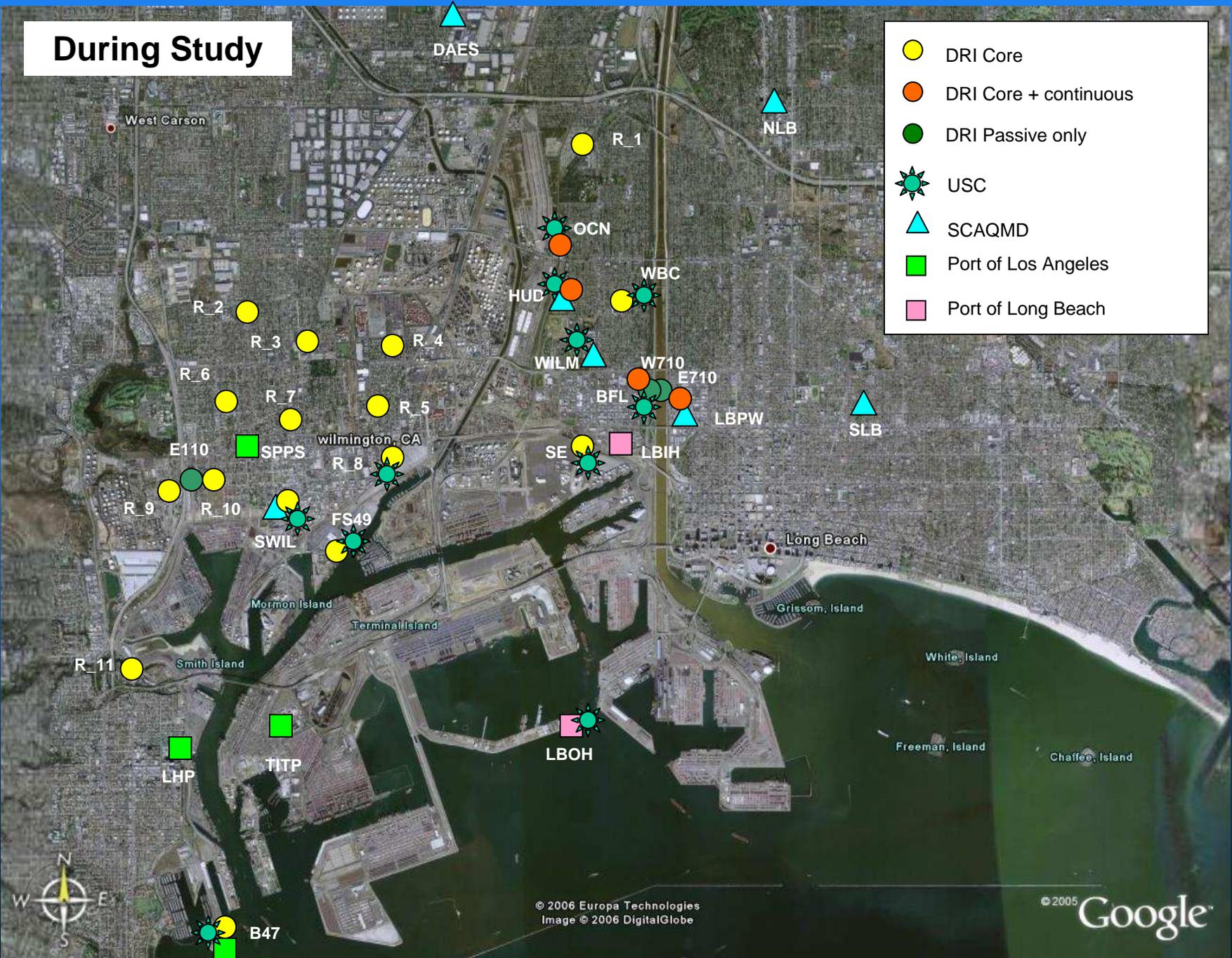
# Before Study

▲ SCAQMD  
■ Port of Los Angeles



# During Study

- DRI Core
- DRI Core + continuous
- DRI Passive only
- ★ USC
- ▲ SCAQMD
- Port of Los Angeles
- Port of Long Beach



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# Economic Value of Reducing Cardiovascular Disease Morbidity

San Diego State University Research Foundation  
Professor Mark Thayer  
\$392,036 (27 months)

**Objective:** Estimate the economic value of reducing the risk of developing cardiovascular disease.

**Expected Results:** Improved estimates of the air pollution control benefits of reducing cardiovascular disease.

# Reducing Emissions of Volatile Organic Compounds from Agricultural Soil Fumigation

*Contract Augmentation*

U.S. Department of Agriculture

Dr. Scott Yates

\$150,000 (36 months)

**Objective:** Additional experiments of fumigant pesticide emissions under various control scenarios.

**Expected Results:** Improved emissions estimates for fumigant pesticides and the emissions reductions that can be achieved by potential control strategies.

# Soil Fumigant Field Testing



## Methods used

- Aerodynamic method
- Integrated horizontal flux
- Theoretical profile shape
- Flux chambers
- Back calculation (ISCST3)



# Example of Ozone Depleting Substances



# Developing a California Inventory for Industrial Applications of Ozone Depleting Substances

Institute for Research and Technical Assistance  
Katy Wolf  
\$199,840 (24 months)

**Objective:** Quantify emissions rates, growth rates, chemical substitution rates, banks, and end-of-life disposal emissions for chemicals that both deplete the stratospheric ozone layer and contribute to global warming.

**Expected Results:** California emission inventory for ozone depleting substances from specific applications.

# **RECOMMENDATION**

**Approve Resolutions  
08-1 through 08-5**