

State of California
AIR RESOURCES BOARD

Resolution 84-7
February 23, 1984

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, an unsolicited research Proposal Number 1239-105 entitled, "Development and Evaluation of a Method for Determining Vapor Pressure of Petroleum Mixtures by Vapor Composition Analysis", has been submitted by the University of California, Davis to the Air Resources Board;

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

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

Proposal Number 1239-105 entitled "Development and Evaluation of a Method for Determining Vapor Pressure of Petroleum Mixtures by Vapor Composition Analysis", submitted by the University of California, Davis to the Air Resources Board for a total amount not to exceed \$92,309; and


WHEREAS, THE Governor's Executive Order D-30-84 prohibits State agencies from awarding research contracts through June 30, 1984;

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 1239-105 entitled "Development and Evaluation of a Method for Determining Vapor Pressure of Petroleum Mixtures by Vapor Composition Analysis", submitted by the University of California, Davis to the Air Resources Board for a total amount not to exceed \$92,309; and

BE IT FURTHER RESOLVED, that, should an exemption from the prohibition contained in Executive Order D-30-84 on awarding contracts for research be granted, 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 \$92,309.

I certify that the above is a true
and correct copy of Resolution 84-7
as passed by the Air Resources Board.


Harold Holmes
BOARD SECRETARY

State of California
AIR RESOURCES BOARD

ITEM NO.: 84-3-3b1
DATE: February 23, 1984

ITEM: Research Proposal No. 1239-105 entitled "Development and Evaluation of a Method for Determining Vapor Pressure of Petroleum Mixtures by Vapor Composition Analysis".

RECOMMENDATION: Adopt Resolution 84-7 approving Research Proposal No. 1239-105 for funding in an amount not to exceed \$92,309.

SUMMARY: The objective of this project is to develop an accurate technique for determining the vapor pressure of heavy crude oils for routine use by Board staff, district staffs and analytical laboratories. Vapor pressure provides a measure of the tendency of such oils to release hydrocarbons to the atmosphere. This information will be used to upgrade hydrocarbon emissions inventories for petroleum production and crude oil processing operations.

The University of California, Davis submitted this proposal to implement a recent recommendation from a joint EPA/Stationary Source Division study. U.C. Davis will evaluate vapor composition analysis as a means of providing data needed for calculating the vapor pressures of heavy crude oils. Vapor composition will be determined by gas chromatography after sampling the vapors above equilibrated liquids containing standard hydrocarbon mixtures or heavy crude oils enclosed in a container at elevated temperature. The resulting chemical composition and published vapor pressure data on individual hydrocarbons will be used to calculate vapor pressures of mixtures. Detailed quantitative chemical analyses will be reported so that the photochemical reactivity of the volatilized hydrocarbons can be estimated by staff.

EPA Region IX has agreed to provide \$30,000 toward the cost of this project. Accordingly, the ARB's share of the cost will not exceed \$62,309.

The proposal was favorably reviewed by ARB and EPA staff and oil industry representatives and was recommended for funding by the Research Screening Committee.