

State of California
AIR RESOURCES BOARD

Resolution 78-61

December 14, 1978

WHEREAS, an unsolicited research Proposal Number 802-67 entitled "Economic Impacts of Air Pollution Control Costs for Selected California Firms" has been submitted by the Development and Resources Corporation to the Air Resources Board; and

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

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

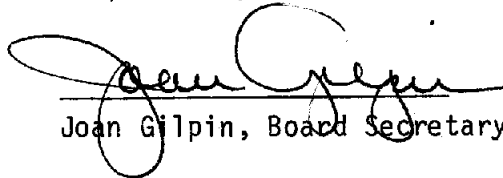
Proposal Number 802-67 entitled "Economic Impacts of Air Pollution Control Costs for Selected California Firms" submitted by Development and Resources Corporation for an amount not to exceed \$125,628;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board under the powers and authority granted by the Health and Safety Code, Section 39705, hereby accepts the recommendation of the Research Screening Committee and approves the following proposal:

Proposal Number 802-67 entitled "Economic Impacts of Air Pollution Control Costs for Selected California Firms" submitted by Development and Resources Corporation, for an amount not to exceed \$125,628,

and authorizes the Executive Officer to initiate administrative procedures and to execute all necessary documents and contracts for the research effort proposed in an amount not to exceed \$125,628.

I certify that the above is a true and correct copy of Resolution 78-61 as passed by the Air Resources Board.


Joan Gilpin, Board Secretary

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No. 802-67 entitled "Economic Impacts of Air Pollution Control Costs for Selected California Firms"

RECOMMENDATION: Adopt Resolution 78-61 approving Research Proposal No. 802-67 for funding in an amount not to exceed \$125,628.

SUMMARY: This proposal if funded would provide economic and financial analyses on selected California firms and industries to estimate those firms' ability to pay air pollution control costs. The firms to be analyzed would be chosen in consultation with ARB staff.

The financial analysis would look mainly at the firms' potential sources of capital and available cash flow to indicate their profitability and capital availability position in order to estimate their ability to pay control costs. A financial model would be developed, computerized, used in the study for the firms chosen, and turned over to the ARB with a handbook on its use along with training for ARB staff on how to use the model for future analyses. The financial data to run the model would be obtained from Dun's Marketing Services by the contractor and would be provided to the ARB on computer tape at the end of the contract. Other information that would be used in the D & R analysis includes the availability of government financing, state policies relating to the industries being analyzed, past and expected future growth of the industries, vintage of technical processes, technical change and alternative production techniques, possible substitution of alternative products, imports and exports of products, and data on multi plant firms and the California/non-California split in their operations.

The purposes of this contract would be to provide an independent identification of those industries (new, old; large, small) best able and least able to maintain profitability while

experiencing increases in their operating costs. It would also assist the ARB in the development of control measures. In those cases where the ARB has alternative options to choose from, knowing different firms' ability to pay would aid the ARB in minimizing the economic impact of control programs. A major benefit of this study would be the financial model which will enable the ARB to perform ability-to-pay analyses for wide range pollutant control measures.

State of California
AIR RESOURCES BOARD

Resolution 78-62

December 14, 1978

WHEREAS, a solicited research Proposal Number 805-67 entitled "Potential Health Hazards Associated with Particulate Matter Released From Rice Straw Burning", has been submitted by the University of California, Davis to the Air Resources Board; and

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

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

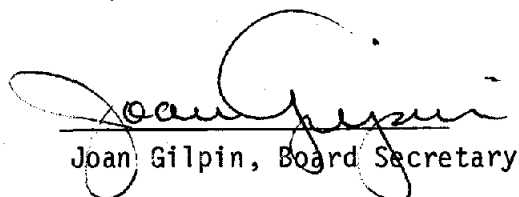
Proposal Number 805-67 entitled "Potential Health Hazards Associated with Particulate Matter Released From Rice Straw Burning", submitted by the University of California, Davis for an amount not to exceed \$64,346, of which no more than \$32,173 shall be funded by the ARB.

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board under the powers and authority granted by the Health and Safety Code, Section 39705, hereby accepts the recommendation of the Research Screening Committee and approves the following proposal:

Proposal 805-67 entitled "Potential Health Hazards Associated with Particulate Matter Released From Rice Straw Burning" submitted by the University of California, Davis, for an amount not to exceed \$64,346, of which no more than \$32,173 shall be funded by the ARB,

and authorizes the Executive Officer to initiate administrative procedures and to execute all necessary documents and contracts for the research effort proposed in an amount not to exceed \$64,346 of which no more than \$32,173 is to be funded by the ARB.

I certify that the above is a true
and correct copy of Resolution 78-62
as passed by the Air Resources Board.


Joan Gilpin, Board Secretary

ITEM NO.: 78-24-3b(2)
DATE: December 14, 1978

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No. 805-67 entitled "Potential Health Hazards Associated with Particulate Matter Released from Rice Straw Burning".

RECOMMENDATION: Adopt Resolution No. 78-62 approving Research Proposal Number 805-67 for funding in an amount not to exceed \$64,346 (\$32,173 from Air Resources Board, \$32,173 from the State Energy Commission).

SUMMARY: The routine practice of rice straw burning in the Central Valley creates a regional air quality problem that is currently uncontrollable. The smoke and fine particulate matter generated create odor and visibility problems that affect everyone in the Valley. The same materials may also impose added health risks to residents. Rice straw smoke is highly irritating to many individuals. Persons suffering from chronic respiratory problems, allergies or even cardio-vascular disease may find their symptoms worsened by such smoke.

The proponents of this study would take size-fractionated samples of particulates sampled under field burn conditions. They would assess the elemental and organic chemistry of these samples. The samples would undergo chemical extraction, with the extracts being used in two basic studies.

Various strains of Salmonella would be employed in conjunction with Ames tests to determine the relative mutagenicity of the fractions. The different fractions would also be tested with macrophage cultures to assess the toxic nature of the material.

The outcome of this study would be a data base that would allow a realistic assessment of the health hazards associated with rice straw burning and point to the benefits of alternative approaches to disposal. Regulatory decisions on burning or emission tradeoffs would also be made on realistic bases.

Emission tradeoffs have been proposed that would permit power generation facilities to burn agricultural wastes to offset their own particulate emissions. One barrier to this approach is that there is no known way, at present, to evaluate the relative health risks of the two types of emissions - coal fly ash vs. rice straw smoke. Current studies show that coal fly ash contains agents that are both toxic and mutagenic. Rice straw smoke may contain more harmful constituents, the same, or far less than coal.

The State Energy Commission has agreed to co-fund this study on a 50-50 basis. It is their interest that the effective use of alternative fuels should be promoted as a result of this study and that tradeoff information for eventual power plant sitings be made available.

State of California
AIR RESOURCES BOARD

Resolution 78-63

December 14, 1978

WHEREAS, a solicited research Proposal Number 799-67 entitled Evaluation of Performance Properties of Architectural Coatings has been submitted by the D. L. Laboratories to the Air Resources Board; and

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

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

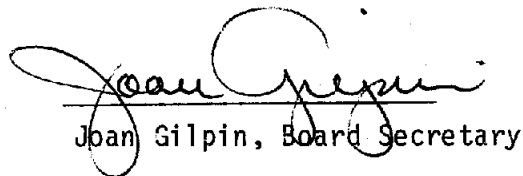
Proposal Number 799-67 entitled Evaluation of Performance Properties of Architectural Coatings submitted by the D. L. Laboratories for an amount not to exceed \$59,575;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board under the powers and authority granted by the Health and Safety Code, Section 39705, hereby accepts the recommendation of the Research Screening Committee and approves the following proposal:

Proposal Number 799-67 entitled Evaluation of Performance Properties of Architectural Coatings submitted by the D. L. Laboratories for an amount not to exceed \$59,575,

and authorizes the Executive Officer to initiate administrative procedures and to execute all necessary documents and contracts for the research effort proposed in an amount not to exceed \$59,575.

I certify that the above is a true and correct copy of Resolution 78-63 as passed by the Air Resources Board.


Joan Gilpin, Board Secretary

ITEM NO: 78-24-3b(3)
DATE: December 14, 1978

State of California
AIR RESOURCES BOARD

ITEM: Research Proposal No. 799-67 entitled "Evaluation of Performance Properties of Architectural Coatings."

RECOMMENDATION: Adopt Resolution 78-63 approving Research Proposal No. 799-67 for funding in an amount not to exceed \$59,575.

SUMMARY: The purpose of this study is to evaluate the properties of commercially available low-solvent or water-base architectural coatings in classes now exempt from the ARB's model rule for maximum solvent content to determine whether these products have properties equivalent to the high-solvent products which are now widely used for the same purposes.

With the guidance of the Research Screening Committee, the staff released a request for proposals for this project. Three responses were received of which this proposal by D. L. Laboratories was concluded to be most meritorious by the staff and the Committee.

This proposal presents a concise plan to achieve our objectives for the project. The contractor realizes that performance data supplied by manufacturers may be inadequate and/or non-uniform, and since different test methods are often used, it will be necessary to conduct independent comparisons of the new products with equivalent conventional coatings. Testing will be limited to those properties that might be affected by a change to higher solids or a water-base system. In each of the 14 exempt categories, 3 to 5 new coatings will be obtained and compared to two equivalent conventional products. Recommendations will be made regarding the need to continue exemptions for each of the now exempt use categories.