State of California
AIR RESOURCES BOARD

Resolution 05-17
February 24, 2005

Agenda Item No.: 05-2-3

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 proposal, number 05-18, entitled “Electric Diesel Particulate Filter Demonstration”, has been submitted by Cleaire Advanced Emission Controls, LLC, in response to the 2005 Innovative Clean Air Technologies (ICAT) Program solicitation;

WHEREAS, the proposal has been independently reviewed for technical and business merit by highly qualified individuals; and

WHEREAS, the Research Division staff and the Executive Officer and Deputy Executive Officers have reviewed and recommend for funding:

> Proposal Number 05-18, entitled “Electric Diesel Particulate Filter Demonstration”, submitted by Cleaire Advanced Emission Controls, LLC, for a total amount not to exceed $71,400.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39703, hereby approves the following:

> Proposal Number 05-18, entitled “Electric Diesel Particulate Filter Demonstration”, submitted by Cleaire Advanced Emission Controls, LLC, for a total amount not to exceed $71,400.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and agreements for the efforts proposed herein, and as described in Attachment A, in an amount not to exceed $71,400.

I hereby certify that the above is a true and correct copy of Resolution 05-17, as adopted by the Air Resources Board.

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Lori Andreoni, Clerk of the Board

ATTACHMENT A

Innovative Clean Air Technologies (ICAT) Grant Proposal:

"Electric Diesel Particulate Filter Demonstration"

Background

Cleaire will transfer, from stationary engines in Europe to heavy-duty truck engines, plug-in electric regeneration of passive diesel particulate filters.

Objective

The project should demonstrate that passive filtration with plug-in regeneration is a practical technology for centrally-garaged heavy-duty vehicles that are not suitable for retrofits with active (catalytic) particulate filters.

Methods

The project will begin with constructing a prototype on-board passive filter and controls suitable for the demonstration vehicles. The next step will be to design and install a regeneration station at the host site(s). Cleaire will then install the filters and data-loggers on several older vehicles, including a school bus and utility truck. Operating parameters such as back-pressure will be collected and analyzed periodically. After a six-month durability period, the emission performance of the filters will be measured at a chassis dynamometer laboratory.

Expected Results

The project should show that retrofit filters suitable for entry into the ARB's Diesel Emission Control Strategies Verification program can be regenerated electrically.

Significance to the Board

The technology should provide a practical retrofit option for diesel trucks that are subject to current and forthcoming regulations but are not suitable for the passive particulate filters that are being installed on most types trucks.

Applicant: Cleaire Advanced Emission Controls, LLC

Project Period: February 28, 2005, to June 28, 2006

Principal Investigator: Dr. Bradley Edgar

ICAT Funding: $71,400

Co-funding: $146,700

Past Experience with This Principal Investigator: None

Prior ICAT Funding to 2005

Year	2004	2003	2002
Funding	0	0	0

B U D G E T S U M M A R Y

Cleaire Advanced Emission Controls, LLC

"Electric Diesel Particulate Filter Demonstration"

Direct Costs and Benefits	**ICAT**	**Total**
1. Labor	$ 0	$ 37,000
2. Employee Fringe Benefits	$ 0	$ 12,950
3. Subcontractors	$ 71,400	$ 77,100
4. Equipment	$ 0	$ 48,500
5. Travel and Subsistence	$ 0	$ 0
6. Materials and Supplies	$ 0	$ 0
7. Other Direct Costs	$ 0	$ 0
Total	$ 71,400	$ 75,550
Indirect Costs		
1. Overhead	$ 0	$ 42,550
2. Other Indirect Costs	$ 0	$ 0
Total	$ 0	$ 42,500
Total Project Costs	**$ 71,400**	**$218,100**