

State of California
AIR RESOURCES BOARD

Resolution 06-51

December 7, 2006

Agenda Item No.: 06-11-2

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 proposal Number 99, entitled "Maximus Stop-Fill Unit Demonstration," has been submitted by The Adept Group, Inc., in response to the 2006 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 99, entitled "Maximus Stop-Fill Unit Demonstration," submitted by The Adept Group, Inc., for a total amount not to exceed \$150,200.

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 99, entitled "Maximus Stop-Fill Unit Demonstration," submitted by The Adept Group, Inc., for a total amount not to exceed \$150,200.

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 \$150,200.

I hereby certify that the above is a true and correct copy of Resolution 06-51, as adopted by the Air Resources Board.

Lori Andreoni, Clerk of the Board

ATTACHMENT A

Innovative Clean Air Technologies (ICAT) Grant Proposal:

“Maximus Stop-Fill Unit Demonstration”

Background

Adept Sciences and Technologies has developed an acoustic sensor that can be used to reduce fugitive emissions of liquefied petroleum gas (LPG) which result during the refilling of LPG storage tanks used in residential applications. The sensor works by determining when during the refilling process the LPG level inside the storage tank has reached the desired level. The use of the device allows the individuals filling the tank to fill the tank with the vent on top of the tank closed, thus preventing the emission of LPG through the vent during the filling process.

Objective

The objective of the project will be to demonstrate the viability of the Maximus Stop-Fill Unit to reduce the fugitive emissions of LPG which occur during the refilling of residential LPG storage tanks.

Methods

The Maximus Stop-Fill Unit will be used by 15 LPG storage tank filling operations for a period of eight weeks to assess its effectiveness in reducing fugitive LPG emissions which occur during the refilling of residential storage tanks.

Expected Results

It is expected that the effectiveness of the Maximus Stop-Fill Unit to reduce fugitive LPG emissions occurring during the refilling of residential LPG storage tanks will be demonstrated in this project.

Significance to the Board

The demonstration of the Maximum Stop-Fill Unit would assist the ARB in assessing the need for regulations to reduce emissions from the refilling of residential LPG storage tanks.

Applicant: Adept Sciences and Technology

Project Period: April 2007 to April 2008

Principal Investigator: Alex Spataru

ICAT Funding: \$150,200 (ARB: \$75,200, SCAQMD: \$75,000)

Co-funding: \$216,900

Past Experience with This Principal Investigator:

none.

Prior ICAT Funding to 2006

Year	2005	2004	2003
Funding	0	0	0

BUDGET SUMMARY

The Adept Group, Inc

“Maximus Stop-Fill Unit Demonstration”

<u>Direct Costs and Benefits</u>	<u>ICAT</u>	<u>Total</u>
1. Labor	\$ 49,750	\$105,600
2. Employee Fringe Benefits	\$ 5,750	\$ 12,205
3. Subcontractors	\$ 72,300	\$133,600
4. Equipment	\$ 0	\$ 12,300
5. Travel and Subsistence	\$ 8,500	\$ 19,850
6. Materials and Supplies	\$ 6,700	\$ 16,300
7. Other Direct Costs	<u>\$ 7,200</u>	<u>\$ 15,300</u>
Total	\$150,200	\$315,155
 <u>Indirect Costs</u>		
1. Overhead	\$ 0	\$ 51,945
2. Other Indirect Costs	<u>\$ 0</u>	<u>\$ 0</u>
Total	<u>\$ 0</u>	<u>\$ 51,945</u>
Total Project Costs	\$150,200	\$367,100

SUBCONTRACTORS' BUDGET SUMMARY

Subcontractor: ASCENT

ASCENT will perform necessary software and hardware modifications for the sensor to be used in field demonstration, improve the performance of transducer driving voltage sub-system, modify critical sub-system components to lower power supply requirements, upgrade sensor molds. ASCENT will assist in selection of demonstration sites, in the drafting of an operator manual, in the training of the operators, and in monitoring the field use of the prototypes.

<u>DIRECT COSTS AND BENEFITS</u>		<u>ICAT</u>	<u>Total</u>
1.	Labor	\$ 53,300	\$ 84,000
2.	Employee Fringe Benefits	\$ 0	\$ 0
3.	Subcontractors	\$ 0	\$ 0
4.	Equipment	\$ 0	\$ 0
5.	Travel and Subsistence	\$ 4,000	\$ 6,000
6.	Materials and Supplies	\$ 15,000	\$ 23,600
7.	Other Direct Costs	<u>\$ 0</u>	<u>\$ 0</u>
	Total Direct Costs	\$ 72,300	\$113,600
<u>INDIRECT COSTS</u>			
1.	Overhead	\$ 0	\$ 20,000
2.	Other Indirect Costs	\$ 0	\$ 0
	Total Indirect Costs	<u>\$ 0</u>	<u>\$ 20,000</u>
<u>TOTAL SUBCONTRACTOR COSTS</u>		\$ 72,300	\$133,600