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SONEX RESEARCH INC
Form 8-K
June 22, 2005

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities
Exchange Act of 1934

Date of Report (Date of earliest event reported): June 22, 2005

SONEX RESEARCH, INC.
(Exact name of registrant as specified in Charter)

| | | |
|-----------------|-----------------|---------------------|
| Maryland | 000-14465 | 52-1188993 |
| (State or other | (Commision file | (IRS employer |
| jurisdiction of | number) | identification no.) |
| incorporation) | | |

23 Hudson Street, Annapolis, MD 21401
(Address of principal executive offices)

(410) 266-5556
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 8.01 - OTHER EVENTS

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On June 22, 2005, the Registrant issued the following announcement over the newswire and posted it on its website (www.sonexresearch.com):

SONEX RECEIVES \$300,000 FOLLOW-ON TASK FROM DARPA

ANNAPOLIS, MARYLAND, June 22, 2005 - SONEX RESEARCH, INC. (OTC SONX), a leader in the field of combustion technology, announced that it has received a \$300,000 follow-on task from the Defense Advanced Research Projects Agency (DARPA) to continue development of a multi-cylinder, four-stroke, high power output, "heavy fuel" engine (HFE) combustion process for potential Department of Defense (DoD) applications such as unmanned aerial vehicles (UAVs).

Sonex, a small business, has performed a best efforts technology development and demonstration of the patented Sonex Combustion System (SCS) to enable the use of JP-5/8 military kerosene-based "heavy fuel" in lightweight, four-stroke piston engines. This project is sponsored by DARPA as a technology feasibility demonstration of a means for lightweight piston engines to comply with a DoD policy directive that mandates heavy fuel for all engines. Gasoline engines are typically 25% to 30% lighter than diesel engines; thus, fully qualified, adapted gasoline engine designs that could burn hard-to-ignite diesel and kerosene-based heavy fuels would address DoD performance, logistics and safety requirements.

The SCS improves the combustion of fuels in four-stroke, direct injected (DI) engines through design modification of the pistons to achieve chemical/turbulent enhancement of combustion. One form of the SCS, called Sonex Controlled Auto Ignition (SCAI), allows ignition and combustion of low cetane fuels, such as JP-5/8, by controlled auto-ignition at moderate compression ratios, and operates at controlled peak cylinder pressures, which should allow the design of lighter weight HFEs rather than the heavy weight required by normal diesel engines.

To date under the existing agreement, Sonex adapted a lightweight, six-cylinder, normally aspirated, gasoline, spark-ignited (SI), automotive engine to the SCAI unthrottled, lean-burn, direct fuel injection combustion process to run on JP5 heavy fuel. This engine was run normally aspirated and turbocharged to examine performance relative to the combustion chamber. In addition, Sonex adapted its 3-cylinder turbocharged diesel laboratory engine to compare a diesel-like combustion chamber to the gasoline-like combustion chamber of the first engine.

With its SCAI process using heavy fuel, Sonex achieved the following laboratory results:

- * Complete control of ignition by means of SCAI chemical ignition using fuel injection timing.
- * Control of peak cylinder pressures consistent with lightweight aluminum engine design.
- * Demonstration of the advantages of the diesel-like combustion chamber and turbocharging for high power output and low smoke at a fuel consumption rate of 0.35 lbs. of fuel per horsepower hour. This is in the range of modern diesel engines.

The objective of this follow-on task is to apply the SCS SCAI to the reconfiguration of a commercially available automotive engine that approximates the combustion chamber, displacement, bore and stroke of an objective 400 hp HFE. Demonstration of the performance criteria of this reconfigured engine is intended to provide the impetus needed to establish a sustained DoD effort to develop and qualify lightweight HFEs.

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This is the second DARPA funded follow-on task to the agreement, which is structured as an "other transaction" pursuant to 10 U.S.C. ss. 2371 and by Section 845 of the National Defense Authorization Act for Fiscal Year 1994, Public Law 103-160, as amended.

The outcomes from this Agreement also relate to the use of SCS SCAI with gasoline and could have significant potential for commercial application in the automotive market. U.S. fuel mileage improvement for production automobiles by model year 2014 is addressed in the House and Senate 2005 Energy Bills. Section 774 of the House bill passed in April 2005 states: "Not later than 30 days after the date of the enactment of this Act, the Administrator of the National Highway Traffic Safety Administration shall initiate a study of the feasibility and effects of reducing by model year 2014, by a significant percentage, the amount of fuel consumed by automobiles." Sonex seeks to be at the forefront in 2005 by providing compelling data on how its SCS SCAI technology for unthrottled gasoline direct injection (GDI) engines could cost effectively improve fuel mileage 25% to 30% and enable reduced exhaust emissions. Sonex has been seeking partners and other funding arrangements to support this quest.

Contact: George E. Ponticas, CFO, Sonex Research, Inc., tel: 410-266-5556, email: george.ponticas@sonex-na.com, website: www.sonexresearch.com.

About DARPA

The Defense Advanced Research Projects Agency (DARPA) is the central research and development organization for the Department of Defense (DoD). It manages and directs selected basic and applied research and development projects for DoD, and pursues research and technology where risk and payoff are both very high and where success may provide dramatic advances for traditional military roles and missions. More information about DARPA can be found on the Internet at www.darpa.mil.

About Sonex

Sonex Research, Inc., a leader in the field of combustion technology, is developing its patented Sonex Combustion System (SCS) piston-based technology for in-cylinder control of ignition and combustion, designed to increase fuel mileage and reduce emissions of internal combustion engines. Sonex plans to complete development, commercialize and market its Sonex Controlled Auto Ignition (SCAI) combustion process to the automotive industry to improve fuel efficiency of gasoline powered vehicles. Additionally, independent third-party testing has confirmed the potential of the SCS application for direct-injected diesel engines to significantly reduce harmful soot in-cylinder without increasing fuel consumption. Other SCS designs are being used to convert gasoline engines of various sizes to operate on safer, diesel-type "heavy fuels" for use in military and commercial applications requiring light weight and safe handling and storage of fuel, such as in UAVs (unmanned aerial vehicles).

Caution Regarding Forward-Looking Statements

"Forward-looking" statements contained in this announcement, as well as all publicly disseminated material about the Company, are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Act. Such statements are based on current expectations, estimates, projections and assumptions by management with respect to matters such as commercial acceptance of the SCS technology, the impact of competition, and the Company's financial condition or results of operations. Readers are cautioned that such statements are not guarantees of future performance and involve risks and uncertainties that could

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cause actual results to differ materially from those expressed in any such forward-looking statements. Additional information regarding the risks faced by Sonex is provided in the Company's periodic filings with the Securities and Exchange Commission under the heading "Risk Factors". Such filings are available upon request from the Company or online in the EDGAR database at www.sec.gov.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

June 22, 2005

SONEX RESEARCH, INC.
Registrant

/s/ George E. Ponticas

George E. Ponticas
Chief Financial Officer and Secretary