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SONEX RESEARCH INC  
Form 8-K  
December 09, 2002

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): December 9, 2002

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

Maryland	0-14465	52-1188993
(State or other jurisdiction of incorporation)	(Commision file number)	(IRS employer identification no.)

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)

ITEM 5. - OTHER EVENTS

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On December 9, 2002, Sonex Research, Inc. (the "Company") posted the following news announcement on its website ([www.sonexresearch.com](http://www.sonexresearch.com)) and issued the announcement over the wire services:

### SONEX RECEIVES DEPARTMENT OF ENERGY SUBCONTRACT TO TEST AUTOMOTIVE DIESEL APPLICATION

ANNAPOLIS, MARYLAND, December 9, 2002 - SONEX RESEARCH, INC. (OTC BB: SONX) announced today that it has been awarded a \$458,862 subcontract under a U.S. Department of Energy (DOE), Small Business Innovation Research (SBIR) Program, Phase II prime contract to Compact Membrane Systems, Inc. (CMS), of Wilmington, Delaware. Sonex will be evaluating its patented piston-based, Sonex Combustion System (SCS) emissions reduction technology in an advanced automotive diesel engine in combination with a polymer membrane technology being developed by CMS.

CEO and co-founder Dr. Andrew A. Pouring stated "Arrangements to secure an appropriate engine for the testing should be completed in a few weeks. We expect the engine to be one that has been used in a joint government and automobile industry program. Once we receive the engine, we anticipate releasing additional details about the project. Initial work under the subcontract is already underway, as Sonex has just received some engine spare parts and necessary equipment to prepare a test cell to house the engine."

CMS is developing its polymer membrane technology for the addition of nitrogen enriched air (NEA) to the diesel engine combustion process as an alternative to the use of exhaust gas recirculation (EGR) as a means to reduce the in-cylinder production of oxides of nitrogen (NOx). If successful, the CMS method could provide the benefits of EGR with reduced risk to engine wear, with reduced heat load for cooling (EGR), without the burden of additional hardware and without significant impact on the turbo-charger. In the past, the introduction of high levels of EGR to reduce NOx emissions has been shown to substantially increase the production of soot/particulate emissions. SCS piston designs, however, have shown the ability to reduce diesel engine soot/particulate emissions.

In 2001 the DOE awarded an SBIR Phase I prime contract to CMS to determine the feasibility of combining SCS piston technology with the CMS polymer membrane technology, and a subcontract was issued to Sonex. Phase I testing was conducted on the Sonex laboratory, single-cylinder, normally aspirated, direct injected (DI) diesel engine. Results showed that the NEA polymer membrane and the SCS piston in the single-cylinder engine, supercharged by Sonex, have the potential for significant reduction of NOx without increasing soot/particulate emissions.

The aim of the current SBIR Phase II contract award to CMS, and the resultant subcontract to Sonex, is to transfer the Phase I single-cylinder results to the multi-cylinder engine. Dr. Pouring added, "Early stages of the project will focus on the emissions reduction capabilities of the SCS piston on its own to provide data for evaluation by DOE and commercial interests. Subsequent testing will take place in combination with the NEA membrane.

Sonex also reported that of the \$458,862 subcontract total, \$100,000 represents the Sonex cost-sharing portion, including the value of the contribution by a third party of the multi-cylinder automotive diesel engine.

Contact: Sonex Research, Inc.: George Ponticas, 410-266-5556, email: [sonex@erols.com](mailto:sonex@erols.com), website: [www.sonexresearch.com](http://www.sonexresearch.com); Investor Relations: The Scottsdale Group, Susan Ladue, 781-292-1050, email: [info@thescottsdalegroup.com](mailto:info@thescottsdalegroup.com), website: [www.thescottsdalegroup.com](http://www.thescottsdalegroup.com).

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### About CMS

Compact Membrane Systems, Inc. (CMS) is a high technology membrane company providing a family of high productivity, fluorinated polymeric membranes for gas separation and the associated production of nitrogen and oxygen enriched air. CMS hollow fiber membrane modules, sized to process engine intake air, are small enough to fit in mobile engine compartments. Their chemical nature allows them to maintain performance over extended periods of time while located in the harsh engine environment. CMS working in conjunction with major industrial gas companies is positioned to customize prototype membrane systems for engine use and subsequently supply commercial modules. More information about CMS can be found on the Internet at [www.compactmembrane.com](http://www.compactmembrane.com).

Contact: Compact Membrane Systems, Inc., Stuart Nemser, 302-999-7996, email: [snemser@compactmembrane.com](mailto:snemser@compactmembrane.com).

### 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 SCS Stratified Charge Radical Ignition (SCRI) combustion process to the automotive industry in response to forthcoming increases in national vehicle fuel mileage standards. Presently, high mileage, roomy and safe five-passenger automobiles using gasoline, direct injected (GDI) engines are sold only in Japan and Europe due to high emissions. Sonex intends to conclusively demonstrate that SCS-SCRI will enable GDI engined vehicles to achieve 50 mpg (highway) while meeting emissions standards to permit sale in the U.S. as a viable, near-term alternative to longer-term solutions such as improvements in hybrid propulsion systems or years of further R&D required for fuel cell technology to become practical.

Additionally, independent third-party testing has confirmed the potential of the SCS application for DI diesel engines to reduce harmful soot in-cylinder without increasing fuel consumption. Sonex is pursuing joint marketing and commercialization programs for the SCS low soot technology with committed industrial partners.

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. Examples include UAVs (unmanned aerial vehicles) and ATVs (all-terrain vehicles) such as those used by U.S. defense forces in Afghanistan, as well as outboard engines, small watercraft used as targets, and generator sets.

### 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 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

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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](http://www.sec.gov).

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### 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.

December 9, 2002

SONEX RESEARCH, INC.  
Registrant

/s/ George E. Ponticas

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George E. Ponticas  
Chief Financial Officer