SONEX RESEARCH INC
Form 10KSB
April 15, 2004

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 10-KSB

ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2003.
Commission file number 0-14465.

SONEX RESEARCH, INC.

Incorporated in State of Maryland
23 Hudson Street, Annapolis, Maryland 21401
Telephone Number: (410) 266-5556
I.R.S. Employer Identification No. 52-1188993

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
None	None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, $.01 par value

Check whether the Issuer (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. YES NO

Check if there is no disclosure of delinquent filers in response to Item 405 of Regulation S-B in this form, and no disclosure will be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB. [ ]

Revenues for the year ended December 31, 2003 were $923,813.

The number of shares outstanding of the Issuer's $.01 par value Common Stock as of March 31, 2004 was 25,032,669. The aggregate market value of voting stock held by non-affiliates of the Registrant was $2,557,548 as of March 31, 2004.

Documents Incorporated by Reference: None.

PART I

ITEM 1. DESCRIPTION OF BUSINESS

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

Sections of this document, as well as all publicly disseminated material about Sonex Research, Inc. ("Sonex" or the "Company"), contain expressions of beliefs, expectations, or intentions, in the form of "forward-looking" statements as that term is defined under applicable federal securities laws. Such statements are based on current expectations, estimates, projections and assumptions by management with respect to, among other things, trends affecting the Company's financial condition or results of operations and the impact of competition. Words such as "expects", "anticipates", "plans", "believes", "estimates", variations of such words, and similar expressions are intended to identify such statements that include, but are not limited to, projections of revenues, earnings, cash flows and contract awards. Such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, all of which are difficult to predict and many of which are beyond the control of the Company.

Forward-looking statements contained herein speak only as of the date of this report. The Company disclaims any obligation to update these statements and cautions readers not to place undue reliance on such statements.

COMPANY OVERVIEW

Sonex, incorporated in Maryland in 1980, is an engineering research and development firm that is seeking to commercialize its patented proprietary technology (the "Sonex Combustion System", "SCS" or "Ultra Clean BurnTM technology") for in-cylinder control of ignition and combustion in engines of various types. The Company was co-founded in 1980 by Dr. Andrew A. Pouring, a former Professor of Aerospace Engineering and Chairman of the Department of Aerospace Engineering at the U.S. Naval Academy. At Sonex, Dr. Pouring conducted basic research into the principle of in-cylinder control of ignition and combustion, concentrating on the piston. By the late 1980's and early 1990's, the development of the SCS had moved in the direction of chemical/turbulent enhancement of combustion through investigation of the effects of changing the chemical characteristics and fuel disbursement characteristics within the combustion chamber.

The Company seeks to commercialize its SCS technologies for a variety of engine applications for commercial and military use. To date, Sonex has engaged in development and demonstration programs with the engine industry and has received funding from the federal government for further development of the SCS technologies. The Company's primary objective is to execute broad agreements with engine and parts manufacturers for industrial production of SCS components under license from Sonex.

The SCS technology for in-cylinder control of ignition and combustion is designed to

- |X| reduce emissions of diesel engines
- |X| increase fuel mileage of a new generation of gasoline engines
- |X|permit gasoline engines to run on safer, kerosene-based "heavy" fuels

The SCS improves the combustion of fuels in engines through design modification of the pistons in four-stroke, direct injected (DI), engines or the cylinder heads in two-stroke, spark-ignited (SI), gasoline engines to achieve chemical/turbulent enhancement of combustion. The SCS process for both two- and four-stroke engines achieves in-cylinder control of ignition and combustion

through the chemical/turbulent enhancement of combustion via combustion chamber modifications that change the chemical characteristics and fuel disbursement characteristics within the combustion chamber.

SCS reductions of soot in DI diesel truck engines have been confirmed by an independent international engine consulting firm. Evidence to date indicates that the SCS is a significant new engine design variable, and that the synergy of the SCS in combination with exhaust gas recirculation can help reduce exhaust aftertreatment requirements to meet future regulatory standards. The Company believes that SCS diesel engine designs should provide reductions in the cost and complexity of future exhaust aftertreatment systems.

Sonex also is seeking to show the technical feasibility of achieving reduced fuel consumption while lowering emissions in a new class of DI gasoline engines, yet overcoming the safety concern that vehicles would need to be reduced in size and weight to improve fuel mileage. A new branch of the SCS focusing on the control of ignition may, with further development, enable DI gasoline engined automobiles, currently manufactured and sold only in markets outside the U.S. due to emissions considerations, to become emissions compliant in the U.S. while providing fuel consumption benefits. In addition, the evolution of hybrid gasoline and electric powered vehicles could be accelerated since a major improvement in engine fuel mileage would provide opportunities for tradeoff of vehicle weight versus power.

An SCS process for the conversion of reliable, lightweight, SI, two-stroke, gasoline engines to start and operate on kerosene-based "heavy" fuels has been applied successfully in a variety of applications such as small, remotely controlled military unmanned aerial vehicles (UAVs). The military now requires such engines to operate on less volatile heavy fuels to reduce the hazard associated with gasoline, making heavy fuel engines (HFEs) more suitable for applications where gasoline storage and use are undesirable. Potential applications of the SCS heavy fuel conversion process can be expanded to a range of military and commercial uses. Sonex is also developing a process for the heavy fuel conversion of SI four-stroke gasoline engines by using direct injection and patented Sonex designs. In addition, Sonex is examining the potential, through cooperation with one or more companies which have complementary technologies and production capabilities, of becoming a supplier of HFEs to military and commercial markets.

As of March 31, 2004, the Company has seven full-time employees and two part-time employees, and engages the part-time services of a consultant who serves as its director of business development and manager of government programs. The Company also engages the services of several other technical and business consultants as needed. The Company has never experienced a strike or work stoppage, and believes its relations with its employees are good.

STRATEGIC PLANNING

Present Sonex technology development is being supported by U.S. Government funding, and the Company is also seeking committed business partners for further technical development and marketing of the various SCS engine applications. Sonex believes that having one or more such partners experienced in dealing with the engine and automotive industries on state-of-the-art technological developments may accelerate commercial acceptance of the SCS technology. Development efforts taking place currently under government contracts to Sonex could facilitate participation by the engine and automotive industries and thereby accelerate commercialization potential of the patented SCS technology for in-cylinder control of ignition and combustion. In 2003 the Company began

taking steps to focus on business re-positioning, strengthening its internal capabilities, and planning for growth. The Company engaged consultants to assess the SCS technologies and business model, suggest approaches for strategic alliances, and provide federal marketing, government procurement assistance, and commercialization services.

Management identified a need to secure strong strategic alliances for the marketing and commercialization of the SCS engine applications by leveraging technology development currently supported by U.S. Government funding as well as seeking relationships with companies which have technologies complementary to the SCS. One of the first objectives on this path was to strengthen the Company's management team.

At the start of 2004, the composition of the Company's Board of Directors changed substantially following the resignation in late January and early February 2004 of three independent directors who had served on the Board for several years. Each of these former directors cited other business responsibilities as the reason for his resignation. The only continuing member of the Board is the Company's Chief Executive Officer. The number of members of the Board was reduced from four to three. Named to the Board to serve on an interim basis were the Company's Chief Financial Officer and one independent director.

In late February 2004 the Company's reconstituted Board of Directors hired a new president to fill the position that had been vacant and entered into an employment agreement with this individual. The Company's new president is developing and implementing an updated business plan, the primary goal of which is to transition Sonex from a research and development company into a technology, commercialization, and manufacturing enterprise. There is no assurance, however, that the Company will be able to complete and implement an updated business plan.

RISK FACTORS

In order to obtain the benefits of the "safe harbor" provisions under applicable federal securities laws for any "forward-looking" statements of the type described previously under the heading "Caution Regarding Forward-Looking Statements", the Company cautions shareholders, investors and prospective investors about significant factors which, among other things, have in some cases affected the Company's actual results and are in the future likely to affect the Company's actual results and cause them to differ materially from those expressed in any such forward-looking statements.

Factors that could cause actual results to differ materially include the specific risks listed below. These risks and uncertainties are not the only ones faced by the Company or that may adversely affect its business. If any of the following risks or uncertainties actually occur, the Company's business, financial condition or results of operations could be materially adversely affected.

- |X| ability to generate cash flow from revenue or to secure financing necessary to fund future operations
- |X| ability to complete technology development and demonstration programs, demonstrate commercial viability of SCS technology and execute licensing agreements that produce significant revenue
- |X| ability to maintain and protect the Company's patents and proprietary information
- |X| ability to attract and retain skilled personnel
- |X| ability to secure a long-term lease for the Company's existing facility or to secure an alternative location
- |X| changes in general economic conditions

|X| competition from companies which have substantially greater financial, technical and marketing resources than does the Company

Furthermore, since its inception in 1980, the Company has generated cumulative net losses of approximately $23 million, and anticipates incurring operating losses for the foreseeable future. Operating results have fluctuated significantly in the past on an annual and quarterly basis, and are expected to continue to fluctuate significantly from quarter to quarter for the foreseeable future. The business historically has not generated sufficient cash flow to fund operations without resorting to external sources of capital. The Company does not have any bank financing arrangements. Operating funds have been raised primarily through the sale of equity securities in both public and private offerings, although revenues have provided most of the necessary operating cash for the last two years.

In the event that funding from internal and external sources is insufficient, the Company would have to cut back significantly its level of spending, which could substantially curtail the Company's operations. These reductions could have an adverse effect on the Company's relations with its potential customers and government funding sponsors.

The Company's success also depends in significant part on the continued services of its key technical and senior management personnel. Losing one or more key employees, including for reasons of poor health, disability, or death, could have a material adverse effect on the Company's business, results of operations, and financial condition. Due to the expense involved, the Company does not maintain life insurance policies for any of its employees. Additionally, in order to avoid long-term financial commitments, the Company does not have employment agreements with any of its personnel with the exception of the new president hired in February 2004.

Further, the market price of the Company's Common Stock could be affected adversely by the substantial number of shares that are reserved for, and may be issued in, the future. As of March 31, 2004, there were 25,032,669 shares of Common Stock issued and outstanding, with an additional 12,636,832 shares reserved for future issuance, primarily upon the conversion of preferred stock and the exercise of options and warrants.

PRIMARY SCS DESIGN MODIFICATIONS

The SCS technology for four-stroke DI engines improves the process of combustion through a combination of chemical and fluid dynamic effects that occur by modifying the engine's combustion chamber and the processes occurring within that chamber. The SCS processes for DI engines change only a single engine component (the piston) while introducing no additional parts and are self-driven by the combustion process. Patented SCS piston designs for four-stroke engines integrate cavities called micro-chambers (MCs) which form a ring around the piston bowl, with each MC positioned with respect to each spray from the fuel injector of a DI engine. The MCs are designed to function either as chemical reactors or reservoirs, depending on the specific design needs, and are connected to the piston bowl by vents. For soot reduction, the reservoirs/vents are placed to increase turbulence, while for enhanced ignition the MCs produce highly active chemical species from a fraction of the fuel-air charge that are expelled on the intake stroke of low compression ratio DI engines to fumigate incoming air and serve as an ignition source.

The SCS processes for DI engines are applicable to: (1) classical diesels as a means to reduce particulate emissions with little or no fuel consumption increase and, if used in conjunction with high levels of exhaust gas recirculation (EGR), to reduce oxides of nitrogen (NOx) and soot with a slight

fuel consumption increase; and (2) "throttle-less gasoline combustion based on compression ignition and high rates of heat release ("lean burn-fast burn") at normal gasoline engine peak cylinder pressures to improve fuel economy with the potential to reduce emissions to EPA Tier II criteria.

The SCS process for the conversion of lightweight, SI, two-stroke, gasoline engines introduces patented features which enable the combustion of heavy fuels through design modification of the cylinder heads to achieve a thermally and chemically enhanced combustion process while still relying on the spark to initiate combustion. Sonex uses a machined cylinder head and combustion chamber insert housing the proprietary SCS technology, and a heated element fuel vaporizer for cold starting. For engines that have the cylinder head and cylinder in one single casting, the stock cylinder head is removed and the remaining cylinder casting is decked and machined for cylinder head screws. The SCS heavy fuel conversion maintains the gasoline engine's stock carburetion or fuel injection system, intake and exhaust systems, spark ignition system, compression ratio and approximate weight.

SCS FOR LOW COMPRESSION RATIO DI ENGINES

Sonex Controlled Auto Ignition (SCAI)

Sonex is developing a new, enhanced SCS process, focusing on the control of ignition for low compression ratio four-stroke DI engines. This process is an in-cylinder method for isolating a small portion of an un-throttled, lean air-fuel charge in each combustion cycle to produce reactive chemical species that are carried over to cause spark-less compression ignition in the next cycle at gasoline compression ratios.

The combustion chamber modifications for this process make use of certain chemically active products of combustion known as "free radicals" that, in conventional internal combustion engines, are not carried from one combustion cycle to the next. With this SCS process, radical (chemical) species that enable ignition are created by interaction of the injected fuel spray with specially designed MCs in the piston side wall. In its early stages of development, Sonex termed this process Stratified Charge, Radical Ignition (SCRI), as free radicals are isolated in MCs to be carried from one combustion cycle to the next to take advantage of the combustion enhancing properties of the free radicals, thereby enabling ignition of all types of fuels and allowing more complete combustion of the fuel. Sonex has now labeled this enhanced combustion process Sonex Controlled Auto Ignition (SCAI) in order to highlight the special ability of the process to control ignition.

SCAI is an unthrottled, low compression ratio, sparkless, compression ignition process at gasoline compression ratios. The SCAI relies on direct injection of fuel into the cylinder (rather than in the intake manifold) as well as the production of radicals for ignition. SCS micro-chambers for SCAI place a special design emphasis on the chemical aspect allowing controlled auto ignition of any fuel at low compression ratios. The SCAI process for four-stroke engines achieves compression ignition-combustion of the fuel without raising the compression ratio to the levels found in diesel engines. The net result is an engine that is fully controllable at all loads and speeds without limitation, has extremely low emissions and the fuel economy of a diesel engine. As a result, the inherent light weight of the gasoline engine is preserved and peak combustion pressures are limited to those of gasoline operation.

The SCAI process for low compression ratio DI engines was developed in a single-cylinder research engine in the fully equipped Sonex laboratory. The SCAI combustion process for control of ignition and combustion was researched

initially on diesel-type fuel, and its ability to reduce NOx, the hardest emissions for diesel engine makers to control, was confirmed. Sonex demonstrated this ignition control in a laboratory, single cylinder engine in meeting a U.S. Department of Defense (DoD) objective to convert gasoline engines to kerosene-based, diesel-type "heavy fuels" (JP-5/JP-8), while retaining the performance and lightweight advantages of a gasoline engine. The laboratory engine was adapted to run on diesel-type heavy fuel based on the SCS piston embodiments, DI, sparkless ignition and low compression ratio controlled combustion over a wide range of speed and load. The SCAI process reduced soot/particulates and NOx emissions substantially while maintaining fuel consumption when compared to the stock configuration of the diesel engine.

During 2001 a major international truck engine manufacturer conducted the first phase of a feasibility study of SCAI combustion technology aimed at transferring the Sonex single cylinder laboratory engine to a modern, advanced, four cylinder, medium-duty truck diesel engine that employs all of the latest diesel engine technology such as a high pressure, electronically controlled injection system, and turbo-charging. This program ended due to operational difficulties and reductions in R&D funding without attaining the performance achieved by Sonex in the single-cylinder engine. The manufacturer did find that the SCAI process resulted in certain positive effects on combustion; however, it concluded that the concept was not close enough to production and would require major funding for further research. The study also identified some of the problems to be solved in transferring the SCAI results to a multi-cylinder engine.

In recognition of the economic realities of the highly competitive, cost-conscious engine industry and its own limited financial resources, the Company sought funding from government sources to help achieve a maturation of the SCAI relative to the expectations of engine manufacturers. Sonex is applying the experience gained from this discontinued program with the truck engine manufacturer to work on a $744,246 Phase 1 contract from the Defense Advanced Research Projects Agency (DARPA) received by the Company in October 2002. The objective of Phase 1 of the DARPA program is to begin the design and development of a heavy fuel engine (HFE) conversion process for a gasoline automotive engine for potential use in a developmental Unmanned Aerial Vehicle (UAV) or other applications. The DoD and NATO now require the elimination of gasoline such that the primary fuel for combat support equipment shall be a single kerosene-based heavy fuel. Heavy fuels are less volatile than gasoline, thereby reducing the hazard associated with the storage, transportation and use of gasoline. Gasoline engines, however, are typically 25% to 30% lighter than diesel engines and, thus, adaptation of gasoline engine designs to burn low cetane (hard to ignite, diesel type) fuel addresses DoD logistics and safety issues.

The first phase of the contract program with DARPA focuses on the SCS SCAI process to convert a modern, spark-ignited (SI), four-stroke, six-cylinder, automotive gasoline engine to heavy fuel operation. The primary objective is to transfer the SCAI heavy fuel design achieved in the Sonex single-cylinder laboratory engine to the multi-cylinder gasoline engine, eliminate the spark ignition system, and produce the same power the engine originally produced on gasoline. Conversion of the engine, originally designed for spark ignition, from gasoline to JP-5 has the advantage of the light weight compared to an ordinary diesel engine since the engine may be used in a UAV application.

During 2003 Sonex adapted the automotive engine using a computer aided design and prototyping fabrication process that involved subcontractors and specialty suppliers, as well as assistance from the engine manufacturer. The SCS throttle-less HFE features a proprietary SCAI piston design, electronically controlled common rail fuel injection system and extensive instrumentation. The first phase recently has demonstrated equal or greater power in a limited range at reduced fuel consumption. It is anticipated that the SCS HFE Phase 1 design, which is already 20% more fuel efficient than the original gasoline engine, can

be turbo-charged to higher power output with advantageous rates of fuel consumption across a wide range of performance criteria. Sonex is seeking Phase 2 funding from DARPA to continue this program.

Outcomes from the DARPA program could validate the SCAI technology for in-cylinder control of ignition and combustion that could be applied later to a gasoline powered version. The duration of demonstration projects with automotive manufacturers could be reduced since the sparkless SCAI process can advantageously employ the centrally located spark plug hole of most production 4-valve per cylinder engines for the installation of the injector.

In addition, the Company believes the availability of the resultant multi-cylinder, four-stroke heavy fuel engine from a successful outcome of the DARPA project could lead to use in other military engine programs, as well as having potential for use in the commercial marine market in pleasure boats for which a diesel fueled engine would be a safer alternative to the current gasoline engines which too often result in dangerous onboard fires.

SCAI and HCCI Combustion

Sonex believes that SCAI will enable practical application of an alternative combustion process known as homogeneous charge compression ignition (HCCI) that is being examined by the worldwide automotive industry. HCCI has been studied by many researchers for years because, in theory, it can lower emissions while also achieving reduced fuel consumption. The lack of a method for controlling the ignition point, however, has prevented practical implementation of HCCI. With its SCAI process, Sonex believes it has attained the control of ignition that will make HCCI viable for military and commercial application. A Sonex technical paper supporting the theoretical aspects of SCAI was presented by a consultant to the Company, Dr. David A. Blank, in May 2003 at a joint U.S. and Japan Society of Automotive Engineers (SAE) Fuels and Lubricants meeting in Japan. A second joint paper will be presented at the 2004 SAE Fuels and Lubricants meeting in France by Sonex Chief Executive Officer and Chief Scientist Dr. Andrew A. Pouring in June 2004.

On the basis of the extensive SCAI single cylinder laboratory engine work it has performed with alcohol and heavier fuels, as well as the promising results achieved on the SCS six-cylinder HFE conversion under the DARPA program, Sonex believes it has attained the control of ignition that will make HCCI viable for commercial application in a new generation of gasoline engines. With the SCAI combustion process, radical (chemical) species that enable compression ignition are created by interaction of the injected fuel spray with specially designed micro-chambers in the piston side wall. The net result is an engine that is fully controllable at all loads and speeds without limitation, has extremely low NOx emissions, and the fuel economy of a diesel engine.

SCAI combines the best aspects of HCCI without its inherent limitations. Combustion pressure is kept low so lightweight gasoline engine construction can be used. The spark plug is eliminated so diesel-like radical ignition is used; its timing is fully controllable by the use of diesel-type direct injection into the cylinder.

SCAI and Gasoline Combustion

Spark ignited (SI), direct injected gasoline (GDI) engines used in five-passenger automobiles manufactured and sold in Japan and Europe achieve 50 mpg (highway) but cannot be sold in the U.S. due to high NOx emissions, which require low sulfur gasoline to assure NOx decomposition in an exhaust treatment system that would be poisoned with high sulfur gasoline sold in the U.S. Low sulfur gasoline will begin introduction in the U.S. in 2006. GDI engines operate

on high air-fuel ratios. Direct injection uses unrestricted air flow and a fuel injector in each cylinder of the engine to provide precisely timed, metered fuel delivery to the combustion chamber to overcome the air and fuel flow inefficiencies of present gasoline engines. Significantly, all the GDI engines reported to date are complex, use a spark plug to initiate conventional (non-homogeneous) combustion, require premium fuel, and do not meet U.S. emissions standards for NOx regardless of the catalytic converter technology.

All automobile manufacturers are familiar with the potential benefits of the GDI engine in performance, fuel consumption and cost-to-manufacture, as well as the challenging exhaust problem with NOx emissions. Engine researchers know the key to solving the GDI NOx problem is to replace SI, lean combustion with HCCI and controlled, high rate heat release combustion. The vexing challenge has been to achieve a combustion control mechanism that works effectively over the range of engine operation expected of an automotive application. Ignition control is the feature lacking in conventional HCCI combustion but which gives remarkably low emissions and good fuel economy.

Sonex believes that with further development using gasoline, SCS SCAI sparkless ignition, unthrottled process for control of ignition will enable practical application of HCCI in GDI engined automobiles and improve on the current fuel economy advantages and overcome the NOx problem to permit the sale of such vehicles in the U.S. With its SCAI in-cylinder combustion process, Sonex expects to be able to achieve better performance, increased fuel mileage, and reduced NOx.

Fuel economy of vehicles sold in the U.S. is a matter of public law under the CAFE (Corporate Average Fuel Economy) legislation. For the past decade, the U.S. automobile industry has been successful in postponing any legislative actions that would have led to an increase in CAFE. The fuel economy issue, potential increases in the fuel economy standards, and increased dependence on imported oil are major parts of national legislative and political debate. Opponents of proposals for higher fuel economy standards, including automakers, object on the basis that higher fuel mileage can only be achieved by building smaller, lighter - and therefore, presumably less safe - vehicles. Supporters of higher fuel economy standards, however, argue that by using technology currently available to automakers, the improvements can be accomplished without making vehicles smaller.

Sonex believes that, with further development, its SCAI, low compression ratio, combustion process for unthrottled operation can lead to conventional gasoline engined vehicles that are 25% - 30% more fuel efficient than today's vehicles while still meeting U.S. emissions standards. Sonex also believes the SCAI technology has the potential to achieve these benefits and overcome the safety concern that vehicles would need to be reduced in size and weight to improve fuel mileage.

Sonex has provided input to the Department of Energy, the White House, and House and Senate conferees on the synergy between a technologically feasible increase in fuel mileage through the paradigm-shifting SCAI combustion process and improved safety. The Company expects to provide additional input to the legislative process in 2004.

The Company hopes to progressively mature the SCAI process to conclusively demonstrate that it enables fully-responsive GDI engines of all sizes as a viable, near-term alternative to longer-term solutions such as improvements in hybrid propulsion or years of further R&D required for fuel cell technology to become practical. Outcomes from the current Sonex six-cylinder engine program on heavy fuel funded by DARPA should validate the SCAI technology for in-cylinder control of ignition and combustion that could be applied later to a gasoline powered version. Preliminary experimental work at Sonex on gasoline has demonstrated that the SCAI process does achieve the desired control of ignition

and high rate of heat releases which are necessary to achieve improved fuel consumption and lower emissions.

SCS FOR DI DIESEL ENGINES

The SCS "Low Soot Diesel Design" (LSDD), based on the Sonex U.S. patents issued in January 1999 and January 2001, is a recent invention in the series for the SCS for "classical" DI diesel engines and involves re-arrangement of SCS features to exploit new fundamental understandings of fluid dynamics. The SCS LSDD has shown significant reductions in soot and NOx while maintaining fuel consumption and power. The key feature of the SCS DI diesel technology is the presence of improved MCs in the piston which to some extent produce and conserve intermediate chemical species from a small portion of the incoming fuel. The expulsion of these materials at high velocity enhances turbulence mixing, achieving better than a 50% soot reduction and a 10% NOx reduction in the Sonex single cylinder, DI, normally aspirated laboratory engine with no change in injection timing. Sonex has also demonstrated that the SCS LSDD can be transferred to a modern turbocharged, intercooled DI diesel engine, as described below.

Application of the LSDD for achieving reduced diesel emissions is highly leveraged when used with exhaust gas recirculation (EGR), allowing enhanced ignition with low soot production in the presence of large amounts of EGR. In the Sonex single cylinder research engine, as well as in a multi-cylinder, normally aspirated diesel engine in the facility of a foreign diesel engine manufacturer, the synergy of SCS and EGR (at levels up to 45%) produced greater NOx reduction than the same engine without EGR over a range of loads and speeds while maintaining the same soot level. Typically, without the SCS, a high level of NOx-reducing EGR produces at least a three-fold increase in soot.

One of the world's leading engine engineering and powertrain consulting firms, Ricardo Consulting Engineers Ltd of the U.K., completed a study in which they reported that a six cylinder DI diesel engine used in medium-duty trucks, operating with the SCS LSDD piston at the best injection timings, emitted up to 45% less soot than the stock engine, with equivalent fuel consumption. The Ricardo program was conducted with the cooperation of a major foreign diesel truck engine manufacturer; however, this manufacturer has not proceeded with further development with Sonex. Ricardo presented its findings, as well as additional results from their subsequent Computational Fluid Dynamics study of the combustion process, in a technical paper to the SAE May 2002 Fuels and Lubes Conference. Sonex is seeking industrial partners to pursue joint marketing and commercialization programs for the SCS LSDD technology.

Sonex has participated in demonstration and development programs with some of the largest multi-national diesel truck engine manufacturers. The demonstration process has gone from proof of concept using screw-assembled prototype pistons fabricated in-house by Sonex and tested by an engine manufacturer in its laboratories, to working with piston suppliers for the fabrication of finished pre-production pistons that would be used in field trials, durability testing, manufacturing optimization, and other tests required before the start of full series production.

Pre-production SCS pistons for the tests were fabricated by Federal-Mogul Corp., a major international supplier of engine components. In 1998 Federal-Mogul acquired the former T&N Piston Products Group of the U.K. T&N had invested significant funds internally in developing innovative and economical techniques of manufacturing Sonex pistons for series production. Federal-Mogul, however, filed for bankruptcy protection in the fall of 2001 to protect its ongoing component supply business from asbestos liabilities left from the acquisition of T&N. Late in 2001 Federal-Mogul informed the Company that it is focusing its limited resources on core businesses and will no longer participate in SCS

research.

The pre-production SCS pistons for the Ricardo test program fabricated by Federal-Mogul, as well as those for an earlier SCS design fabricated by another piston manufacturer, required special metals processing methods. For that reason, SCS piston production under these methods might have resulted in a higher than expected cost premium for SCS pistons. As a result, Sonex, in conjunction with a consultant who is a former design engineer with a major piston manufacturer, have developed a much simpler SCS piston production method which can be used with existing series production machinery.

Sonex and Compact Membrane Systems, Inc. (CMS), a small business in Wilmington, Delaware, proposed to investigate the diesel engine emissions reduction potential of combining the patented SCS piston-based technology and the CMS polymer membrane technology for the addition of nitrogen enriched air (NEA) to the diesel engine combustion process as an alternative to the use of EGR as a means to reduce the in-cylinder production of 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 when the engine operates with high levels of EGR.

In 2001 the U.S. Department of Energy (DOE) awarded CMS a Small Business Innovation Research (SBIR) Program, Phase I prime contract 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 conducted on the Sonex laboratory, single-cylinder, normally aspirated, DI diesel engine 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.

In the fourth quarter of 2002 the Company received a subcontract from CMS for $458,862, of which $100,000 is cost-shared (funded) by Sonex, under a CMS prime contract for a DOE, SBIR Program Phase II project. In the second quarter of 2003 Sonex took delivery of the advanced research automotive diesel engine to be used for the testing. The engine is a state-of-the-art, three-cylinder, DI common rail injection system, turbo-charged, automotive diesel engine developed by a major international vehicle manufacturer in the joint U.S. government and automotive industry funded PNGV (Partnership for a New Generation Vehicle) program. The estimated value of the contribution by the vehicle manufacturer of the automotive diesel engine and associated technical support represents the Sonex cost-shared portion of the subcontract. A successful result of this program would provide SCS in-cylinder emissions reduction data on a multi-cylinder diesel engine as a means for diesel engine manufacturers to evaluate the potential for SCS designs, alone and in combination with the NEA membrane, to reduce the cost and complexity of future exhaust aftertreatment systems.

During engine testing, the Company has not been able to achieve the LSDD performance achieved in other engines with conventional injection systems. Sonex encountered difficulty in controlling the characteristics of the common rail injection system and matching its requirements with the design requirements of the SCS pistons, which must be compatible with the fuel injection system and computer control. Achieving this synergy has been very challenging since many critical parameters of the engine baseline and fuel injection design were not made available to Sonex. In addition, initial testing with the NEA membrane demonstrated the limited viability for commercialization of the CMS membranes in this automotive size application.

Sonex has developed a plan to understand the difference between the common rail system and earlier injection systems when used with SCS pistons; however, during the first quarter of 2004, CMS suspended further work on the program pending the outcome of a progress meeting to be held with the DOE program sponsor in April 2004. CMS and Sonex have discussed the potential for applying the SCS piston technology and the NEA membrane technology to larger diesel engines in which the NEA membranes are expected to perform better and more consistently.

SCS FOR SMALL HEAVY FUEL ENGINES (HFEs)

The U.S. Department of Defense (DoD) and NATO now require the elimination of gasoline such that the primary fuel for combat support equipment shall be a single kerosene-based, diesel-type, "heavy fuel" (JP-5/JP-8). Heavy fuels are less volatile than gasoline, thereby reducing the hazard associated with the use, storage and transportation of gasoline. The requirement for a single military fuel is also a logistics issue, as the military seeks to minimize the number and complexity of fuels required. Large combat support equipment acquired by the military is powered by diesel engines that can use heavy fuels. No solution has been identified, however, for the thousands of smaller engines, including those powering remotely controlled military unmanned aerial vehicles (UAVs), small boats, and other applications for which gasoline storage, transport and use are undesirable.

SCS for Small, Two-Stroke Engines

The Company, in its laboratory and under contract with the U.S. military and defense contractors, has applied its proprietary patented SCS starting system and modified combustion chamber to the conversion of reliable, lightweight, spark-ignited (SI), two-stroke, gasoline engines to start and operate on JP-5/JP-8 military heavy fuels for a variety of applications such as small UAVs. Other potential applications include outboard engines, generator sets, and pleasure boats for which a lightweight engine burning heavy fuel would eliminate the hazards of gasoline storage and use.

The SCS process for the conversion of lightweight, SI, two-stroke, gasoline engines incorporates a machined cylinder head and combustion chamber insert housing the proprietary SCS technology. The SCS heavy fuel conversion maintains the gasoline engine's stock carburetion or fuel injection system, intake and exhaust systems, spark ignition system, compression ratio and approximate weight.

The Sonex HFE technology can be applied as a retrofit to existing engines or during manufacture of new engines. Sonex HFEs have demonstrated the ability to provide gasoline-like performance over the full engine range without smoking or "knocking", which has been a major shortcoming of other heavy fuel conversion technologies. The SCS heavy fuel conversion maintains the power, fuel consumption, light weight, low cost, and practicality of the gasoline engine without the additional weight and expense of other powerplant alternatives being considered to meet the requirement for heavy fuel operation, such as diesel and turbine engines.

SCS HFEs for the Military

Sonex has successfully scaled its SCS design from an original cylinder displacement of 18 cubic centimeters (cc) to an engine with a 176 cc displacement per cylinder, and is confident that its proprietary SCS technology is scaleable to cylinder volumes larger than 176cc. In 1998 under a "best efforts" feasibility demonstration contract from the U.S. Marine Corps (USMC) Systems Command, Sonex successfully converted the existing SI, carburetted,

100cc single cylinder, two-stroke, gasoline fueled engines to start and run on heavy fuel, leading the USMC to contract Sonex to convert an additional forty UAV engines used in the Dragondrone UAV. The Dragondrone became the first tactical UAV to be certified for deployment aboard ship. Other potential military HFE applications include outboard engines, small watercraft used as targets, and generator sets.

The Company seeks to capitalize on the success to date with SCS HFEs by participation in new DoD programs. In addition, Sonex seeks sponsors within the DoD who are obliged to make an effort to comply with the directive on the elimination of gasoline when purchasing numerous commercially available items that are powered by two-stroke gasoline engines. In recent years the Company also has been developing relationships with domestic and foreign defense contractors.

In the third quarter of 2002 the Company was awarded a subcontract from Science Applications International Corporation (SAIC) of San Diego, the DoD prime contractor for a developmental UAV, to conduct a survey of commercially available gasoline engines of approximately 72 horsepower and, with the approval of SAIC, select a candidate engine for a "best efforts" SCS conversion to start and operate on heavy fuels. Initial funding of $200,000 to Sonex was approved to begin the project. SAIC also awarded a subcontract to a competing company to develop a heavy fuel conversion for a rotary engine already in production.

During the candidate engine survey and selection process, the DoD program sponsor increased the targeted horsepower requirement to 100. Sonex and SAIC together selected a candidate two-stroke, three-cylinder, fuel injected gasoline engine which displaces 939 cc (313 cc/cylinder) advertised to meet the new target horsepower requirement, although this engine was not yet in production. Sonex conducted testing of the selected engine on gasoline to develop baseline performance data. In the meantime, additional funding of $81,947 for Sonex was approved.

Due to deficiencies found by Sonex in operating the candidate engine on gasoline and concurrent fuel consumption problems experienced by the competing rotary engine operating on heavy fuel, in the first quarter of 2003 the DoD sponsor expressed a desire to have Sonex work with the competing rotary engine developer to focus on improving the fuel consumption of the rotary HFE. This joint effort was not formalized because work on the engine later was placed on hold while SAIC concentrated on resolving a number of technical issues with the flight vehicle. Subsequently, the prime contract to SAIC was terminated by the DoD in October 2003. Sonex now seeks to obtain the necessary funding from DoD to continue development of this HFE, and others, for use in intermediate size UAVs for varied missions.

In September 2003 the Company received a purchase order of approximately $165,000 from another large DoD prime contractor to develop a combustion system to convert two, twin-cylinder, gasoline engines displacing 50cc and 120cc per cylinder, respectively, to start and operate on heavy fuels for potential use in UAVs. To date Sonex has achieved substantial fuel economy benefits on JP-5 fuel on the SCS HFEs over the stock gasoline engines. Delivery of the HFEs to the customer is expected to take place during the second quarter of 2004.

SCS Potential for Heavy Fuel Rotary Engines

While rotary technology has been the subject of some work worldwide, it is becoming an activity of focus and interest for Sonex. The Company has developed a patent application using proprietary techniques to improve the performance of rotary engines when converted to run on heavy fuels. This is accomplished by implementation of a unique and innovative Sonex process for fuel injection and handling, combined with a modification to the rotary engine fuel system and

combustion process, thus resulting in two very important attributes for engine performance.

The advantages for the rotary engine when compared to piston technologies as in two-stroke engines are clearly significant. The rotary engine has fewer moving parts and is a very simple and elegant technical solution for UAV engines. Rotary engines converted by Sonex to run on heavy fuel are expected to exhibit efficient and steady performance. Combustion efficiency is expected to improve, thereby decreasing fuel consumption over all load ranges, which is very important for increasing endurance and/or increasing available payload capacity on UAVs.

The Company is exploring a relationship with another small company which is developing rotary engines for use in generator sets for military and commercial use, and has applied for funding from the DoD to begin development work on a small rotary HFE.

PATENTS AND PROPRIETARY INFORMATION

The Company has endeavored to protect its technology by filing for patents in the U.S. and in those foreign countries in which it may be able to commercialize the SCS. The most recent U.S. patents for the SCS DI diesel engine technology were issued in January 1999 and January 2001, and the most recent U.S. patent for the SCS heavy fuel engine technology was issued in January 1999. The name "SONEX" was registered at the U.S. Patent and Trademark Office in 1987.

The Company has also developed a significant body of trade secrets, proprietary information and know-how relating to its technology. Although the principles underlying the SCS concept are capable of being understood by experts in the field, management believes that it would be difficult to apply the SCS successfully to any given engine configuration without the benefit of the trade secrets, know-how and proprietary information owned by the Company.

Management believes that the Company's business depends substantially upon the protection afforded by its granted and pending patents, as well as its trade secrets, proprietary information and know-how. All contracts outside the Company involving any exchange of confidential technical information are made under secrecy agreements approved by the Company's patent counsel. In addition, all of the management and technical employees of the Company are required to sign non-disclosure agreements respecting the Company's technology.

COMPETITION

The Company faces significant competition from the extensive research departments of the world's major vehicle and engine manufacturers. These companies exercise a bias toward in-house technologies over those developed by independent suppliers. Competition also comes from several independent engine testing and consulting firms around the world which are in the business of developing engine technologies. The Company's competitors have substantially greater financial, technical and marketing resources than does the Company. Accordingly, the Company cannot be sure that it will have the resources or expertise to compete successfully in the future.

Although the experience and financial resources of its competitors far exceed those of the Company, management believes that the SCS can provide significant advantages over the competition in terms of low cost, improved performance, and simplicity.

SECRECY AND NON-DISCLOSURE

Due to the highly competitive nature of the engine industry, in connection with its contracts and/or demonstration programs with manufacturers, Sonex is required to execute joint secrecy and disclosure agreements that, in most cases, expressly prohibit the public disclosure of the names and other significant information about the participants and the current or proposed programs. Failure by Sonex to maintain this strict level of confidentiality would jeopardize its relationship with these organizations.

ITEM 2. DESCRIPTION OF PROPERTY

The Company's principal executive offices and testing facility are housed in a single story building located at 23 Hudson Street, Annapolis, Maryland, 21401. The facility is equipped with emissions and engine testing equipment and machine shop and storage facilities necessary to support the laboratory. Management believes that this facility is adequate and suitable for the Company's present needs, and that all of the Company's property is adequately covered by insurance. The building contains approximately 6,000 square feet and is being occupied by the Company on a month-to-month basis under the terms of an operating lease agreement, pursuant to which the property owner is required to provide thirty days notice if he wants the Company to vacate the premises. Management will seek to negotiate a new long-term lease for its facility or search for an alternative location in the event that an agreement cannot be reached for the existing premises. Management believes that the resolution of the uncertainty with respect to the facility will not result in a significant interruption in the operations of the Company.

ITEM 3. LEGAL PROCEEDINGS

As of the date of this report, management is aware of no legal proceedings pending against the Company.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the fourth quarter of 2003.

PART II

ITEM 5. MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

PUBLIC TRADING OF COMMON STOCK

The Company's Common Stock currently is traded in the over-the-counter market on the OTC Bulletin Board service under the symbol "SONX". The OTC Bulletin Board is an electronic and screen-based quotation medium operated by NASDAQ. Quotation information on OTC Bulletin Board stocks is available on stockbrokers' desktop terminals.

The high and low closing prices of the Common Stock, obtained from the historical pricing information available on the NASDAQ website www.nasdaq.com, for each quarterly period since January 1, 2002 were as follows:

Quarter ended:	High	Low
March 31, 2002	$.23	$.14
June 30, 2002	.16	.06
September 30, 2002	.30	.06
December 31, 2002	.26	.14
March 31, 2003	.24	.15
June 30, 2003	.22	.14
September 30, 2003	.20	.11
December 31, 2003	.20	.10
March 31, 2004	.16	.09

SHARES OUTSTANDING AND RESERVED FOR ISSUANCE; HOLDERS; DIVIDENDS

As of March 31, 2004, there were 25,032,669 shares of Common Stock issued and outstanding, with approximately 900 holders of record. The shares for approximately 1,800 additional beneficial owners of the Common Stock are held of record (in "street name") by brokers, dealers, banks, and other entities holding such securities of record in nominee name or otherwise or as a participant in a clearing agency registered pursuant to Section 17A of the Securities Exchange Act of 1934.

As of March 31, 2004, a total of 12,636,832 shares of Common Stock were reserved for future issuance as follows: 4,400,000 shares issuable upon the conversion of preferred stock outstanding; 4,733,907 shares issuable upon the exercise of options granted under the Company's Stock Option Plan (the "Option Plan"); 1,330,425 shares for options available to be granted under the Option Plan; 500,000 shares issuable upon the exercise of options granted to the Company's new president which are not part of the Option Plan; 200,000 shares issuable on March 15, 2005 to the Company's new president upon continued employment; 992,500 shares issuable upon the exercise of outstanding warrants; 420,000 shares issuable in connection with a consulting agreement; and 60,000 shares issuable upon the conversion of notes payable outstanding.

Presently the only securities authorized for issuance under equity compensation plans relate to the Option Plan and the option granted to the Company's new president which is not part of the Option Plan, which grant was made on February 23, 2004. Detailed information as of December 31, 2003 with respect to Common Stock issuable under the Option Plan, including activity during 2003 and weighted average exercise prices, is presented in tabular form in Note 14 to the accompanying financial statements.

The Company has never paid cash dividends on its Common Stock and does not expect to pay any cash dividends in the foreseeable future.

RECENT SALES OF UNREGISTERED SECURITIES

During 2003 the Company issued no securities without registration under the Securities Act of 1933 (the "Securities Act"). In the first quarter of 2004 the Company issued without registration under the Securities Act an aggregate of 3,440,000 shares of Common Stock in connection with the execution of various agreements for services, officer, director and employee compensation, and the satisfaction of liabilities for accrued compensation, as more fully described in

Note 17 to the accompanying financial statements. The Company views these issuances as transactions by an issuer not involving any public offering and therefore as exempt from registration under Sections 4(2) and/or 4(6) of the Securities Act.

The certificates representing such shares are endorsed with a standard restrictive legend stating that the shares have not been registered under the Securities Act or in any state or other jurisdiction, and that no disposition of the shares may be made unless pursuant to an effective registration statement or upon the issuance of an opinion of the Company's legal counsel that the disposition may be made pursuant to a valid exemption from any registration requirements.

ITEM 6. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Note: Statements made in the following discussion which express beliefs, expectations, or intentions, as well as those that are not historical fact, are "forward-looking" statements that are subject to risks, uncertainties and assumptions. Our actual results, performance or achievements could differ materially from those expressed in any such forward-looking statements as a result of a variety of factors, including the risks and uncertainties referred to under the "Caution Regarding Forward-Looking Statements" and "Risk Factors" sections in Item 1 of this report.

ACCUMULATED LOSSES; SOURCES OF CAPITAL

Since its inception in 1980, the Company has generated cumulative net losses of approximately $23 million and anticipates continuing to incur operating losses for the foreseeable future. Operating results have fluctuated significantly in the past on an annual and quarterly basis, and are expected to continue to fluctuate significantly from quarter to quarter for the foreseeable future. The business historically has not generated sufficient cash flow to fund operations without resorting to external sources of capital. The Company does not have any bank financing arrangements. Operating funds have been raised primarily through the sale of equity securities in both public and private offerings, with development and demonstration contract revenues also providing limited operating cash.

The Company historically has derived the majority of its revenues from engineering and development funding provided by established companies willing to assist the Company in the development of its SCS technology and, more recently, from government sources. In 2002 and 2003, however, revenues increased substantially, providing cash to fund the majority of the Company's operating expenditure requirements. During 2002 and 2003 the Company's only customers were branches of the U.S. government and military or their prime contractors. In 2004 revenues from government sources are expected, although there can be no assurance, to provide a significant portion of the cash necessary to fund operations.

FINANCIAL POSITION AND LIQUIDITY

The Company operated under severe cash flow difficulties for extended periods during 2001 and 2002, prompting its two officers to voluntarily and at their own discretion defer receipt of payment of significant portions of their current wages to reduce the Company's monthly cash requirements. With the generation of

cash flow from revenues earned under contracts awarded to the Company during the second half of 2002, some of the amounts owed to the Company's officers were repaid in December 2002. Also at that time the Company's officers began receiving their current wages. During the first quarter of 2003 the Company's chief executive officer once again began deferring some of his current wages and, since April 2003, he has deferred all of his current wages. As of December 31, 2003, total such wages payable to the Company's chief executive and chief financial officers were $190,157 and $86,403, respectively.

The continued deferral of portions of current wages by the Company's officers cannot be expected to continue indefinitely, and the Company will be required to pay amounts outstanding as soon as cash flow permits. Similarly, the Company has accumulated significant unpaid consulting fees, the majority of which amounts as of December 31, 2003 (a total of $122,732) are payable to two individuals. The amount and timing of payments for unpaid compensation owing to the Company's officers and its consultants will be determined at the discretion of the Company's officers; however, all such unpaid compensation is payable upon demand.

As of March 31, 2004, the Company had available cash and equivalents of approximately $22,000 and accounts receivable, including contract costs incurred but not yet billed, of approximately $91,500. The Company hopes, although there can be no assurance, that it will receive a follow-on award to its largest current military contract in the near future.

Management recognizes that the Company's history of operating losses, level of available funds, and revenue from current and future contracts, in relation to projected expenditures, raise substantial doubt as to the Company's ability to commence generation of significant revenues from the commercialization of the SCS and ultimately achieve profitable operations. Accordingly, the Company will continue to minimize its operating expenditures through a number of measures, including, as necessary, the deferral by its officers of portions of their salaries as described in the notes to the accompanying financial statements.

In 2003 the Company began taking steps to focus on business re-positioning, strengthening its internal capabilities, and planning for growth, engaging consultants to assess its technologies and business model and to suggest approaches for strategic alliances and commercialization services. Management concluded that significant personnel and financial resources will be required. The application of personnel and financial resources, however, is greatly constrained by the Company's liquidity problems and lack of capital.

In late February 2004 the Company hired a new president whose initial focus will be to develop and implement an updated business plan, the primary goal of which is to transition Sonex from a research and development company into a technology, commercialization, and manufacturing enterprise. There is no assurance, however, that the Company will be able to complete and implement an updated business plan.

Based upon available resources, current and projected spending levels, and expected revenue from current and anticipated contracts, management believes the Company will have sufficient capital to fund operations until approximately June 30, 2004. The Company's prospects beyond that time are dependent upon its ability to enter into significant funded contracts for the further development of its SCS technology, establish joint ventures or strategic partnerships with major industrial concerns, or secure a major capital infusion.

In the event sufficient funding is not available through the generation of revenues or from external sources, the Company would have to substantially reduce the level of its operations. Such a reduction could have a material adverse effect on the Company's relationships with government funding sources, strategic partners and potential customers.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates continuity of operations, realization of assets and satisfaction of liabilities in the ordinary course of business. The propriety of use of the going concern basis is dependent upon, among other things, the Company's ability to generate sufficient revenue and ultimately achieve profitable operations. These uncertainties raise substantial doubt about the Company's ability to continue as a going concern. The accompanying financial statements do not include any adjustments relating to the recoverability of the carrying amounts of recorded assets or the amount of liabilities that might result from the outcome of these uncertainties.

SALARY DEFERRALS BY OFFICERS AND EMPLOYEES

In order to help conserve the Company's limited cash resources, all of the Company's current and former officers and certain of the Company's other employees for several years have voluntarily deferred receipt of payment of significant portions of their authorized annual salaries at the request of the Board of Directors. A written agreement between these individuals and the Company was first executed in 1992 in connection with an indispensable $2 million private investment made by a venture capital group in exchange for the issuance of a new class of convertible preferred stock. The individuals who are parties to this agreement have consented to the deferral of payment of amounts so accumulated until the Company has received licensing revenue of at least $2 million or at such earlier date as the Board of Directors determines that the Company's cash flow is sufficient to allow such payment. Since January 1, 1997, however, there has been no further deferral of salary requested of the Company's non-officer employees. The conditions that would require repayment of deferred amounts have yet to occur.

At the conclusion of a legal challenge by two former officers of the Company initiated in 1993 demanding full payment of deferred salaries upon the termination of their employment, in 1996 the Maryland Court of Special Appeals rejected this demand and ruled that the written agreement to defer compensation was a valid and enforceable contract.

RESULTS OF OPERATIONS

Condensed comparative results:

[Note: In order to conform to the classifications used in 2003, certain amounts for 2002 and 2001 presented in prior years as research and development expenses (R&D) have been reclassified to cost of revenue, and interest charges included in prior years as General and Administrative (G&A) have been presented as a separate line item. The net loss for each period does not change as a result of these reclassifications.]

	2003	2002	2001
Total revenue	$ 923,813	$ 471,912	$ 245,291
Cost of revenue	689,278	299,360	179,286
R&D expenses	208,201	192,358	420,661
G&A expenses	423,239	301,215	333,260
Interest expense	11,815	3,378	3,839

Total expenses	1,332,533	796,311	937,046
Net loss from operations	(408,720)	(324,399)	(691,755)
Investment income	3,242	2,759	1,400
Net loss	$ (405,478)	$ (321,640)	$ (690,355)

The net loss for 2003 is $83,838, or 26%, higher than the net loss for 2002, as a significant increase in revenue was offset in part by higher associated cost of revenue and higher G&A expenses, primarily due to higher personnel costs. With the award of several significant contracts during the second half of 2002, revenue nearly doubled in 2003 versus the prior year, with related increases in expenses to support the increase in business. Total expenses were higher than would be expected with the increase in revenue because in 2003 the Company changed its method of accounting for stock-based compensation as described in the accompanying financial statements, resulting in an increase of $59,729 in total charges for stock-based compensation, from $30,965 in 2002 to $90,694 in 2003.

The net loss for 2002 is $368,715, or 53%, lower than the net loss for 2001, as a significant increase in revenue and an overall reduction in personnel costs were offset in part by higher associated cost of revenue.

The Company's revenues consist of funding received for technology development and demonstration contracts entered into with commercial or defense/government entities. Management is unable to predict future changes to development and demonstration contract revenue because the amounts earned to date under previous contracts have been determined through negotiations with such entities based upon the level of effort required and the level of funding that each entity has been willing to commit. Management anticipates, however, that future revenue may also include consulting fees earned while working together with manufacturers to optimize the results achieved on a particular manufacturer's engine, and, ultimately, license fees and royalty revenue once the Company's technology is placed into production engines by manufacturers. The future amounts of such other types of revenue cannot be reasonably estimated.

Cost of revenue primarily consists of direct labor charges and other direct expenditures, including those for consulting services, attributable to funded programs, and allocated labor overhead charges.

Comparison of 2003 to 2002

Total revenue increased $451,901, or 96%, from 2002 to 2003. During the second half of 2002 the Company was awarded two significant contracts and a significant subcontract from branches of the U.S. government and military or their prime contractors, with the majority of revenues from two of these projects being recognized in 2003. Revenue for 2002 also included Department of Defense (DoD) and other government revenue from four smaller contracts.

The following is a listing of the three major projects received in late 2002 which continued into 2003. Detailed discussions of each program are provided in Item 1 of this report.

Subcontract awarded by Science Applications International Corporation (SAIC), a large DoD prime contractor, for development of the Company's heavy fuel technology for military applications. Awarded third quarter of

2002. Initial funding of $200,000, later increased by $81,947. Completion in 2003.

Prime contract awarded by the Defense Advanced Research Projects Agency (DARPA) for heavy fuel technology development. Awarded fourth quarter of 2002. Total funding of $744,246. Completion in 2004.

Subcontract awarded by Compact Membrane Systems, Inc. (CMS) under its prime contract from the U.S. Department of Energy (DOE) for a Small Business Innovation Research (SBIR) Program, Phase II project for the Company's diesel emission reduction technology. Awarded fourth quarter of 2002. Total award to Sonex of $458,862, of which $100,000 is cost-shared (funded) by Sonex. Completion expected in 2004.

Revenues from the DARPA and CMS programs totaled $780,099 and represented 81% of total revenues recognized in 2003, while revenues from all three of the government projects totaled $391,155 and represented 83% of total revenues recognized in 2002.

The following table summarizes defense/government revenue recognized in each of the past three years:

	2003	2002	2001
DARPA	$ 522,397	$ 109,024	
CMS	227,691	55,884	$ 20,000
SAIC	55,700	226,247	
Other DoD	118,025	80,757	125,291
	$ 923,813	$ 471,912	$ 145,291

The potential revenue remaining to be recognized during 2004 in connection with the DARPA and CMS programs is $69,991 and $100,462, respectively. Although management anticipates that each program will be funded for the entire amount awarded to date, there is no assurance that this will be the case.

Cost of revenue increased from $299,360 in 2002 to $689,278 in 2003 as a result of the increased revenue generated in 2003. As more contracts were secured, a higher percentage of R&D (direct labor) personnel's time was spent on funded contracts in 2003 versus 2002, with the associated charges being recorded as cost of revenue rather than R&D. On the whole, a higher percentage of total R&D costs were classified as cost of revenue in 2003 (77%) as opposed to 2002 (61%), as new hires in 2002 and 2003 were brought on to work almost exclusively on funded contracts. The increased workload also resulted in higher direct costs, including consulting fees with the engagement of a program manager and specialized technical consultants, associated with funded contracts in 2003 versus 2002.

Comparison of 2002 to 2001

Total revenue increased $226,621, or 92%, from 2001 to 2002. As described under "Comparison of 2003 to 2002" section above, during the second half of 2002 the Company was awarded two significant contracts and a significant subcontract from branches of the U.S. government and military or their prime contractors, while there were no revenues in 2002 from commercial contracts. DoD and other

government revenue for 2001 came from four contracts, three of which were for development of the Company's heavy fuel technology for military applications. The three contracts in 2001 for military applications all were completed in that year, while work on the fourth contract from the government extended into early 2002.

Progress on commercial applications of the Company's diesel engine emissions reduction technology slowed considerably in 2002, but outcomes in 2003 and 2004 from two of the new defense/government projects are expected to be transferable to commercial applications. All of the revenue from commercial contracts for 2001 was earned in connection with the Company's diesel engine piston technology under a program with a foreign engine manufacturer for a feasibility study of the Company's SCAI technology in diesel truck engines. There was no follow-on work with this manufacturer once the program was completed.

Cost of revenue increased from 2001 to 2002 as a result of the increased revenue generated in 2002. As more contracts were secured, a higher percentage of R&D (direct labor) personnel's time was spent on funded contracts in 2002 versus 2001, with the associated charges being recorded as cost of revenue rather than R&D. On the whole, a higher percentage of total R&D costs were classified as cost of revenue in 2002 (61%) as opposed to 2001 (27%), as new hires in 2002 were brought on to work almost exclusively on funded contracts. The increased workload also resulted in higher direct costs associated with funded contracts in 2002 versus 2001.

Research and development (R&D) expenses:

	2003	2002	2001
Personnel:			
Employee compensation	$ 391,967	$ 255,443	$ 335,605
Taxes & benefits	60,406	30,491	54,730
Stock option compensation	28,442		
Consulting fees	208,290	44,008	64,587
Total personnel	689,105	329,942	454,922
Project parts and supplies	97,907	66,532	28,116
Occupancy	51,469	46,151	47,591
Depreciation, patent amortization and write-off of abandoned patents	39,677	35,133	52,326
Patent maintenance and renewal fees	12,204	8,022	7,243
Other expenses	7,117	5,938	9,749
Total R&D expenses	897,479	491,718	599,947
Less amounts classified as cost of revenue:			
Personnel	(489,072)	(180,928)	(114,975)
Labor overhead	(128,053)	(61,997)	(59,698)
Project parts and supplies	(68,049)	(55,637)	(3,598)
Other expenses	(4,104)	(798)	(1,015)
Net R&D	$ 208,201	$ 192,358	$ 420,661

The following analysis is based on a comparison of total R&D expenses as listed

above before deduction of amounts classified as cost of revenue.

Comparison of 2003 to 2002

Total R&D expenses increased by $405,761, or 83%, from 2002 to 2003, primarily as a result of a significant increase in personnel costs, as well as an increase in parts and supplies.

Personnel costs increased by $359,163, or 109%, from 2002 to 2003 due in large part to an increase in the number of personnel, including consultants, hired in response to the increase in business activity in 2003. A portion of the increase related to the Company's change in method of accounting for stock-based compensation in 2003, resulting in charges of $28,442 in 2003 and none in 2002. Additionally, bonus awards were higher, primarily because the Company's Chief Scientist and CEO was granted a bonus of $25,000 in 2003 versus none in 2002.

The increase in consulting fees reflects increased time spent by the consultant who serves as program manager (the same individual who serves as the Company's director of business development - see G&A discussion) as well as the charges for a fuel injection system consultant. The increase in project parts and supplies relates to greater purchases to support the new contracts. Project parts and supplies expense includes motor fuel, engine parts and other items used or consumed in engine testing and in the machine shop, as well as fabrication services.

Occupancy expenses, primarily rent, have remained relatively consistent for the past several years primarily because the monthly facility rent has not changed since March 2000. The slight increase from 2002 to 2003 reflects the increase in business activity in 2003. Rent expense is allocated 80% to R&D and 20% to G&A based on the proportionate share of floor space devoted to each category.

Total depreciation, patent amortization, and patent write-offs increased by $4,544, or 13%, from 2002 to 2003. The largest component is depreciation expense, which increased from $17,956 in 2002 to $22,565 in 2003 as there were more equipment additions made in 2003 and 2002 than in recent years.

Comparison of 2002 to 2001

Total R&D expenses decreased by $108,229, or 18%, from 2001 to 2002, primarily as a result of a significant decrease in personnel costs, as well as a decrease in patent write-offs, offset in part by an increase in parts and supplies.

Personnel costs decreased by $124,980, or 27%, from 2001 to 2002 due in part to large staff reductions, including consultants, at the end of 2001 and the start of 2002. The increase in the number and size of funded contracts from 2001 to 2002, however, resulted in the hiring of additional personnel during the second half of 2002, thereby partially offsetting the overall decrease in personnel costs resulting from the earlier reductions in staff.

The decrease of $80,162, or 24%, in employee compensation was mostly due to the changes in staffing levels and to the fact that the Company's Chief Scientist and CEO was awarded a bonus of $25,000 in 2001 but none in 2002. The decrease of $24,239, or 44%, in payroll taxes and employee benefits from 2001 to 2002 is related to the lower total payroll as well as significantly lower health insurance costs because health insurance coverage for the Company's Chief Scientist and CEO was discontinued in early 2002 when he turned 70 years old.

The overall decrease of $20,579, or 32%, in consulting fees from 2001 to 2002 resulted from two major factors. At the end of 2001 the Company discontinued its consulting agreement with the individual residing in Europe who served as R&D

Supervisor and International Liaison Officer. This individual was compensated in the form of restricted stock and cash, with related charges totaling $62,587 in 2001. (The Company measures compensation for stock issued for services at the market price on the date of award or at the agreed-upon value of the services.) This decrease was offset in part by an increase in fees for consultants, primarily for those working on funded contracts, of $41,714, from $2,000 in 2001 to $43,714 in 2002 as a result of the new contracts obtained during the second half of 2002. These consulting fees were for time spent by the consultant who served as program manager (the same individual who serves as the Company's director of business development - see G&A discussion) as well as the charges for a fuel injection system consultant.

Total project parts and supplies expense increased by $38,416 from 2001 to 2002, as a result of the increase in the number and size of funded contracts from 2001 to 2002. Project parts and supplies expense includes motor fuel, engine parts and other items used or consumed in engine testing and in the machine shop.

Occupancy expenses, primarily rent, have remained relatively consistent for the past several years except for an increase in the monthly rent in March 2000. Rent expense is allocated 80% to R&D and 20% to G&A based on the proportionate share of floor space devoted to each category.

Total depreciation, patent amortization, and patent write-offs decreased by $17,193, or 33%, from 2001 to 2002. The largest component is patent write-offs, which were lower by $19,830, decreasing from $23,253 in 2001 to $3,423 in 2002. Such write-offs represent the charging to expense of the unamortized costs of patents abandoned by the Company due to lack of expected commercial potential, and specifically relate to older patents filed in small countries. Ongoing patent amortization was approximately the same in 2002 versus 2001, as there were no new major patents granted in 2002 for which amortization of costs capitalized in prior years would begin. Depreciation expense increased slightly from $15,441 in 2001 to $17,956 in 2002, as there were more asset additions made in 2002 than in 2001.

General and administrative (G&A) expenses:

	2003	2002	2001
Personnel:			
Employee compensation	$ 154,630	$ 130,715	$ 125,557
Taxes & benefits	11,558	8,916	10,352
Stock option compensation	62,252	30,965	42,120
Consulting fees	102,460	28,813	37,066
Amortization of deferred compensation from grant of stock options			29,761
Total personnel	330,900	199,409	244,856
Occupancy	15,514	10,651	10,882
Proxy solicitation & annual meeting	18,388	17,862	19,618
Audit fees	20,350	9,180	9,450
Legal fees	4,907	11,435	5,264
Investor relations		19,942	1,520
Stock transfer agent fees	8,297	8,098	8,496
Other expenses	24,883	24,638	37,013
Total G&A	$ 423,239	$ 301,215	$ 333,260

Comparison of 2003 to 2002

Total G&A expenses increased by $122,024, or 41%, from 2002 to 2003, primarily

as a result of a significant increase in personnel costs, offset in part by a reduction in investor relations charges.

Employee compensation increased $23,915, or 18%, from 2002 to 2003 primarily as a result of an increase effective January 1, 2003 in the annual salary (before deferral) of the Company's chief financial officer and the hiring in 2003 of part-time clerical help. The increase in stock option compensation, which includes amounts related to options granted to consultants and outside directors, from 2002 to 2003 of $31,287 reflects the Company's change in method in 2003 of accounting for stock-based compensation. With the change in method, such charges in 2003 include the amortization over the related vesting period of charges associated with option grants made in prior years as well as in the current period, while there would be no charges related to prior option grants in the 2002 figure. The option charges for 2002 recorded under the previous method related entirely to consultants.

Occupancy expenses, primarily rent, increased from 2002 to 2003 because the figure for 2002 reflects an offset for sublease income, which arrangement ended in 2003. Rent expense is allocated 80% to R&D and 20% to G&A based on the proportionate share of floor space devoted to each category.

Consulting fees in total increased $73,647 from 2002 to 2003 as the Company has expanded its marketing and commercialization capabilities in 2003 by hiring specialized consultants to provide business advisory services in areas such as strategic alliances, federal marketing, and government procurement assistance. Total professional fees (audit, legal and investor relations) decreased by $15,200, or 37%, from 2002 to 2003, reflecting the termination at the end of 2002 of the Company's relationship with an investor relations firm engaged in the second quarter of 2002. In addition, a decline in legal services as well as an overaccrual for estimated legal fees in 2002 which was reversed in 2003 resulted in disproportionately higher charges recorded in 2002 versus 2003. These decreases were nearly offset by higher auditing fees, which more than doubled from 2002 to 2003 as the Company changed independent accountants for 2003 from a small local firm, which disbanded its public company audit practice, to a larger regional firm.

Comparison of 2002 to 2001

Total G&A expenses decreased by $32,045, or 10%, from 2001 to 2002, as decreases in personnel costs and other expenses were partially offset by increases in charges for investor relations services and professional fees.

Employee compensation increased only $5,158, or 4%, from 2001 to 2002, as an increase in accrued unused vacation pay was offset in part by a decline in the use of part-time clerical help in 2002 as opposed to 2001, while the annual salary and amount of bonus awarded to the Company's chief financial officer remained the same in both years.

Consulting fees in total, including stock option compensation, decreased $19,408, or 25%, from 2001 to 2002. Charges for services by the individual who serves as the Company's director of business development (the same individual who serves as a technical program manager) decreased $20,733, or 30%, from $69,186 in 2001 to $48,453 in 2002. In 2002 and 2001 the Company paid this consultant part in cash and part in stock options for business development services. Charges paid through stock options totaled $25,625 in 2002 versus $42,120 in 2001. With the Company's receipt of two significant funded projects during the second half of 2002, this individual spent nearly all of his time serving as a program manager, resulting in the decrease in charges to G&A for business development services from 2001 to 2002.

A further decrease from 2001 to 2002 of $10,000 in consulting fees related to the former president of the Company, who was engaged on a part-time basis under a consulting agreement that provided for quarterly compensation of $5,000. This arrangement was terminated by mutual agreement effective June 30, 2001, resulting in charges of $10,000 in 2001. At the end of September 2001 this individual resigned from the position of president but remains on the Board of Directors. In December 2001 he agreed to waive payment of the fees for 2001; the Company accounted for this transaction by crediting the same amount to paid-in capital.

These decreases were offset in part by charges of $11,325 for services by other consultants engaged for the first time in 2002. Such services primarily were for accounting and computer assistance, as well as for business strategy services.

Amortization of deferred compensation from grant of stock options represents annual non-cash charges in connection with a below-market option to purchase stock owned by the Company's principal shareholder granted in 1997 to the new president of the Company in order to induce him to take that position. Amortization of the related charges has been recorded over the five-year vesting period of the option, with the final portion of $29,761 having been charged to expense in 2001.

Occupancy expenses, as well as proxy solicitation and annual meeting expenses, remained relatively unchanged from 2001 to 2002. Rent, the primary component of occupancy expenses, is allocated 80% to R&D and 20% to G&A based on the proportionate share of floor space devoted to each category.

The Company recorded higher legal fees in 2002 versus 2001 as estimates of legal fees charged to expense were found to have exceeded actual billings once a statement was received from the Company's securities legal counsel. The Company had underestimated charges for 2001 and overestimated charges for 2002, resulting in disproportionately higher charges recorded in 2002 versus 2001.

Charges for investor relations services increased substantially from $1,520 in 2001 to $19,942 in 2002 because during the second quarter of 2002 the Company engaged the services of an investor relations firm for the first time in a decade. This relationship was terminated effective December 31, 2002.

CRITICAL ACCOUNTING POLICIES

A complete summary of significant accounting policies implemented by the Company is presented in Note 2 to the accompanying financial statements. The Company considers the following policies included in that summary to be critical accounting policies:

Patents: The costs associated with the filing of patent applications are deferred. Amortization is recorded on a straight-line basis over the remaining legal life of patents, commencing in the year in which the patent is granted. Costs related to patent applications which ultimately fail to result in the grant of a patent, as well as the unamortized costs of patents abandoned by the Company due to lack of expected commercial potential, are charged to operations at the time such determination is made.

Revenue recognition: Revenue derived from development and demonstration contracts is recognized upon the Company's completion of the milestones and/or submission of progress reports specified in each contract. Development contracts are executed for funding supplied by a United States Government or Department of Defense (the "Government") agency or prime contractor for proof-of-concept demonstration programs. Revenue and costs for these contracts that require the Company to provide stipulated services for a fixed price have been recognized

using the percentage-of-completion method of accounting by relating contract costs incurred to date to total estimated contract costs at completion. Contracts which are based on costs incurred are subject to post-award audit and potential price redetermination. In connection with contracts in progress, any excess of billings over costs incurred plus estimated profit is recorded as a current liability, while any excess of costs incurred plus estimated profit over billings is recorded as a current asset, at the financial statement date. In the opinion of management, adjustments, if any, on completed contracts would not have a material adverse effect on the Company's financial position or results of operations. Commercial development contracts are executed in situations in which an engine manufacturer is willing to provide funding to partially offset the development costs incurred by the Company in applying its technology to one of the manufacturer's engines. Generally, commercial development contracts require the Company to demonstrate that the manufacturer's engine, when modified with the Company's technology, can meet certain emissions reduction and performance goals specified in the contract. In addition, these contracts sometimes provide that payment of part of the contract amount will be made only if the Company meets the specified goals. The Company is not required to repay any funds received in connection with its development contracts.

ADOPTION OF NEW ACCOUNTING PRONOUNCEMENTS

A summary of recent accounting pronouncements is presented in Note 2 to the accompanying financial statements.

As of January 1, 2003, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 123 - "Accounting for Stock-based Compensation", which provides for the fair value based method of accounting to be applied to the Company's stock option grants and other equity-based compensation. SFAS No. 148 - "Accounting for Stock-based Compensation Transition and Disclosure", issued in December 2002, amends SFAS No. 123 to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock options and other equity-based employee compensation. The Company has chosen to apply the "modified prospective method" of SFAS No. 148 pursuant to which fair value based stock option compensation costs for 2003 have been recognized as if the fair value based method had been used to account for all employee equity-based awards made in prior periods as well as the current period.

Prior to 2003 the Company accounted for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board (APB) Opinion No. 25 - "Accounting for Stock Issued to Employees". Under APB No. 25, compensation cost is measured as the excess, if any, of the quoted market price of the Company's stock at the date of grant over the exercise price of the option granted. Compensation cost for stock options, if any, is recognized ratably over the vesting period.

The adoption by the Company in fiscal 2004 of new accounting pronouncements which have a delayed effective date is not expected to have a material impact on its financial statements.

ITEM 7. FINANCIAL STATEMENTS

Index to financial statements:

Financial statements:

- Balance sheets as of December 31, 2003 and 2002
- Statements of operations and accumulated deficit for the three years ended December 31, 2003
- Statements of paid-in capital for the three years ended December 31, 2003
- Statements of cash flows for the three years ended December 31, 2003
- Notes to financial statements

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and
Stockholders of Sonex Research, Inc.

We have audited the accompanying balances sheet of Sonex Research, Inc. (the "Company") as of December 31, 2003 and 2002, and the related statements of operations and accumulated deficit, paid-in capital and cash flows for the years ended December 31, 2003 and 2002, respectively. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Sonex Research, Inc. as of December 31, 2003 and 2002, and the results of its operations and its cash flows for the years ended December 31, 2003 and 2002, respectively, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As described in Note 3 to the financial statements, the Company's ability to generate sufficient revenue and ultimately achieve profitable operations remains uncertain. The Company has incurred significant net losses since its inception. The Company's future prospects depend upon its ability to demonstrate commercial viability of its products and ultimately achieve profitable operations, which raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 3. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

As described in Notes 2 and 14 to the financial statements, in 2003 the Company changed its method of accounting for stock-based compensation.

HAUSSER + TAYLOR LLC

Cleveland, Ohio
April 2, 2004

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and
Stockholders of Sonex Research, Inc.

We have audited the accompanying statements of operations and accumulated deficit, paid-in capital and cash flows for the year ended December 31, 2001 of Sonex Research, Inc. (the "Company"). These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the results of operations and cash flows of Sonex Research, Inc. for the year ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As described in Note 3 to the financial statements, the Company's ability to generate sufficient revenue and ultimately achieve profitable operations remains uncertain. The Company has incurred significant net losses since its inception. The Company's future prospects depend upon its ability to demonstrate commercial viability of its products and ultimately achieve profitable operations, which raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 3. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

C. L. STEWART & COMPANY

Annapolis, Maryland
April 10, 2002

SONEX RESEARCH, INC.
BALANCE SHEETS

	December 31,	
	2003	2002
ASSETS		
Current assets		
Cash and equivalents	$ 7,616	$ 105,998
Accounts receivable	161,045	64,702
Prepaid expenses	12,276	25,814
Loans to officers and employees (Note 4)	20,000	22,500
Total current assets	200,937	219,014
Patents (Note 6)	202,518	203,623
Property and equipment (Note 7)	103,005	58,808
Total assets	$ 506,460	$ 481,445
LIABILITIES AND STOCKHOLDERS' EQUITY/(DEFICIT)		
Current liabilities		
Accounts payable and other accrued liabilities	$ 23,904	$ 36,322
Short-term lines of credit (Note 9)	22,473	
Deferred revenue - billings in excess of costs and estimated profits on contracts in progress (Note 8)	42,834	66,587
Current portion of capital lease obligations	18,413	5,657
Notes and interest payable to shareholders (Note 9)	67,751	37,327
Accrued compensation and benefits (Note 10)	657,494	427,397
Total current liabilities	832,869	573,290
Capital lease obligations (Note 9)	33,698	10,985
Deferred compensation (Note 11)	965,450	906,856
Stockholders' equity/(deficit)		
Preferred stock, $.01 par value, 2,000,000 shares authorized and issued, 1,540,001 shares outstanding	15,400	15,400
Common stock, $.01 par value, 48,000,000 shares authorized, shares issued and outstanding: 21,592,669 in 2003 and 2002	215,927	215,927
Additional paid-in capital	21,511,436	21,420,742
Accumulated deficit	(23,046,389)	(22,640,911)
Notes receivable from officers & employees (Note 5)	(21,931)	(20,844)
Total stockholders' equity/(deficit)	(1,325,557)	(1,009,686)
Commitments (Note 16)		

Total liabilities and stockholders' equity/(deficit)	$ 506,460	$ 481,445

The accompanying notes are an integral part of the financial statements.

SONEX RESEARCH, INC.
STATEMENTS OF OPERATIONS AND ACCUMULATED DEFICIT

	Year ended December 31,		
	2003	2002	2001
Revenue			
Defense/government	$ 923,813	$ 471,912	$ 145,291
Commercial			100,000
	923,813	471,912	245,291
Costs and expenses			
Cost of revenue	689,278	299,360	179,286
Research and development	208,201	192,358	420,661
General and administrative	423,239	301,215	333,260
Interest expense	11,815	3,378	3,839
	1,332,533	796,311	937,046
Net loss from operations	(408,720)	(324,399)	(691,755)
Investment income	3,242	2,759	1,400
Net loss	(405,478)	(321,640)	(690,355)
Accumulated deficit			
Beginning of period	(22,640,911)	(22,319,271)	(21,628,916)
End of period	$(23,046,389)	$(22,640,911)	$(22,319,271)
Weighted average number of common shares outstanding	21,592,669	21,495,529	20,224,090
Net loss per share (basic and diluted)	$ (.019)	$ (.015)	$ (.034)

The accompanying notes are an integral part of the financial statements.

SONEX RESEARCH, INC.
STATEMENTS OF PAID-IN CAPITAL

	Price per share	Preferred stock ($.01 per share) Shares	Amount	Common stock (.01 par value) Shares	Amount	Additional paid-in capital
Balance, January 1, 2001		1,540,001	$15,400	19,479,868	$194,799	$20,927,437
March private placement	.25			300,000	3,000	72,000
March for services	.25			54,577	546	13,098
April private placement	.25			125,000	1,250	30,000
June private placement	.20			325,000	3,250	61,750
June for services	.29			44,916	449	12,667
August payment of stock subscription	.20			25,000	250	4,750
September for services	.25			55,000	550	13,200
October private placement	.15			750,000	7,500	105,000
December for services	.25			53,308	533	12,794
December forgiveness of payables						10,000
Stock option compensation						42,120
Amortization of deferred compensation from grant of stock options						29,761
Balance, December 31, 2001		1,540,001	15,400	21,212,669	212,127	21,334,577
March private placement	.15			360,000	3,600	50,400
May for services	.25			12,000	120	2,880
July for services	.25			8,000	80	1,920
Stock option compensation						30,965
Balance, December 31, 2002		1,540,001	15,400	21,592,669	215,927	21,420,742
Stock-based compensation						90,694
Balance, December 31, 2003		1,540,001	$15,400	21,592,669	$215,927	$21,511,436

The accompanying notes are an integral part of the financial statements.

SONEX RESEARCH, INC.
STATEMENTS OF CASH FLOWS

	Year ended December 31, 2003	2002	2001
Cash flows from operating activities			
Net loss	$(405,478)	$(321,640)	$(690,355)
Adjustments to reconcile net loss to net cash			

provided by (used in) operating activities			
Depreciation	26,889	17,956	15,441
Amortization of patents	17,112	17,177	36,885
Amortization of deferred compensation from grant of stock options			29,761
Current charges paid in stock or options		35,965	95,957
Stock-based compensation	90,694		
Accrued interest on loans to/notes from employees	(1,087)	(2,719)	
Accrued interest on notes to shareholder	3,307	1,327	
(Increase) decrease in accounts receivable	(96,343)	(26,874)	(20,488)
(Increase) decrease in prepaid expenses	13,538	(32)	1,359
Increase (decrease) in accrued liabilities	217,679	195,569	128,569
Increase (decrease) in billings in excess of costs on contracts in progress	(23,753)	66,587	
Increase (decrease) in deferred compensation	58,594	48,912	47,100
Net cash provided by (used in) operating activities	(98,848)	32,228	(355,771)
Cash flows from investing activities			
(Increase) decrease in loans to/notes from employees	2,500		
Acquisition of property and equipment	(20,333)	(1,869)	(3,664)
Additions to patents	(16,007)	(16,712)	(25,266)
Net cash provided by (used in) investing activities	(33,840)	(18,581)	(28,930)
Cash flows from financing activities			
Issuance of stock - private placements		54,000	288,750
Increase (decrease) in short-term lines of credit	22,473		
Issuance of notes payable to shareholders	85,000	36,000	
Payment of principal on notes to shareholders	(55,000)		
Payment of accrued interest on notes to shareholders	(2,883)		
Reduction of capital lease obligations	(15,284)	(1,004)	
Forgiveness of payables			10,000
Net cash provided by (used in) financing activities	34,306	88,996	298,750
Increase (decrease) in cash	(98,382)	102,643	(85,951)
Cash at beginning of period	105,998	3,355	89,306
Cash at end of period	$ 7,616	$ 105,998	$ 3,355
Non-cash transactions:			
Equipment acquired through capital lease obligations	$ 50,753	$ 17,646	

The accompanying notes are an integral part of the financial statements.

SONEX RESEARCH, INC.
NOTES TO FINANCIAL STATEMENTS

NOTE 1 - THE COMPANY

Sonex Research, Inc. has developed a proprietary technology, known as the Sonex Combustion System (SCS), which improves the combustion of fuel in internal combustion engines through modification of the pistons in large engines or the cylinder heads in small engines. The SCS achieves in-cylinder control of ignition and combustion to increase fuel mileage of gasoline engines, reduce emissions of diesel engines, and permit small gasoline engines to run on safer diesel-type fuels. The Company's objective is to execute broad agreements with engine and parts manufacturers for industrial production of SCS components under license from Sonex.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Presentation of financial statements: Certain reclassifications have been made to the financial statements of the prior years to conform to the classifications used in 2003, most notably the reclassification of amounts in the Statement of Operations from Research and Development to Cost of Revenue and from General and Administrative to Interest Expense.

Cash and equivalents: The Company's By-Laws restrict the types of permitted investments to securities issued by the U.S. Treasury, savings accounts insured by the U.S. Government, or investment companies that invest in obligations of the U.S. Government or its agencies. The Federal Deposit Insurance Corporation (FDIC) insures bank balances up to $100,000. At any point in time, the Company's bank balances may exceed the FDIC insurance limit. The Company considers all short-term, highly liquid investments which are convertible into cash within three months or less to be cash equivalents.

Patents: The costs associated with the filing of patent applications are deferred. Amortization is recorded on a straight-line basis over the remaining legal life of patents, commencing in the year in which the patent is granted. Costs related to patent applications which ultimately fail to result in the grant of a patent, as well as the unamortized costs of patents abandoned by the Company due to lack of expected commercial potential, are charged to operations at the time such determination is made.

Property and equipment: Property and equipment is stated at cost or, in the case of leased equipment under capital leases, at the present value of future lease payments, less accumulated depreciation. Major renewals and betterments are capitalized and ordinary repair and maintenance expenditures are charged to operations in the year incurred. Depreciation is computed using the straight line method over useful lives of three to seven years.

Revenue recognition: Revenue derived from development and demonstration contracts is recognized upon the Company's completion of the milestones and/or submission of progress reports specified in each contract. Development contracts are executed for funding supplied by a United States Government or Department of Defense (the "Government") agency or prime contractor for proof-of-concept demonstration programs. Revenue and costs for these contracts that require the Company to provide stipulated services for a fixed price have been recognized using the percentage-of-completion method of accounting by relating contract costs incurred to date to total estimated contract costs at completion. Contracts which are based on costs incurred are subject to post-award audit and

potential price redetermination. In connection with contracts in progress, any excess of billings over costs incurred is recorded as a current liability, while any excess of costs incurred over billings is recorded as a current asset, at the financial statement date. In the opinion of management, adjustments, if any, on completed contracts would not have a material adverse effect on the Company's financial position or results of operations.

Commercial development contracts are executed in situations in which an engine manufacturer is willing to provide funding to partially offset the development costs incurred by the Company in applying its technology to one of the manufacturer's engines. Generally, commercial development contracts require the Company to demonstrate that the manufacturer's engine, when modified with the Company's technology, can meet certain emissions reduction and performance goals specified in the contract. In addition, these contracts sometimes provide that payment of part of the contract amount will be made only if the Company meets the specified goals. The Company is not required to repay any funds received in connection with its development contracts.

Stock-based compensation: As of January 1, 2003, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 123 - "Accounting for Stock-based Compensation" issued by the Financial Accounting Standards Board (FASB), which provides for the fair value based method of accounting to be applied to the Company's stock option grants and other equity-based compensation. SFAS No. 148 - "Accounting for Stock-based Compensation - Transition and Disclosure", issued in December 2002, amends SFAS No. 123 to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock options and other equity-based employee compensation. The Company has chosen to apply the "modified prospective method" of SFAS No. 148 pursuant to which fair value based stock option compensation costs for 2003 have been recognized as if the fair value based method had been used to account for all employee equity-based awards made in prior periods as well as the current period.

Prior to 2003 the Company accounted for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board (APB) Opinion No. 25 - "Accounting for Stock Issued to Employees". Under APB No. 25, compensation cost is measured as the excess, if any, of the quoted market price of the Company's stock at the date of grant over the exercise price of the option granted. Compensation cost for stock options, if any, is recognized ratably over the vesting period.

Net loss per share: Net loss per share is computed based upon the weighted average number of common shares outstanding during the year. Potentially dilutive securities, which include convertible preferred stock, stock options and warrants, would serve to reduce the loss per share and, accordingly, are excluded from the computation.

Use of estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and notes. Actual results may differ from those estimates.

Major customers: During 2003 and 2002 the Company's only customers were branches of the U.S. government and military or their prime contractors. Revenues generated from two such customers under contracts-in-progress represented 81% of total revenues in 2003.

Concentration of credit risk: The Company maintains part of its cash in bank deposit accounts at financial institutions. At times, the balances in such accounts may exceed the FDIC insurance limitation of $100,000 per account. The

Company's accounts receivable at December 31, 2003 consist entirely of uncollateralized customer obligations due under normal business terms from branches of the U.S. government and military or their prime contractors. Based on the Company's collection experience and the creditworthiness of such customers, management concluded that no allowance for doubtful accounts was necessary.

New accounting standards: SFAS No. 148 issued in December 2002 also amends the disclosure provisions of SFAS No. 123 and APB Opinion No. 28, "Interim Financial Reporting." The Statement is effective for fiscal years beginning after December 15, 2002.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities." This statement amends and clarifies financial reporting for derivative instruments, including certain derivative instruments embedded in other contracts and for hedging activities under SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement is effective for contracts entered into or modified after June 30, 2003, and for hedging relationships designated after June 30, 2003. The Company currently has no derivative instruments and undertakes no hedging activities.

In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity." This statement establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. SFAS No. 150 was originally to be effective for financial instruments entered into or modified after May 31, 2003, and otherwise was to be effective at the beginning of the first interim period beginning after June 15, 2003. In November 2003, FASB issued FASB Staff Position 150-3 which delays or defers indefinitely the effective date of certain provisions of SFAS No. 150.

In January 2003, the FASB issued Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities", an interpretation of Accounting Research Bulletin No. 51. FIN 46 requires certain variable interest entities, or VIEs, to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective for all VIEs created or acquired after January 31, 2003. For VIEs created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period beginning after June 15, 2003. The Company currentl