SONEX RESEARCH INC
Form 10QSB
November 14, 2001

U.S. SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 10-QSB

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

For the quarterly period ended September 30, 2001

SONEX RESEARCH, INC.

Incorporated in the State of Maryland
23 Hudson Street
Annapolis, Maryland 21401

Telephone Number: (410) 266-5556
IRS Employer Identification No. 52-1188993

Commission file number 0-14465

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 [x] NO [ ]

There were 21,159,361 shares of the Issuer's $.01 par value Common Stock outstanding at November 14, 2001.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (Unaudited)

REPORT OF INDEPENDENT ACCOUNTANTS

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

We have reviewed the condensed financial statements appearing on pages 3 through 10 of this Form 10-QSB Quarterly Report of Sonex Research, Inc. (the "Company") as of September 30, 2001. These financial statements are the responsibility of the Company's management.

We conducted our review in accordance with standards established by the American Institute of Certified Public Accountants. A review of interim financial information consists principally of applying analytical procedures to financial data and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the accompanying financial statements for them to be in conformity with generally accepted accounting principles.

We previously audited, in accordance with generally accepted auditing standards, the balance sheet as of December 31, 2000, and the related statements of operations and accumulated deficit and cash flows for the year then ended (the "audited financial statements", not presented herein), and in our report dated March 30, 2001, we expressed an unqualified opinion on those financial statements. We also stated that the audited financial statements were prepared assuming that the Company will continue as a going concern; however, as described in Note 3 to the audited financial statements, the Company has incurred significant net losses since its inception and its ability to commence generation of significant revenue and ultimately achieve profitable operations raise substantial doubt about the Company's ability to continue as a going concern. The audited financial statements and the accompanying condensed financial statements do not include any adjustments that might result from the outcome of this uncertainty.

C. L. STEWART & COMPANY

Annapolis, Maryland
November 12, 2001

SONEX RESEARCH, INC.
CONDENSED BALANCE SHEETS
(Unaudited)

ASSETS	September 30, 2001	December 31, 2000

Current assets		
Cash and equivalents	$ 2,187	$ 89,306
Accounts receivable	84,936	17,340
Prepaid expenses	27,956	27,142
Loans to officers and employees	22,500	22,500
Total current assets	137,579	156,288
Notes receivable from officers and employees	18,125	18,125
Patents and technology, net of accumulated amortization of $48,123 in 2001 and $39,600 in 2000	199,865	215,707
Property and equipment, net of accumulated depreciation of $438,531 in 2001 and $425,031 in 2000	57,511	69,026
Total assets	$ 413,080	$ 459,146
LIABILITIES AND STOCKHOLDERS' EQUITY/(DEFICIT)		
Current liabilities		
Accounts payable and other accrued liabilities	$ 78,853	$ 41,775
Accrued wages	84,474	6,807
Accrued bonus and vacation pay	83,500	91,381
Total current liabilities	246,827	139,582
Deferred compensation	847,074	810,844
Stockholders' equity/(deficit)		
Preferred stock, $.01 par value - 2,000,000 shares issued; 1,540,001 shares outstanding	15,400	15,400
Common stock, $.01 par value, 48,000,000 shares authorized - shares issued and outstanding: 20,409,361 in 2001 and 19,479,868 in 2000	204,094	194,799
Additional paid-in capital	21,186,093	20,927,437
Accumulated deficit	(22,086,408)	(21,628,916)
Total stockholders' equity/(deficit)	(680,821)	(491,280)
Total liabilities and stockholders' equity	$ 413,080	$ 459,146

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

SONEX RESEARCH, INC..
CONDENSED STATEMENTS OF OPERATIONS AND ACCUMULATED DEFICIT
(Unaudited) Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2001	2000	2001	2000
Revenue				
Defense	$ 79,936	$ 29,270	$ 113,710	$ 293,058

Commercial	50,000	0	100,000	70,000
	129,936	29,270	213,710	363,058
Costs and expenses				
Cost of revenue	44,552	34,919	65,976	186,992
Research & development	100,083	120,978	374,852	340,514
General & administrative	84,390	81,871	231,652	244,353
	229,025	237,768	672,480	771,859
Net loss from operations	99,089	208,498	458,770	408,801
Other (income)/expense				
Investment and other income	(116)	(1,241)	(1,278)	(3,588)
Net loss	98,973	207,257	457,492	405,213
Accumulated deficit				
Beginning	21,987,435	21,224,942	21,628,916	21,026,986
End	$22,086,408	$21,432,199	$22,086,408	$21,432,199
Weighted average number of shares outstanding	20,342,731	18,594,455	19,947,173	18,396,873
Net loss per share	$.005	$.011	$.023	$.022

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

SONEX RESEARCH, INC.
CONDENSED STATEMENTS OF PAID-IN CAPITAL

(Unaudited)

	Price per share	Preferred stock ($.01 par value) Shares	Amount	Common stock ($.01 par value) Shares	Amount	Additional paid-in capital
Balance, January 1, 1999		1,540,001	$15,400	17,642,860	$176,429	$20,209,503
March for services	$.44			20,975	210	9,098
June for services	.46			17,925	179	8,071
September for services	.38			36,923	369	13,593
December for services	.32			36,803	368	11,478
April and December						

option exercises	.50			255,000	2,550	124,950
Correction of stock ledger				(2,317)	(23)	23
Stock option compensation						24,000
Amortization of deferred compensation from grant of stock options						29,760
Balance, December 31, 1999		1,540,001	15,400	18,008,169	180,082	20,430,476
February exercise of warrants	.35			285,000	2,850	96,900
March for services	.40			24,130	241	10,125
June exercise of warrants	.375			196,667	1,967	71,783
June exercise of warrants for notes	.375			48,333	483	17,642
June for services	.41			31,538	315	12,695
September for services	.24			56,877	569	13,181
December private placement	.25			775,000	7,750	186,000
December for services	.25			54,154	542	12,996
Stock option compensation						45,875
Amortization of deferred compensation from grant of stock options						29,764
Balance, December 31, 2000		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	13,099
April private placement	.25			125,000	1,250	30,000
June private placement	.25			325,000	3,250	61,750
June for services	.25			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
Stock option compensation						28,870
Amortization of deferred compensation from grant of stock options						22,321
Balance, Sept. 30, 2001		1,540,001	$15,400	20,409,361	$204,094	$21,186,093

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

SONEX RESEARCH, INC.
CONDENSED STATEMENTS OF CASH FLOWS
(Unaudited)

	Nine months ended September 30,	
	2001	2000
Cash flows from operating activities		
Net loss	$ (457,492)	$ (405,213)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation	13,500	13,972
Amortization of patents	37,853	48,058
Amortization of deferred compensation	22,321	22,323
Current charges paid in stock or options	69,380	59,126
(Increase) decrease in accounts receivable	(67,596)	18,345

(Increase) decrease in prepaid expenses	(814)	2,379
Increase (decrease) in current liabilities	107,245	44,048
Increase (decrease) in deferred compensation	36,230	36,230
Net cash used in operating activities	(239,373)	(160,732)
Cash flows from investing activities		
Acquisition of property and equipment	(1,985)	(1,386)
Additions to patents	(22,011)	(31,092)
Net cash provided by (used in) investing activities	(23,996)	(32,478)
Cash flows from financing activities		
Issuance of stock - exercise of warrants		173,500
Issuance of stock - private placement	176,250	
Net cash provided by financing activities	176,250	173,500
Increase (decrease) in cash	(87,119)	(19,710)
Cash		
Beginning of period	89,306	57,768
End of period	$ 2,187	$ 38,058

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

SONEX RESEARCH, INC.
NOTES TO CONDENSED FINANCIAL STATEMENTS
(Unaudited)

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. Variations of the Company's technology have been applied to all types of internal combustion engines, including those used in personal and commercial vehicles as well as engines used in fixed or portable utility applications. Sonex concentrates its commercial efforts on the application of the SCS to the reduction of exhaust emissions in direct injected turbocharged diesel engines. The Company's objective is to execute broad agreements with engine manufacturers and their piston suppliers for industrial production of SCS pistons under license from Sonex.

NOTE 2 - PRESENTATION OF FINANCIAL STATEMENTS

The accompanying unaudited condensed financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-QSB and Item 310(b) of

Regulation S-B. Accordingly, these financial statements do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included.

Operating results for the three- and nine-month periods ended June 30, 2001 are not necessarily indicative of the results that may be expected for the year ending December 31, 2001. For further information, reference is made to the financial statements and notes thereto included in the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000.

Certain reclassifications have been made to the prior period financial statements to conform to the classifications used in the current period.

NOTE 3 - 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.

NOTE 4 - ACCRUED WAGES

Beginning in the first quarter of 2001, the Company's officers have voluntarily and at their own discretion deferred receipt of payment of significant portions of their current wages to reduce the Company's monthly cash requirements. Such wages payable to the Company's officers totaling $70,077 as of September 30, 2001 are included in the total of accrued wages reported on the accompanying balance sheet, although that figure had been reduced to $60,199 as of October 31, 2001 as a result of payments made during the month. 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 such accrued wages as soon as cash flow permits. The amount and timing of such payments will be determined at the discretion of the Company's officers, as these accrued wages are not subject to the terms of the Company's written agreement with current and former employees to defer payment of portions of their salaries as described in Note 5.

NOTE 5 - DEFERRED COMPENSATION

In order to help conserve the Company's limited cash resources, certain of the Company's employees for several years have voluntarily deferred receipt of payment of significant portions of their authorized annual salaries upon request by the Board of Directors. By written agreement with the Company, these individuals 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. Beginning in January 1997, however, there has been no further deferral of salary requested of the Company's non-executive employees.

Deferred compensation outstanding is payable to the following classifications of personnel:

	Sept. 30, 2001	December 31, 2000
Current executive officers	$ 514,467	$ 478,237
Current employees and consultants	62,088	62,088
Former officers and employees	270,519	270,519
	$ 847,074	$ 810,844

The conditions that would require repayment of deferred amounts have yet to occur, and it is unlikely that such conditions will occur prior to September 30, 2002. Accordingly, such deferred compensation is reported separately in the accompanying balance sheet as a non-current liability.

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.

NOTE 6 - INCOME TAXES

The Company has not incurred any federal or state income taxes since its inception due to operating losses. At December 31, 2000, the Company had net operating loss and capital loss carryforwards of approximately $16.2 million available to offset future taxable income. If certain substantial changes in the Company's ownership should occur, there would be an annual limitation on the amount of the carryforwards which can be utilized.

NOTE 7 - STOCKHOLDERS' EQUITY

Authorized capital stock

The Company is presently authorized to issue 48 million shares of $.01 par value common stock and 2 million shares of $.01 par value convertible preferred stock. All of the authorized shares of preferred stock, along with common stock purchase warrants, were issued for $2 million in February 1992 (the "Preferred Stock Investment") to a small number of individuals who qualified as "accredited investors" pursuant to Rule 501 of Regulation D of the Securities Act of 1933 (the "Act") and to Proactive Partners, L.P. and certain of its affiliates ("Proactive"), who became the largest beneficial owner of the Company's common stock by virtue of the acquisition of the convertible preferred stock and common stock purchase warrants.

The preferred stock has priority in liquidation over the common stock, but it carries no stated dividend. The holders of the preferred stock, voting as a separate class, have the right to elect that number of directors of the Company which represents a majority of the total number of directors. The preferred stock is convertible at any time at the option of the holder into common stock at the rate of $.35 per share of common stock. As of September 30, 2001, a total of 459,999 shares of preferred stock had been converted into 1,314,278 shares of common stock.

Private placements of common equity

In a private financing during March and April 2001 the Company raised $106,250 from a small number of the Company's shareholders, including its chief executive officer and chief financial officer, who participated in previous private financings of the Company. A total of 425,000 shares of the Company's common stock and five-year warrants to purchase an additional 425,000 shares of common stock at $.50 per share were issued in this financing.

In a private financing in June 2001 the Company issued 350,000 shares of common stock for proceeds of $70,000 received from a small group of the Company's local shareholders. A portion of the proceeds was in the form of a subscription receivable of $5,000, which amount was received in August 2001.
The offer and sale of these shares of common stock and warrants to purchase shares of common stock satisfied the conditions of Rule 506 of Regulation D of the Act and, as such, were exempt from the registration requirements of Section 5 of the Act as transactions not involving any public offering within the meaning of Section 4(2) of the Act.

Stock options

The Company maintains a non-qualified stock option plan (the "Plan") which has made available for issuance a total of 7.5 million shares of common stock. All directors, full-time employees and consultants to the Company are eligible for participation. Option awards are determined at the discretion of the Board of Directors. Upon a change in control of the Company, all outstanding options granted to employees and directors become vested with respect to those options which have not already vested. Options outstanding expire at various dates through September 2011.

The Company accounts for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board (APB) Opinion No. 25. 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. In its complete annual financial statements presented in its Form 10-KSB, the Company provides additional pro forma disclosures as required under Statement of Financial Accounting Standards No. 123 - "Accounting for Stock-Based Compensation" as if the fair value based method of accounting had been applied to the Company's stock option grants made subsequent to 1994.

From January 1, 2001 through September 30, 2001, the Company had the following activity in options to purchase shares of common stock under the Plan:

	# of shares	Weighted average exercise price	# of shares exercisable	Weighted average exercise price
Unexercised at January 1, 2001	4,326,216	$.52	3,760,716	$.52
Granted/becoming exercisable	129,375	.25	329,375	.41
Exercised	0		0	
Lapsed	(160,650)	.50	(160,650)	.50

Unexercised at Sept. 30, 2001	4,291,941	$.50	3,929,441	$.51

C
ommon stock reserved for future issuance

At June 30, 2001, a total of 11,664,591 shares of common stock were reserved by the Company for issuance for the following purposes:

Purpose	# of shares
Currently exercisable warrants expiring in	
February 2002, exercisable at $.75 per share	167,759
March 2002, exercisable at $.75 per share	220,000
December 2005, exercisable at $.50 per share	387,500
March 2006, exercisable at $.50 per share	250,000
April 2006, exercisable at $.50 per share	175,000
	1,200,259
Currently exercisable options	3,929,441
Granted options becoming exercisable in the future	362,500
Options available for future grants	1,772,391
Conversion of preferred stock	4,400,000
Total shares reserved	11,664,591

NOTE 8 - COMMITMENTS

The Company occupies its office and laboratory facility 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. The lease currently provides for monthly rent of $4,000 and requires the Company to pay all property related expenses. The Company will seek to negotiate a new long-term lease for its facility or search for an alternative location in the event that a long-term 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.

NOTE 9 - SUBSEQUENT EVENT

In a private financing in October 2001, the Company raised $112,500 from a small number of the Company's shareholders, including its chief executive officer, chief financial officer, and newest member of the Board of Directors, each of whom participated in previous private financings of the Company. A total of 750,000 shares of the Company's common stock were issued in this transaction.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL POSITION AND RESULTS OF OPERATIONS

Caution regarding forward-looking statements

Sections of this Report, as well as all publicly disseminated material about Sonex Research, Inc. ("Sonex" or the "Company"), contain information in the form of "forward-looking" statements within the meaning of the Private Securities Litigation Act of 1995 (the "Act"). 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. Accordingly, readers are cautioned not to place undue reliance on such forward-looking statements.

In order to obtain the benefits of the "safe harbor" provisions of the Act for any such 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, but are not limited to, the following:

- ability to generate cash flow from revenue or to secure financing necessary to fund future operations
- ability to demonstrate commercial viability of technology
- ability to complete technology development and demonstration programs and execute licensing agreements that produce significant revenue
- ability to attract and retain skilled personnel
- changes in general economic conditions
- competition

Overview of the Company and its technology

Sonex Research, Inc., 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 that is

designed to reduce emissions and increase fuel mileage of diesel and gasoline engines. 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. 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.

The SCS improves the combustion of fuel in engines through design modification of the pistons in four-stroke direct injected (DI) diesel engines or the cylinder heads in two-stroke spark-ignited (SI) engines. Variations of the Company's technology have been applied to all types of internal combustion engines, including those used in personal and commercial vehicles (automobiles, trucks, buses, boats, motorcycles) as well as engines used in fixed or portable utility applications (motor generator sets, pumps, chain saws), whether SI or compression ignited (CI), carburetted or fuel injected, using gasoline, diesel, alcohol and/or other fuels.

For the past several years, Sonex has concentrated its commercial efforts on the application of the SCS to the reduction of exhaust emissions in DI turbocharged diesel engines. SCS designs reduce soot and other emissions while maintaining fuel consumption and power. Management believes that the Company's piston-based emissions reduction enabling technology for DI diesel engines, which changes only a single engine component while introducing no additional parts and is self-driven by the combustion process, can be an alternative to exhaust aftertreatment. The Company is participating in demonstration and development programs with some of the world's largest multi-national diesel engine manufacturers with the goal of executing license agreements for industrial production of SCS pistons.

The patented SCS for DI diesel 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. SCS DI diesel designs integrate one or more cavities as microchambers which form a ring around the piston bowl, with each microchamber positioned in line with a spray from the fuel injector. The microchambers perform as reservoirs that produce active chemical species (partially reacted charges) which are expelled at high velocity to enhance combustion and burn the soot cloud. The microchambers are connected to the piston bowl by tunnel-like vents that control the amount of fuel and air that enter the microchamber and also control the amount of turbulence that is created when gases jet out of the microchambers through these vents into the piston bowl. The position of the microchambers is a critical factor in controlling the temperature of the microchamber and the rate of reaction of gases that may be resident in the microchamber at any one time.

The SCS "Low Soot" design, 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 DI diesel engines and involves re-arrangement of SCS features to exploit new fundamental understandings of fluid dynamics. The key feature of the SCS DI diesel technology is the presence of improved microchambers in the piston which produce and conserve intermediate and radical 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 research engine with no change in injection timing. Sonex has also demonstrated that the SCS technology can be transferred to a modern turbocharged, intercooled DI diesel engine.

In 2000 Sonex introduced its Stratified Charge Radical Ignition (SCRI) combustion technology, a new branch of the SCS which Sonex believes 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 of its potential for lowering both emissions and fuel consumption since compression ignition does not require the use of a spark plug; however, the lack of a method for controlling the ignition point has prevented practical implementation of HCCI. Sonex believes it has attained the control of ignition that will make HCCI viable for commercial application by achieving radical assisted, four-stroke combustion to enable fully controllable compression ignition at low pressures as a function of fuel injection timing.

With SCRI, radical (chemical) species that enable ignition are created by interaction of the injected fuel spray with specially designed microchambers 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 emissions and the fuel economy of a diesel engine. On a DI, single cylinder laboratory engine at Sonex, the SCRI reduced NOx emissions by 80% and smoke by 90% while maintaining fuel consumption, using diesel-type fuels.

Management believes that the SCRI piston design, with further development, can enable DI gasoline engined automobiles, currently sold only in markets outside the U.S. because of emissions problems, to become emissions compliant while maintaining their current fuel consumption advantages. The Company is seeking committed industrial partners and/or funding assistance from agencies of the U.S. government to provide substantial on-going financial support and technical expertise to continue development of the SCRI.

The Company, in its laboratory and under contract with the U.S. military and defense contractors, also has applied a proprietary patented SCS starting system and modified combustion chamber to the conversion of reliable, lightweight, SI, two-stroke, gasoline engines to start and operate on JP-5/JP-8 standard military fuels (also referred to as "heavy fuels") 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. Sonex HFEs achieve power and fuel consumption substantially equal to that of the stock gasoline engines. Sonex-modified single-cylinder, 100cc HFEs have been deployed aboard ship and on land by the U.S. Marine Corps (USMC) in the Dragondrone UAV, the only UAV qualified for shipboard use.

As of November 12, 2001, the Company has five full-time employees and engages the part-time services of several consultants on a regular basis. The Company has never experienced a strike or work stoppage, and believes its relations with its employees are good.

Competition

The Company faces significant competition from the extensive research departments of the world's major vehicle and engine manufacturers. These OEMs 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, since no additional moving parts are added to the engine.

Secrecy and non-disclosure

Due to the highly competitive nature of the world's automotive and truck industries, in connection with its contracts and/or demonstration programs with such manufacturers the Company is required to execute joint secrecy and disclosure agreements that expressly prohibit the public disclosure of the customers' names and other significant information. Failure by Sonex to maintain this strict level of confidentiality would jeopardize the relationship of the Company with its customers.

Current diesel engine programs

On a continuing basis for the past few years, the Company has performed extensive design and development work on medium- and heavy-duty truck engines for large foreign multi-national diesel truck engine original equipment manufacturers (OEMs) in separate programs. The demonstration process involves many stages, from proof of concept using screw-assembled prototype pistons fabricated in-house by Sonex and tested by the engine manufacturer in its laboratories, to working with piston suppliers for the fabrication of finished pre-production pistons that will be used in field trials, and durability, manufacturing optimization, and other tests required before the start of full series production.

Also, in cooperation with the engine OEMs, the Company has worked with the major piston suppliers to these manufacturers, providing engineering specifications and drawings for their use in evaluating alternative production methods in anticipation of eventual piston orders from the engine manufacturers. The most extensive collaboration has been with the former T&N Piston Products Group of the U.K., which was acquired in 1998 by Federal-Mogul Corp., a major international supplier of engine components based in Southfield, Michigan. T&N invested significant funds internally in developing innovative and economical techniques of manufacturing Sonex pistons for series production, as well as performing finite element, thermal and stress analyses to examine the effects of stress on the Sonex piston under a variety of extreme conditions.

Promising test results at Sonex of the SCS "Low Soot" design for "classical" diesel engines using hand-assembled pistons led a foreign engine OEM to arrange in 2001 for third party evaluation of the Sonex "Low Soot" diesel technology by one of the world's leading independent engine R&D and testing firms. The test engine is a turbocharged and intercooled six-cylinder, DI diesel engine used in medium-duty trucks. Pre-production SCS pistons were fabricated by Federal-Mogul for this evaluation. The test program was completed during the third quarter of

2001.

The engine R&D and testing firm recently issued its report confirming the soot reduction capability of the SCS in this OEM's engine using pre-production pistons. The observed results approximate those achieved by the Company in-house with hand-assembled, experimental SCS pistons that showed a 50% reduction in soot with 10% reduction in NOx while maintaining fuel consumption and power. The Company and the engine R&D and testing firm are discussing additional confirmatory testing and evaluating the marketing potential of this report. The engine OEM is now assessing the program results before deciding on how to proceed. Federal-Mogul, however, which recently filed for bankruptcy protection, has informed the Company that it is focusing its limited resources on core businesses and will no longer participate in SCS research. Sonex plans to focus its attention to other piston suppliers who have evaluated earlier SCS designs.

In spring 2001 Sonex and a second foreign engine OEM reached agreement on a joint feasibility study of the potential of the SCRI diesel design. The objective of the study is to transfer the SCRI results achieved by Sonex on the single-cylinder laboratory diesel engine to a modern, advanced, multi-cylinder, naturally aspirated, 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. The Company has received progress payments during the feasibility study and will be entitled to incentive payments at the conclusion of the test program upon the achievement of certain emissions reduction targets. The agreement also includes provisions pursuant to which the engine OEM is granted priority rights to negotiate a license for the SCRI diesel technology.

Testing has proceeded from the design stage to testing with screw-assembled SCS pistons produced by the manufacturer under Sonex guidance. Recent testing has moved to a turbo-charged engine and is expected to be completed before the end of the year.

SCS SCRI Process for Gasoline Engines

Management believes that the SCRI piston design, with further development, can enable DI gasoline engined automobiles, currently sold only in markets outside the U.S. because of emissions problems, to become emissions compliant while maintaining their current fuel consumption advantages.

Vehicle manufacturers are now trying to out do each other on fuel mileage, with improvement of 15% being a major objective, but NOx emissions remain a problem. U.S. firms are focusing their attention on hybrid propulsion technologies, such as gasoline/diesel-electric power plants, rather than improvements in combustion technology (more efficient ways of burning fuel). Hybrid power plants utilize

the gasoline or diesel engine during steady speed operation. These engines operate at high rpm to develop the needed power and suffer from added weight.

There are ongoing efforts in Japan, however, to achieve a new class of engines known as GDI, Gasoline Direct Injected engines, that operate on high air-fuel ratios. DI 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. GDI engines have achieved reductions in gasoline consumption of 20% to 30%. Mitsubishi has produced over 800,000, five-passenger, 2,700 pound vehicles with GDI engines that achieve 53 mpg, for sale in markets other than the U.S. 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 benefits of the GDI engine in performance, fuel consumption and cost-to-manufacture, as well as the challenging exhaust problem with NOx emissions in the presence of excess oxygen that cannot be solved with a catalytic converter. Engine researchers know the key to solving the GDI NOx problem is to replace spark ignited, lean combustion with homogeneous, compression ignition 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.

Worldwide automotive industry researchers have been studying HCCI because compression ignition does not require the use of a spark plug; thus, in theory, HCCI 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 the SCRI process, Sonex believes it has the potential not only to make HCCI viable for commercial application but also to leapfrog the Japanese GDI accomplishments. The SCRI piston design could enable fuel- efficient GDI engines to become emissions compliant and thereby improve fuel mileage of U.S. produced automobile and light trucks by 25% to 30%. Later this fall Sonex will present a paper on the SCRI at an international symposium of combustion engineers in France, sponsored by the French Petroleum Institute, that will focus exclusively on HCCI, or CAI (controlled auto-ignition) as it is also known in Europe.

This fall in its laboratory, Sonex has demonstrated the feasibility of converting its single cylinder SCRI research engine, originally fueled with JP-5 and diesel, to operate on gasoline using the SCRI combustion process. Considerable research remains to be done on the single cylinder engine to establish the design parameters needed to transfer the process to a multi-cylinder engine.

The Company is seeking committed industrial partners to provide substantial on-going financial support and technical expertise to continue the work and achieve these objectives. After establishing design parameters, the Company then would be in a solid position to work with the auto industry on demonstration projects to transition SCRI to multi-cylinder engines so gasoline can be burned

effectively in eventual production engines of all sizes. Fortunately, demonstration projects with automotive manufacturers could provide results fairly quickly since the sparkless SCRI can advantageously employ the centrally located spark plug hole of most production 4-valve per cylinder engines for the installation of the injector.

In March 2001 Dr. Andrew A. Pouring, CEO and founder of Sonex, testified in a hearing before the House Committee on Armed Services' Subcommittee on Research and Development on Innovative Research Companies. Dr. Pouring gave an overview of the potential of the patented SCS, piston-based, engine technology for in-cylinder control of ignition and combustion to reduce emissions and increase fuel mileage of diesel and gasoline engines. The Company is following-up with the Committee and is enlisting the aid of federal legislators to gain exposure for the SCRI process.

Heavy fuel engines (HFEs)

Also at the hearing before the House Committee on Armed Services, Dr. Pouring reported on the unresponsiveness of the military to the existing directive mandating the elimination of gasoline in favor of JP-5/JP- 8 standard military fuels (also referred to as "heavy fuels"), and how SCS heavy fuel engine (HFE) technology can assist in the implementation of that directive. Sonex has successfully applied a patented SCS starting system and modified combustion chamber design to the conversion of reliable, lightweight small, spark-ignited, carburetted, two-stroke, gasoline fueled engines of various sizes used in small, remotely controlled military unmanned aerial vehicles (UAVs) to start and operate on heavy fuels. Sonex-modified single-cylinder, two-stroke, 100cc HFEs have been deployed aboard ship by the U.S. Marine Corps in the Dragondrone UAV, and the Company has successfully completed heavy fuel conversions of other UAV engines for the military.

UAVs conduct short-range tactical reconnaissance while operating virtually unseen and unheard, taking pictures of battlefields and enemy installations and relaying them back to ground forces. Existing UAV engines in the military's inventory operate on gasoline. Because of safety and logistics concerns, however, all military small engines, such as those powering UAVs, eventually will be required to operate on less volatile, widely available heavy fuels used by jet aircraft and most military vehicles.

The Company is assessing additional potential uses by the military for the SCS HFE technology, as well as private sector opportunities. Operation of a light-weight engine on high flash point fuels such as diesel and heavy fuels, will reduce the hazard associated with gasoline, making such an engine much more suitable for applications where gasoline storage is undesirable, such as in diesel fueled utility engines used in pumps, generator sets, etc., in homes, commercial buildings and boats. Other military applications for two-cycle HFEs include standby generators, water pumps, chainsaws, earth tampers and outboard engines.

Sonex also conducted a feasibility study in a single-cylinder laboratory engine for the Navy using the SCRI combustion system that would allow conversion of an eight-cylinder gasoline engine to heavy fuel use while retaining its light

weight and flexibility. The feasibility was proven, with the Sonex laboratory engine achieving the fuel economy of a diesel and low emissions; however, rather than proceed with a program to transfer the Sonex single-cylinder engine results to the gasoline engine, which would retain its performance and lightweight advantages, the Navy instead decided to examine conventional diesel and turbine technologies.

Dr. Pouring told the Committee that Sonex seeks to capitalize on the success to date with SCS HFEs by participation in new military programs, and that the Company is seeking sponsors within the military who are obliged to make an effort to comply with the directive on the elimination of gasoline.

In June 2001 the Company was awarded two contracts from the military for prototype development of small HFEs for experimental UAVs. These projects, which will be completed during the fourth quarter of 2001, could lead to subsequent contracts for HFE optimization. The Company is also awaiting word on the potential award of additional military contracts in the near future for development of various sizes of HFEs.

Additional information on the Company's business, its technology, and its management can be found in the Company's 2000 Annual Report on Form 10-KSB.

Financial position and liquidity

As of September 30, 2001, the Company had available cash and equivalents of $2,187 and accounts receivable of $84,936. During October 2001 the Company raised $112,500 in a private financing from a small group of investors, including the Company's CEO and co-founder, Dr. Andrew A. Pouring, its CFO, Mr. George E. Ponticas and Director John H. Drewanz, who joined the Board on October 1. From March 2001 through June 2001 the Company raised capital of $176,250 from private financings.

Beginning in the first quarter of 2001, the Company's officers have voluntarily and at their own discretion deferred receipt of payment of significant portions of their current wages to reduce the Company's monthly cash requirements. Such wages payable to the Company's officers total $70,077 as of September 30, 2001, although that figure had been reduced to $60,199 as of October 31, 2001 as a result of payments made during the month. 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 such accrued wages as soon as cash flow permits.

The Company high expectations of receiving additional contracts from the military in the near future for heavy fuel engine development. 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 through Deceember 31, 2001. In the event that anticipated revenue is delayed or does not materialize, or if additional short-term capital is not arranged, the Company will have to reduce the scope of its operations in the fourth quarter. Furthermore, the Company's prospects beyond that date 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. There is no assurance that the Company will be able to achieve these objectives.

Results of operations

A net loss of $457,492 was recorded for the first nine months of 2001, as compared to $405,213 for the corresponding period in 2000, an increase of $52,279. The increase in the loss was due to substantially lower revenue for defense department contracts, offset in part by the related decrease in costs incurred for such contracts, in 2001 versus 2000.

Revenue and cost of revenue:

	Nine months ended September 30, 2001	2000
Defense	$ 113,710	$ 293,058
Commercial	100,000	70,000
	$ 213,710	$ 363,058
Cost of revenue	$ 65,976	$ 186,992

Defense contracts relate to the Company's technology for conversion of commercial gasoline fueled engines used in UAVs and the like to heavy fuel operation. Commercial revenue earned in connection with the Company's DI diesel engine piston technology is subject to the negotiated amount, if any, that an engine manufacturer is willing to provide in funding to partially offset the development costs incurred by the Company in applying its technology to one of the manufacturer's engines.

All of the defense revenue reported for the first nine months of 2000 relates to a major sub-contract awarded in the fall of 1999 from a prime contractor to the U.S. military pursuant to which Sonex demonstrated the technical feasibility of converting an existing high performance, 650 horsepower, 4-stroke, gasoline fueled engine for marine use to start and operate on heavy fuels. The Company devoted a significant portion of its available resources to the performance of this sub-contract from late in 1999 through June 2000 when work was substantially completed. Defense department revenue in 2001 has all been generated from June through September in connection with development contracts for the heavy fuel conversion of gasoline UAV engines.

Cost of revenue primarily consists of direct labor charges and direct purchases attributable to funded programs. Such amounts were substantially higher in the first nine months of 2000 than in 2001 due to the above-mentioned defense sub-contract.

Research and development (R&D) expenses:

R&D expenses for the first nine months of the year increased by $34,338, or 10%, from $340,514 in 2000 to $374,852 in 2001. While the number of employees remained the same and compensation rates increased only slightly, a higher percentage of the workforce was devoted to funded projects in 2000 as opposed to 2001. Associated charges were therefore classified as "Cost of revenue" rather than R&D expenses for 2000. "Cost of revenue" in 2000 also included approximately $52,000 in charges for consulting services incurred for funded contracts, with no similar charges being incurred in 2001. The increase in R&D expenses would have been larger than reported were it not for the fact that the 2000 total includes approximately $36,800 for the write-off of unamortized costs of patents abandoned while the 2001 total includes approximately $21,400 in such charges.

General and administrative (G&A) expenses:

Total G&A expenses for the first nine months of the year decreased by $12,701, or 5%, from $244,353 in 2000 to $231,652 in 2001. Personnel costs decreased $6,060, from $167,872 in 2000 to $161,812 in 2001, or 4%, primarily as a result of slightly lower use of temporary clerical personnel in 2001 and a reduction in payroll tax expense resulting from the payment of less cash compensation in 2001 due to the current year deferral of wages by the Company's CFO. Shareholder meeting expenses were lower by $2,561 in 2001 versus 2000. Net decreases in other expenses amounted to $4,080.

PART II - OTHER INFORMATION

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits:

4 Instruments defining the rights of security holders (contained in the Articles of Incorporation and By-laws, as amended, filed with the 1992 Annual Report on Form 10-KSB)

(b) Reports on Form 8-K:

None.

SIGNATURES

In accordance with the requirements of the Exchange Act, the Registrant caused this report to be signed on its behalf by the undersigned, thereto duly authorized.

SONEX RESEARCH, INC.
(Registrant)

/s/ George E. Ponticas
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by: George E. Ponticas
Chief Financial Officer

November 14, 2001