SPIRE CORP
Form 10-Q
August 14, 2007

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

FORM 10-Q

|X| Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the quarterly period ended June 30, 2007; or

|_| Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the transition period from _______ to _______

Commission file number: 0-12742

SPIRE CORPORATION
(Exact name of registrant as specified in its charter)

MASSACHUSETTS	04-2457335
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

ONE PATRIOTS PARK
BEDFORD, MASSACHUSETTS 01730-2396
(Address of principal executive offices)

781-275-6000
(Registrant's telephone number including area code)

Indicate by "X" whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports); and (2) has been subject to such filing requirements for the past 90 days.
Yes |X| No |_|

Indicate by check mark whether the registrant is a large accelerated filer, an electronic filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer |_| Accelerated filer |_| Non-accelerated filer |X|

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes |_| No |X|

The number of shares of the registrant's common stock outstanding as of August 1, 2007 was 8,273,887:

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PART I
FINANCIAL INFORMATION

ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

SPIRE CORPORATION AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS

	JUNE 30, 2007
ASSETS	
Current assets	
Cash and cash equivalents	$ 7,494,000
Restricted cash	132,000
	7,626,000
Short-term investments	--
Restricted short-term investments	--
Accounts receivable - trade, net	4,690,000
Inventories, net	10,228,000
Deposits on equipment for inventory	1,900,000
Prepaid expenses and other current assets	218,000
Total current assets	24,662,000
Net property and equipment	6,216,000
Intangible and other assets, net of accumulated amortization	833,000
Available-for-sale investments at quoted market value	1,680,000
Restricted cash - long-term	--
Deposit - related party	304,000
Total assets	$ 33,695,000
LIABILITIES AND STOCKHOLDERS' EQUITY	
Current liabilities	
Current portion of capital lease obligation - related party	$ 1,065,000
Current portion of equipment line of credit	1,167,000
Accounts payable	2,590,000
Accrued liabilities	4,653,000
Current portion of advances on contracts in progress	12,001,000
Total current liabilities	21,476,000
Long-term portion of capital lease obligation - related party	--
Long-term portion of equipment line of credit	2,333,000
Long-term portion of advances on contracts in progress	1,922,000
Deferred compensation	1,680,000
Deferred taxes	71,000
Total long-term liabilities	6,006,000
Total liabilities	27,482,000
Commitments and Contingencies	
Stockholders' equity	
Common stock, $0.01 par value; 20,000,000 shares authorized; 8,263,637 shares issued and outstanding on June 30, 2007 and 8,236,663 shares issued and outstanding on December 31, 2006	83,000
Additional paid-in capital	19,389,000
Accumulated deficit	(13,366,000)
Accumulated other comprehensive income	107,000
Total stockholders' equity	6,213,000

Total liabilities and stockholders' equity	$ 33,695,000

See accompanying notes to unaudited condensed consolidated financial statements.

SPIRE CORPORATION AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 3	
	2007	2006	2007	2006
Net sales and revenues				
Sales of goods	$ 6,100,000	$ 1,291,000	$ 10,439,000	$ 4,155
Contract research, service and license revenues	2,479,000	2,604,000	5,137,000	5,113
Total net sales and revenues	8,579,000	3,895,000	15,576,000	9,268
Costs of sales and revenues				
Cost of goods sold	5,168,000	1,340,000	8,739,000	3,694
Cost of contract research, services and licenses	2,322,000	2,260,000	4,450,000	4,505
Total cost of sales and revenues	7,490,000	3,600,000	13,189,000	8,199
Gross Margin	1,089,000	295,000	2,387,000	1,069
Operating expenses				
Selling, general and administrative expenses	2,856,000	2,217,000	5,864,000	4,810
Internal research and development expenses	78,000	195,000	123,000	353
Total operating expenses	2,934,000	2,412,000	5,987,000	5,163
Loss from operations	(1,845,000)	(2,117,000)	(3,600,000)	(4,094
Other income (expense), net	(19,000)	36,000	(11,000)	9
Loss before income tax benefit	(1,864,000)	(2,081,000)	(3,611,000)	(4,085
Income tax benefit	--	--	--	
Net loss	$ (1,864,000)	$ (2,081,000)	$ (3,611,000)	$ (4,085

Loss per share of common stock –

basic and diluted	$ (0.23)	$ (0.26)	$ (0.44)	$ (
Weighted average number of common and common equivalent shares outstanding - basic and diluted	8,263,571	7,905,479	8,255,178	7,572

See accompanying notes to unaudited condensed consolidated financial statements.

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SPIRE CORPORATION AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	SIX MONTHS ENDE
	2007
Cash flows from operating activities:	
Net loss	$ (3,611,000)
Adjustments to reconcile net loss to net cash used in operating activities:	
Depreciation and amortization	945,000
Loss on impairment of capital equipment	78,000
Deferred compensation	47,000
Stock-based compensation	208,000
Increase (decrease) in accounts receivable reserves	(47,000)
Changes in assets and liabilities:	
Restricted cash	258,000
Interest receivable	--
Accounts receivable, net	(633,000)
Inventories	(6,011,000)
Prepaid expenses and other current assets	1,199,000
Accounts payable, accrued liabilities and other liabilities	505,000
Deposit - related party	(68,000)
Advances on contracts in progress	5,704,000
Net cash used in operating activities	(1,426,000)
Cash flows from investing activities:	
Purchase of short-term investments	--
Proceeds from maturity of short-term investments	5,000,000
Additions to property and equipment	(508,000)
Increase in intangible and other assets	(265,000)
Net cash provided by (used in) investing activities	4,227,000
Cash flows from financing activities:	
Proceeds from issuance of common stock, net of offering costs	--
Borrowings from equipment line of credit	3,500,000
Principal payment on capital lease obligations	--
Principal payment on capital lease obligations - related parties	(448,000)

Proceeds from exercise of stock options	105,000
Net cash provided by financing activities	3,157,000
Net increase (decrease) in cash and cash equivalents	5,958,000
Cash and cash equivalents, beginning of period	1,536,000
Cash and cash equivalents, end of period	$ 7,494,000
Supplemental disclosures of cash flow information:	
Cash paid during the period for:	
Interest	$ (50,000)
Interest - related party	$ 47,000
Income taxes	$ 7,000

See accompanying notes to unaudited condensed consolidated financial statements.

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SPIRE CORPORATION AND SUBSIDIARIES
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

JUNE 30, 2007

1. DESCRIPTION OF THE BUSINESS

Spire Corporation (the "Company") develops, manufactures and markets highly-engineered products and services in three principal business areas: (i) solar, (ii) optoelectronics and (iii) biomedical generally bringing to bear expertise in materials technologies across all three business areas.

In the solar area, the Company develops, manufactures and markets specialized equipment for the production of terrestrial photovoltaic modules from solar cells. The Company's equipment has been installed in approximately 190 factories in 46 countries. The Company also provides custom and building integrated photovoltaic (BIPV) modules, stand-alone emergency power backup and photovoltaic systems integration services using technology developed by the Company.

On July 31, 2007, the Company entered into contractual relationship with Gloria Solar Co., Ltd. ("Gloria Solar"), a company organized under the laws of the Republic of China (Taiwan), pursuant to which (i) the Company agreed to sell to Gloria Solar certain assets belonging to the Company's solar systems business for $4,000,000 and (ii) the Company and Gloria Solar agreed to form a joint venture for the purpose of pursuing the solar photovoltaic systems market within the United States; the joint venture will design, market, sell and manage the installation of systems for the generation of electrical power by solar photovoltaic means in primarily commercial/industrial and utility segments of such market (the "JV Systems Business"). Gloria Solar will own 55% of the joint venture and the Company will own 45% of the joint venture. In connection with the formation of the joint venture, (i) the Company agreed to contribute to the joint venture its solar photovoltaic system assets related to the JV Systems Business, including certain intellectual property and know-how, access to information technology assets and relationships, relationships with current and previous customers, contract backlog and project opportunities, certain registered trademarks, and employment relationships with staff members and (ii) Gloria Solar agreed to contribute $5,000,000 in cash.

In the optoelectronics area, the Company provides custom compound semiconductor foundry and fabrication services on a merchant basis to customers involved in biomedical/biophotonics instruments, telecommunications and defense applications. Services include compound semiconductor wafer growth, other thin film processes and related device processing and fabrication services. The Company also provides materials testing services and performs services in support of sponsored research into practical applications of optoelectronic technologies.

In the biomedical area, the Company provides value-added surface treatments to manufacturers of orthopedic and other medical devices that enhance the durability, antimicrobial characteristics or other material characteristics of their products; develops and markets hemodialysis catheters and related devices for the treatment of chronic kidney disease; and performs sponsored research programs into practical applications of advanced biomedical and biophotonic technologies.

The Company has incurred significant operating losses. Loss from operations, before gain on sales of licenses and extinguishment of purchase commitment, were $8.3 million and $6.6 million for the years ended December 31, 2006 and 2005, respectively. Loss from operations for the six months ended June 30, 2007 was $3.6 million. These losses from operations have resulted in cash losses (earnings (loss) from operations excluding gain on sales of licenses plus or minus non-cash adjustments) of approximately $5.4 million and $4.2 million in each of the years ended December 31, 2006 and 2005, respectively and approximately $2.4 million for the six months ended June 30, 2007. The Company has funded these cash losses from cash receipts of $7.7 million from proceeds of a common stock offering in 2006, $6.7 million related to the sale of certain licenses to its medical products and solar technologies in 2005 and $3.5 million of bank borrowings in 2007. As of June 30, 2007, the Company had cash and cash equivalents of $7.5 million. While the Company believes it has inherent assets and technology that it could sell or license in the near term, there is no guarantee that the Company would be able to sell or license those assets on a timely basis and at appropriate values that would allow the Company to continue to fund its operating losses. The Company has developed several plans to mitigate cash losses primarily from increased revenues and, if required, potential cost reduction efforts and outside financing. The Company believes it has sufficient resources to continue as a going concern.

2. INTERIM FINANCIAL STATEMENTS

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission regarding interim financial reporting. Certain information and footnote disclosures normally included in consolidated financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted in accordance with such rules and regulations. These unaudited condensed consolidated financial statements should be read in conjunction with the annual audited consolidated financial statements and notes thereto for the year ended December 31, 2006, included in our Annual Report on Form 10KSB filed with the Securities and Exchange Commission.

In the opinion of management, the accompanying unaudited, condensed consolidated financial statements contain all adjustments necessary to fairly present the Company's financial position as of June 30, 2007 and December 31, 2006 and the results of its operations and cash flows for the three and six months ended June 30, 2007 and 2006. The results of operations for the three and six months ended June 30, 2007 are not necessarily indicative of the results to be expected for the fiscal year ending December 31, 2007. The condensed consolidated balance sheet as of December 31, 2006 has been derived from audited financial statements as of that date.

The accounting policies followed by the Company are set forth in Footnote 2 to the Company's consolidated financial statements in its Annual Report on Form 10-KSB for the year ended December 31, 2006.

New Accounting Pronouncement

In June 2006, the Financial Accounting Standards Board ("FASB") issued Interpretation No. 48, "Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement 109" ("FIN 48"). This statement clarifies the criteria that an individual tax position must satisfy for some or all of the benefits of that position to be recognized in a company's financial statements. FIN 48 prescribes a recognition threshold of more likely -than-not, and a measurement attribute for all tax positions taken or expected to be taken on a tax return, in order for those tax positions to be recognized in the financial statements. Effective January 1, 2007, the Company adopted the provisions of FIN 48. The Company does not expect that the amounts of unrecognized tax benefits will change significantly within the next 12 months.

The Company is currently subject to audit by the Internal Revenue Service for the calendar years ended 2003, 2004, 2005 and 2006. The Company and its Subsidiaries state income tax returns are subject to audit for the calendar years ended 2003, 2004, 2005 and 2006.

The Company has determined that no liability exists for interest and penalties related to uncertain tax positions as of December 31, 2006 and June 30, 2007. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for federal and state income taxes.

3. ACCOUNTS RECEIVABLE/ADVANCES ON CONTRACTS IN PROGRESS

Net accounts receivable, trade consists of the following:

	June 30, 2007	December 3 2006
Amounts billed	$ 4,750,000	$ 3,876,0
Retainage	8,000	8,0
Accrued revenue	158,000	399,0
	4,916,000	4,283,0
Less: Allowance for sales returns and doubtful accounts	(226,000)	(273,0
Net accounts receivable	$ 4,690,000	$ 4,010,0
Advances on contracts in progress	$ 13,923,000	$ 8,219,0

Retainage represents revenues on certain United States government sponsored research and development contracts. These amounts, which usually represent 15% of the Company's research fee on each applicable contract, are not collectible until a final cost review has been performed by government auditors. Included in retainage are amounts expected to be collected after one year, which totaled approximately $8,000 at June 30, 2007. All other accounts receivable are expected to be collected within one year.

All contracts with United States government agencies have been audited by the government through December 2005. The Company has not incurred significant losses or adjustments as a result of government audits.

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to pay amounts due. The Company actively pursues collection of past due receivables as the circumstances warrant. Customers are contacted to determine the status of payment and senior accounting and operations management are included in these efforts as is deemed necessary. A specific reserve will be established for past due accounts over 60 days and over a specified amount, when it is probable that a loss has been incurred and the Company can reasonably estimate the amount of the loss. The Company does not record an allowance for government receivables and invoices backed by letters of credit as realizeability is reasonably assured. Bad debts are written off against the allowance when identified. There is no dollar threshold for account balance write-offs. While rare, a write-off is only recorded when all efforts to collect the receivable have been exhausted and only in consultation with the appropriate business line manager.

In addition, the Company maintains an allowance for potential future product returns and rebates related to current period revenues. The Company analyzes the rate of historical returns when evaluating the adequacy of the allowance for sales returns and allowances. Returns and rebates are charged against the allowance when incurred.

Advances on contracts in progress represent contracts for which billings have been presented to the customer but revenue has not been recognized.

4. INVENTORIES

Inventories consist of the following:

	June 30, 2007	December 31, 2006
Raw materials	$ 3,426,000	$ 1,519,000
Work in process	6,392,000	2,310,000
Finished goods	410,000	388,000
	$ 10,228,000	$ 4,217,000

5. LOSS PER SHARE

The following table provides a reconciliation of the denominators of the Company's reported basic and diluted loss per share computations for the periods ended:

	Three Months Ended June 30,		Six Month
	2007	2006	2007
Weighted average number of common and common equivalent shares outstanding - basic	8,263,571	7,905,479	8,255,1

Add: Net additional common shares upon assumed exercise of common stock options	--	--	--
Adjusted weighted average number of common and common equivalents shares outstanding - diluted	8,263,571	7,905,479	8,255,1

For the three and six months ended June 30, 2007, 6,250 and 91,250, respectively, and for the three and six months ended June 30, 2006, 22,500 and 16,250 shares, respectively, of common stock issuable relative to stock options had exercise prices per share that exceeded the average market price of the Company's common stock and were excluded from the calculation of diluted shares since the inclusion of such shares would be anti-dilutive.

In addition, for the three and six months ended June 30, 2007, 125,360 and 106,230 shares, respectively, and for the three and six months ended June 30, 2006, 176,680 and 189,134 shares, respectively, of common stock related to stock options were excluded from the calculation of dilutive shares since the inclusion of such shares would be anti-dilutive due to the Company's net loss position.

6. OPERATING SEGMENTS AND RELATED INFORMATION

The following table presents certain operating division information in accordance with the provisions of SFAS No. 131, "Disclosure about Segments of an Enterprise and Related Information."

	Solar	Biomedical	Optoelectronics	Tot Comp
For the three months ended June 30, 2007				
Net sales and revenues	$ 4,975,000	$ 2,827,000	$ 777,000	$ 8,5
Loss from operations	$ (725,000)	$ (215,000)	$ (905,000)	$ (1,8
For the three months ended June 30, 2006				
Net sales and revenues	$ 647,000	$ 2,556,000	$ 692,000	$ 3,8
Loss from operations	$ (1,048,000)	$ (300,000)	$ (769,000)	$ (2,1
For the six months ended June 30, 2007				
Net sales and revenues	$ 8,568,000	$ 5,353,000	$ 1,655,000	$ 15,5
Loss from operations	$ (1,308,000)	$ (726,000)	$ (1,566,000)	$ (3,6
For the six months ended June 30, 2006				
Net sales and revenues	$ 3,185,000	$ 4,883,000	$ 1,200,000	$ 9,2
Loss from operations	$ (1,478,000)	$ (952,000)	$ (1,664,000)	$ (4,0

The following table shows net sales and revenues by geographic area (based on customer location):

	Three Months Ended June 30,				Six M
	2007	%	2006	%	2007
Foreign	$3,678,000	43%	$ 968,000	25%	$7,464,000
United States	4,901,000	57%	2,927,000	75%	8,112,000
	$8,579,000	100%	$3,895,000	100%	$15,576,000

Revenues from contracts with United States government agencies for the three months ended June 30, 2007 and 2006 were approximately $225,000 and $506,000, or 3% and 13% of consolidated net sales and revenues, respectively.

Revenues from contracts with United States government agencies for the six months ended June 30, 2007 and 2006 were approximately $520,000 and $1,126,000, or 3% and 12% of consolidated net sales and revenues, respectively.

Two customers accounted for approximately 37% of the Company's gross sales during the three months ended June 30, 2007 and one customer accounted for approximately 16% of the Company's gross sales for the three months ended June 30, 2006. Three customers accounted for approximately 41% of the Company's gross sales during the six months ended June 30, 2007 and two customers accounted for approximately 27% of the Company's gross sales for the six months ended June 30, 2006. One customer represented approximately 15% of trade accounts receivable at June 30, 2007 and one customer represented approximately 20% of trade accounts receivable at June 30, 2006.

7. INTANGIBLE AND OTHER ASSETS

Patents amounted to approximately $120,000, net of accumulated amortization of approximately $662,000, at June 30, 2007. Licenses amounted to approximately $141,000, net of accumulated amortization of approximately $192,000 at June 30, 2007. Patent cost is primarily composed of cost associated with securing and registering patents that the Company has been awarded or that have been submitted to, and the Company believes will be approved by, the government. License cost is composed of the cost to acquire rights to the underlying technology or know-how. These costs are capitalized and amortized over their useful lives or terms, ordinarily five years, using the straight-line method. There are no expected residual values related to these patents or licenses. For disclosure purposes, the table below includes future amortization expense for licenses and patents owned by the Company as well as approximately $572,000 of estimated amortization expense on a five-year straight-line basis related to patents that remain pending as of the balance sheet date.

Estimated amortization expense for the periods ending December 31, is as follows:

Year	Amortization Expense
2007 remaining 6 months	$110,000
2008	196,000
2009	155,000
2010	150,000
2011	143,000

Beyond 2011	79,000
	$833,000

8. AVAILABLE-FOR-SALE INVESTMENTS

Available-for-sale securities consist of the following assets held as part of the Spire Corporation Non-Qualified Deferred Compensation Plan:

	June 30, 2007	December 31, 2006
Equity investments	$ 834,000	$ 1,160,000
Government bonds	268,000	262,000
Cash and money market funds	578,000	39,000
	$ 1,680,000	$ 1,461,000

These investments have been classified as long-term available-for-sale investments and are reported at fair value, with unrealized gains and losses included in accumulated other comprehensive loss, net of related tax effect. As of June 30, 2007, the net unrealized gain on these marketable securities was approximately $178,000.

9. NOTES PAYABLE AND CREDIT ARRANGEMENTS

The Company had a $2,000,000 Loan Agreement with Citizens Bank of Massachusetts which expired on June 26, 2007. On May 25, 2007, the Company and its wholly-owned subsidiary, Bandwidth Semiconductor, LLC ("Bandwidth"), entered into a Loan and Security Agreement (the "Loan Agreement") with Silicon Valley Bank (the "Bank"). Under the Loan Agreement, for a one-year period, the Company and Bandwidth can borrow up to $3,500,000 in the aggregate to finance certain equipment purchases (including reimbursement of certain previously-made purchases). Each advance made under the Loan Agreement will be due thirty-six (36) months from the date the advance is made. Advances made under the Loan Agreement will bear interest at the Bank's prime rate, as determined, plus 0.5% (8.75% at June 30, 2007) and payable in thirty-six (36) consecutive monthly payments following the funding date of that advance. On June 17, 2007, the Company borrowed from the line for the full $3,500,000 to finance certain capital equipment purchased previously by Bandwidth. At June 30, 2007, the Company was not in compliance with its profitability covenant for the second quarter. The Company has received a waiver from the Bank with respect to this covenant.

10. STOCK OPTION PLAN AND STOCK-BASED COMPENSATION

On January 1, 2006, the Company adopted the fair value recognition provisions of Financial Accounting Standards Board ("FASB") Statement No. 123(R), Share-Based Payment ("Statement 123(R)") using the modified prospective method. Based on an analysis of the Company's historical data, the Company applied 14% forfeiture rates to stock options outstanding in determining its Statement 123(R) stock-based compensation expense which it believes is a reasonable forfeiture estimate for the period. The impact of Statement 123(R) on the Company's results of operations resulted in recognition of stock-based compensation expense of approximately $137,000 and $208,000 for the three and six months ended June 30, 2007, respectively, and approximately $60,000 and $119,000 for the three and six months ended June 30, 2006. The total non-cash, stock-based compensation expense included in the condensed consolidated statement of operations for the periods presented is included in the following expense categories:

	Three Months Ended June 30,		Six Month
	2007	2006	2007
Cost of contract research, services and licenses	$ 14,000	$ 4,000	$ 19,0
Cost of goods sold	6,000	9,000	8,0
Administrative and selling	117,000	47,000	181,0
Total stock-based compensation	$ 137,000	$ 60,000	$ 208,0

At June 30, 2007 the Company had outstanding options under two stock option plans: the 1996 Equity Incentive Plan (the "1996 Plan") and the 2007 Stock Equity Plan (the "2007 Plan"). Both plans were approved by stockholders and provided that the Board of Directors may grant options to purchase the Company's common stock to key employees and directors of the Company. Incentive and non-qualified options must be granted at least at the fair market value of the common stock or, in the case of certain optionees, at 110% of such fair market value at the time of grant. The options may be exercised, subject to certain vesting requirements, for periods up to ten years from the date of issue. The 1996 Plan expired with respect to the issuance of new grants as of December 10, 2006.

A summary of options outstanding under the 2007 Plan and 1996 Plan as of June 30, 2007 and changes during the six-month period is as follows:

	Number of Shares	Weighted-Average Exercise Price	Average Remaining Contractual Life (Years)
Options Outstanding at December 31, 2006	416,002	$5.21	
Granted	85,000	$9.60	
Exercised	(26,974)	$3.91	
Cancelled/expired	(12,000)	$7.81	
Options Outstanding at June 30, 2007	462,028	$6.03	7.32
Options Exercisable at June 30, 2007	211,478	$4.30	5.42

The per-share weighted-average fair value of stock options granted during the three and six months ended June 30, 2007 and 2006 was $6.45 for both periods in 2007 and $4.48 and $4.86 in 2006, respectively, on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

Year	Expected Dividend Yield	Risk-Free Interest Rate	Expected Option Life	Expected Volatility Fac

2007	--	4.68%	4.5 years	85.4%

The risk free interest rate reflects treasury yields rates over a term that approximates the expected option life. The expected option life is calculated based on historical lives of all options issued under the plan. The expected volatility factor is determined by measuring the actual stock price volatility over a term equal to the expected useful life of the options granted.

11. COMPREHENSIVE LOSS

Comprehensive loss includes certain changes in equity that are excluded from net loss and consists of the following:

	For the Three Months Ended June 30,		For the S J
	2007	2006	2007
Net loss	$ (1,864,000)	$ (2,081,000)	$ (3,611,00
Other comprehensive income (loss):			
Unrealized gain on available for sale marketable securities, net of tax	48,000	(56,000)	47,00
Total comprehensive loss	$ (1,816,000)	$ (2,137,000)	$ (3,564,00

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

THIS MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS SECTION AND OTHER PARTS OF THIS REPORT CONTAIN FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF SECTION 27A OF THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND SECTION 21E OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED (THE "EXCHANGE ACT"), WHICH STATEMENTS INVOLVE RISKS AND UNCERTAINTIES. THESE STATEMENTS RELATE TO OUR FUTURE PLANS, OBJECTIVES, EXPECTATIONS AND INTENTIONS. THESE STATEMENTS MAY BE IDENTIFIED BY THE USE OF WORDS SUCH AS "MAY", "COULD", "WOULD", "SHOULD", "WILL", "EXPECTS", "ANTICIPATES", "INTENDS", "PLANS", "BELIEVES", "ESTIMATES", AND SIMILAR EXPRESSIONS. THE COMPANY'S ACTUAL RESULTS AND THE TIMING OF CERTAIN EVENTS MAY DIFFER SIGNIFICANTLY FROM THE RESULTS AND TIMING DESCRIBED IN THE FORWARD-LOOKING STATEMENTS. FACTORS THAT COULD CAUSE OR CONTRIBUTE TO SUCH DIFFERENCES INCLUDE, BUT ARE NOT LIMITED TO, THOSE FACTORS DISCUSSED OR REFERRED TO IN THIS REPORT AND IN THE ANNUAL REPORT ON FORM 10-KSB FOR THE YEAR ENDED DECEMBER 31, 2006. THE FOLLOWING DISCUSSION AND ANALYSIS OF THE COMPANY'S FINANCIAL CONDITION AND RESULTS OF OPERATIONS SHOULD BE READ IN LIGHT OF THOSE FACTORS AND IN CONJUNCTION WITH, THE COMPANY'S ACCOMPANYING CONSOLIDATED FINANCIAL STATEMENTS, INCLUDING THE NOTES THERETO.

OVERVIEW

Spire Corporation (the "Company") develops, manufactures and markets highly-engineered products and services in three principal business areas: solar equipment, biomedical and optoelectronics bringing to bear expertise in materials technologies across all three business areas, discussed below.

In the solar equipment area, the Company develops, manufactures and markets specialized equipment for the production of terrestrial photovoltaic modules from solar cells. The Company's equipment has been installed in approximately 190 factories in 46 countries. The Company also provides custom and building integrated photovoltaic modules, stand-alone emergency power backup and photovoltaic systems integration services using technology developed by the Company.

On July 31, 2007, the Company entered into contractual relationship with Gloria Solar Co., Ltd. ("Gloria Solar"), a company organized under the laws of the Republic of China (Taiwan), pursuant to which (i) the Company agreed to sell to Gloria Solar certain assets belonging to the Company's solar systems business for $4,000,000 and (ii) the Company and Gloria Solar agreed to form a joint venture for the purpose of pursuing the solar photovoltaic systems market within the United States; the joint venture will design, market, sell and manage the installation of systems for the generation of electrical power by solar photovoltaic means in primarily commercial/industrial and utility segments of such market (the "JV Systems Business"). Gloria Solar will own 55% of the joint venture and the Company will own 45% of the joint venture. In connection with the formation of the joint venture, (i) the Company agreed to contribute to the joint venture its solar photovoltaic system assets related to the JV Systems Business, including certain intellectual property and know-how, access to information technology assets and relationships, relationships with current and previous customers, contract backlog and project opportunities, certain registered trademarks, and employment relationships with staff members and (ii) Gloria Solar agreed to contribute $5,000,000 in cash.

In the optoelectronics area, the Company provides compound semiconductor foundry and fabrication services on a merchant basis to customers involved in biomedical/biophotonic instruments, telecommunications and defense applications. Services include compound semiconductor wafer growth, other thin film processes and related device processing and fabrication services. The Company also provides materials testing services and performs services in support of sponsored research into practical applications of optoelectronic technologies.

In the biomedical area, the Company provides value-added surface treatments to manufacturers of orthopedic and other medical devices that enhance the durability, antimicrobial characteristics or other material characteristics of their products; develops and markets hemodialysis catheters and related devices for the treatment of chronic kidney disease; and performs sponsored research programs into practical applications of advanced biomedical and biophotonic technologies.

Operating results will depend upon product mix, as well as the timing of shipments of higher priced products from the Company's solar equipment line and delivery of solar systems. Export sales, which amounted to 48% of net sales and revenues for the six months ended June 30, 2007, continue to constitute a significant portion of the Company's net sales and revenues.

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Results of Operations

The following table sets forth certain items as a percentage of net sales and revenues for the periods presented:

	Three Months Ended June 30,	Six Months

	2007	2006	2007
Net sales and revenues	100%	100%	100%
Cost of sales and revenues	87	92	85
Gross profit	13	8	15
Selling, general and administrative expenses	34	57	37
Internal research and development expenses	1	5	1
Loss from operations	(22)	(54)	(23)
Other expense, net	--	1	--
Loss before income tax benefit	(22)	(53)	(23)
Income tax benefit	--	--	--
Net loss	(22%)	(53%)	(23%)

OVERALL

The Company's total net sales and revenues for the six months ended June 30, 2007 ("2007") were approximately $15,576,000 as compared to approximately $9,268,000 for the six months ended June 30, 2006 ("2006") an increase of approximately $6,308,000 or 68%. The increase was primarily attributable to an approximate $5,779,000 increase in solar equipment sales and an approximate $455,000 increase in optoelectronics sales. Additionally, catheter product sales in the Company's biomedical business unit increased approximately $753,000 in 2007 as compared with 2006, partially offset by a decrease of approximately $617,000 in research and development revenues.

SOLAR BUSINESS UNIT

Sales in the Company's solar business unit increased 169% during the six months ended June 30, 2007 to approximately $8,568,000 as compared to approximately $3,185,000 in 2006. The increase is the result of shipments of solar equipment reflecting the overall increase in activity in the solar power industry. The Company has focused its sales and marketing efforts on establishing the Company as one of the premier suppliers of equipment to the solar power industry for the manufacture of photovoltaic power modules.

OPTOELECTRONICS BUSINESS UNIT

Revenues in the Company's optoelectronics business unit increased 38% to approximately $1,655,000 during the six months ended June 30, 2007 as compared to approximately $1,200,000 in the prior year. The increase reflects an overall increase in optoelectronics activities attributable to a shift in product mix to larger scale commercial orders compared with smaller sized research and development projects.

BIOMEDICAL BUSINESS UNIT

Revenues of the Company's biomedical business unit increased 10% during the six months ended June 30, 2007 to approximately $5,353,000 as compared to approximately $4,883,000 in 2006. The increase reflects increased revenues from the Company's catheter products and orthopedics coatings services offset by reduced revenues from research and development contracts.

Three and Six Months Ended June 30, 2007 Compared to Three and Six Months Ended June 30, 2006

NET SALES AND REVENUES

The following table categorizes the Company's net sales and revenues for the periods presented:

	Three Months Ended June 30,		Increa
	2007	2006	$
Sales of goods	$ 6,100,000	$ 1,291,000	$ 4,809,0
Contract research, services and license revenues	2,479,000	2,604,000	(125,0
Net sales and revenues	$ 8,579,000	$ 3,895,000	$ 4,684,0

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The 372% increase in sales of goods for the three months ended June 30, 2007 as compared to the three months ended June 30, 2006 was primarily due to an increase in solar equipment revenues and an increase in catheter products sales. Solar equipment sales increased 909% in 2007 as compared to 2006 primarily due to an overall increase in solar power industry activity. Sales of catheters increased 55% due primarily to the introduction of its heparin-coated catheter which was introduced in the fourth quarter of 2006.

The 5% decrease in contract research, services and license revenues for the three months ended June 30, 2007 as compared to the three months ended June 30, 2006 is primarily attributable to a decrease in contract revenues for Spire's research and development activities partially offset by an increase in orthopedics and optoelectronics services. Revenues from Spire's research and development activities decreased 59% in 2007 as compared to 2006 primarily due to a decrease in the number and value of contracts associated with funded research and development. Revenue from Spire's optoelectronics processing services (Bandwidth) increased 12% in 2007 compared to 2006 as a result of increased demand for Bandwidth's services and commercial production runs of products from its development efforts.

The following table categorizes the Company's net sales and revenues for the periods presented:

	Six Months Ended June 30,		Increa
	2007	2006	$
Sales of goods	$ 10,439,000	$ 4,155,000	$ 6,284,0
Contract research, services and license revenues	5,137,000	5,113,000	24,0
Net sales and revenues	$ 15,576,000	$ 9,268,000	$ 6,308,0

The 151% increase in sales of goods for the six months ended June 30, 2007 as compared to the six months ended June 30, 2006 was primarily due to an increase in solar equipment revenues and an increase in catheter products sales.

Solar equipment sales increased 227% in 2007 as compared to 2006 primarily due to an overall increase in solar power industry activity. Sales of catheters increased 57% due primarily to the introduction of its heparin-coated catheter which was introduced in the fourth quarter of 2006.

The 1% increase in contract research, services and license revenues for the six months ended June 30, 2007 as compared to the six months ended June 30, 2006 is primarily attributable to an increase in orthopedics and optoelectronics services. These increases were partially offset by a decrease in government research and development activities. Revenues from Spire's research and development activities decreased 52% in 2007 as compared to 2006 primarily due to a decrease in the number and value of contracts associated with funded research and development. Revenue from Spire's optoelectronics processing services (Bandwidth) increased 38% in 2007 compared to 2006 as a result of increased demand for Bandwidth's services and commercial production runs of products from its development efforts.

COST OF SALES AND REVENUES

The following table categorizes the Company's cost of sales and revenues for the periods presented, stated in dollars and as a percentage of related sales and revenues:

	Three Months Ended June 30,				Incr
	2007	%	2006	%	$
Cost of goods sold	$ 5,168,000	85%	$ 1,340,000	104%	$ 3,828,
Cost of contract research, services and licenses	2,322,000	94%	2,260,000	87%	62,
Net cost of sales and revenues	$ 7,490,000	87%	$ 3,600,000	92%	$ 3,890,

The $3,828,000 (286%) increase in cost of goods sold is primarily due to increased costs within Spire's solar equipment product line corresponding to the 909% increase in solar equipment sales and a 55% increase in medical product sales. The decrease in cost of goods sold as a percentage of revenue is the result of improved contribution margins in these product lines as increased production volume utilizes more of the available capacity.

The $62,000 (3%) increase in cost of contract research and service revenues in 2007 is primarily due to decreased costs within the Company's government research and development activities corresponding to the lower level of government

research and development revenues and contracts. The Company recorded a $73,000 charge, to cost of contract research and service revenues, associated with an expected loss on completing a contract with the National Renewable Energy Laboratory ("NREL"). The loss represents the unreimbursed portion of Spire's expected expense to complete the contract. Although optoelectronics revenues increased 12% from prior year level Bandwidth's costs actually decreased by 2%. Bandwidth production costs are largely fixed and incremental increases in revenues can have a substantial favorable impact on operations.

The following table categorizes the Company's cost of sales and revenues for the periods presented, stated in dollars and as a percentage of related sales and revenues:

	Six Months Ended June 30,				Increase/
	2007	%	2006	%	$
Cost of goods sold	$ 8,739,000	84%	$ 3,694,000	89%	$ 5,045,
Cost of contract research, services and licenses	4,450,000	87%	4,505,000	88%	(55,
Net cost of sales and revenues	$ 13,189,000	85%	$ 8,199,000	88%	$ 4,990,

The $5,045,000 (137%) increase in cost of goods sold is primarily due to increased costs within Spire's solar equipment product line corresponding to the 227% increase in solar equipment sales and a 57% increase in catheter products sales. The decrease in cost of goods sold as a percentage of revenue is the result of improved contribution margins in these product lines as increased production volume utilizes more of the available capacity.

The $55,000 (1%) decrease in cost of contract research and service revenues in 2007 is primarily due to decreased costs within the Company's government research and development activities corresponding to the lower level of government research and development revenues and contracts. Although optoelectronics revenues increased 38% from prior year level Bandwidth's costs actually decreased by 2%. Bandwidth production costs are largely fixed and incremental increases in revenues can have a substantial favorable impact on operations. The Company recorded a $73,000 charge, to cost of contract research and service revenues associated with an expected loss on completing a contract with the NREL. The loss represents the unreimbursed portion of Spire's expected expense to complete the contract.

OPERATING EXPENSES

The following table categorizes the Company's operating expenses for the periods presented, stated in dollars and as a percentage of total sales and revenues:

	Three Months Ended June 30,				Increase/
	2007	%	2006	%	$
Selling, general and administrative	$ 2,856,000	33%	$ 2,217,000	57%	$ 639,
Internal research and development	78,000	1%	195,000	5%	(117,
Operating expenses	$ 2,934,000	34%	$ 2,412,000	62%	$ 522,

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

The increase in selling, general and administrative expense was due primarily to commissions related to sales of solar equipment. The Company uses a network of independent sales representatives in addition to its internal sales personnel. The independent sales representatives are compensated on a straight commission whereas internal sales personnel receive a base salary plus commission. In addition royalty expense was up due to royalties on products sold by the Company under licensing agreements with third parties. Selling, general and administrative expense decreased to 33% of sales and revenues as compared to 57% in the prior year. The reduction was primarily due to the 120% increase in sales and revenues compared to the 29% increase in expenses.

INTERNAL RESEARCH AND DEVELOPMENT

The decrease in research and development costs was primarily a result of a reduction in internal research and development activities as a result of the Company's current cost sharing contract with NREL nearing completion.

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The following table categorizes the Company's operating expenses for the periods presented, stated in dollars and as a percentage of total sales and revenues:

	Six Months Ended June 30,				Increase/
	2007	%	2006	%	$
Selling, general and administrative	$ 5,864,000	38%	$ 4,810,000	52%	$ 1,054,
Internal research and development	123,000	1%	353,000	4%	(230,
Operating expenses	$ 5,987,000	38%	$ 5,163,000	56%	$ 824,

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

The increase in selling, general and administrative expense was due primarily to commissions related to sales of solar equipment. The Company uses a network of independent sales representatives in addition to its internal sales personnel. The independent sales representatives are compensated on a straight commission whereas internal sales personnel receive a base salary plus commission. In addition royalty expense was up due to royalties on products sold by the Company under licensing agreements with third parties. Selling, general and administrative expense decreased to 38% of sales and revenues as compared to 52% in the prior year. The reduction was primarily due to the 68% increase in sales and revenues compared to the 22% increase in expenses.

INTERNAL RESEARCH AND DEVELOPMENT

The decrease in research and development costs was primarily a result of a reduction in internal research and development activities as a result of the Company's current cost sharing contract with NREL nearing completion.

OTHER EXPENSE, NET

The Company earned approximately $9,000 and $75,000 of interest income for the three months ended June 30, 2007 and 2006, respectively. The Company incurred interest expense of approximately $24,000 and $40,000 for the three months ended June 30, 2007 and 2006, respectively. The decrease in interest income is due to lower cash balances held by the Company. Interest expense increased due to payments on the Company's outstanding Term Loan with Silicon Valley Bank partially offset by lower interest expense with respect to certain capital leases. The Company lost approximately $4,000 during the three month period ending June 30, 2007, due to the conversion of Japanese Yen into U.S.

dollars as compared to income of $1,000 for the same period in 2006.

The Company earned approximately $53,000 and $94,000 of interest income for the six months ended June 30, 2007 and 2006, respectively. The Company incurred interest expense of approximately $50,000 and $88,000 for the six months ended June 30, 2007 and 2006, respectively. The decrease in interest income is due to lower cash balances held by the Company. Interest expense decreased due to payments against the principal balance of certain capital leases. The Company lost approximately $14,000 during the period ending June 30, 2007, due to the conversion of Japanese Yen into U.S. dollars as compared to income of $3,000 for the same period in 2006.

INCOME TAXES

The Company did not record an income tax benefit for the three and six months ended June 30, 2007 and 2006. A valuation allowance has been provided against the current period tax benefit due to uncertainty regarding the realization of the net operating loss in the future.

NET LOSS

The Company reported a net loss for the three months ended June 30, 2007 of approximately $1,864,000, compared to a net loss of $2,081,000 in 2006. The net loss decreased approximately $217,000 primarily due to the increase in sales and revenues and the improvement in gross margins.

The Company reported a net loss for the six months ended June 30, 2007 of approximately $3,611,000, compared to a net loss of $4,085,000 in 2006. The net loss decreased approximately $474,000 primarily due to the increase in sales and revenues and the improvement in gross margins.

Liquidity and Capital Resources

	June 30, 2007	December 31, 2006	Increa $
Cash and cash equivalents	$ 7,494,000	$ 1,536,000	$ 5,958,0
Working capital (deficit)	$ 3,186,000	$ 3,938,000	$ (752,0

Cash and cash equivalents increased primarily due to cash from the Company's bank borrowings and customer advances. Cash was used to pay the outstanding balance on capital equipment acquired in 2006 for the expansion of the optoelectronics business unit, and to acquire inventory to fulfill future solar equipment orders. Generally the Company will receive advances from its solar equipment customers to fund its acquisition of inventory. The overall reduction in working capital is due to cash losses from operations and additional investment in equipment of $508,000. The Company has historically funded its operating cash requirements using operating cash flow and proceeds from the sale and licensing of technology.

On May 25, 2007, the Company and its wholly-owned subsidiary, Bandwidth Semiconductor, LLC ("Bandwidth"), entered into a Loan and Security Agreement (the "Loan Agreement") with Silicon Valley Bank. Under the Loan Agreement, for a one-year period, the Company and Bandwidth can borrow up to $3.5 million in the aggregate to finance certain equipment purchases (including reimbursement of certain previously-made purchases). Each advance made under the Loan Agreement will be due thirty-six (36) months from the date the advance is made. Advances made under the Loan Agreement will bear interest at one half of one percentage point (0.5%) above Silicon Valley Bank's prime rate and payable in thirty-six (36) consecutive monthly payments following the funding date of that advance. On June 17, 2007 the Company did draw down the line for the full $3.5 million to finance certain capital equipment purchased previously by Bandwidth.

Under the terms of the Loan Agreement, as long as any commitment remains outstanding under the facility, the Company and Bandwidth must comply with an adjusted quick ratio covenant and a minimum quarterly net income covenant. In addition, until all amounts under the Loan Agreement are repaid, covenants under the Loan Agreement impose restrictions on the Company's and Bandwidth's ability to, among other things, incur additional indebtedness, create or permit liens on the Company's or Bandwidth's assets, merge, consolidate or dispose of assets (other than in the ordinary course of business), make dividend and other restricted payments, make certain debt or equity investments, make certain acquisitions, engage in certain transactions with affiliates or change the business conducted by the Company, Bandwidth and their subsidiaries. Any failure by the Company or Bandwidth to comply with the covenants and obligations under the Loan Agreement could result in an event of default, in which case Silicon Valley Bank ("SVB") may be entitled to declare all amounts owed to be due and payable immediately. The Company's and Bandwidth's obligations under the Loan Agreement are secured by substantially all of the Company's and Bandwidth's assets, with the exception of any intellectual property owned or licensed by the Company or Bandwidth. At June 30, 2007, the Company was not in compliance with its profitability covenant for the second quarter. The Company has received a waiver from the SVB with respect to this covenant.

The Company had a $2,000,000 Loan Agreement (the "Prior Loan Agreement") with Citizens Bank of Massachusetts (the "Bank"), which expired on June 27, 2007. The Prior Loan Agreement provided Standby Letter of Credit guarantees for certain foreign and domestic customers, which are 100% secured with cash. At June 30, 2007, the Company had approximately $132,000 of restricted cash associated with outstanding Letters of Credit. Standby Letters of Credit under this Prior Loan Agreement bear interest at 1%.

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to pay amounts due. The Company actively pursues collection of past due receivables as the circumstances warrant. Customers are contacted to determine the status of payment and senior accounting and operations management are included in these efforts as is deemed necessary. A specific reserve will be established for past due accounts over 60 days and over a specified amount, when it is probable that a loss has been incurred and the Company can reasonably estimate the amount of the loss. The Company does not record an allowance for government receivables and invoices backed by letters of credit as realizeability is reasonably assured. Bad debts are written off against the allowance when identified. There is no dollar threshold for account balance write-offs. While rare, a write-off is only recorded when all efforts to collect the receivable have been exhausted and only in consultation with the appropriate business line manager.

There are no material commitments by the Company for capital expenditures. At June 30, 2007, the Company's accumulated deficit was approximately $13,366,000, compared to accumulated deficit of approximately $9,756,000 as of December 31, 2006.

On July 31, 2007, the Company entered into contractual relationship with

Gloria Solar pursuant to which (i) the Company agreed to sell to Gloria Solar certain assets belonging to the Company's solar systems business for $4,000,000 and (ii) the Company and Gloria Solar agreed to form a joint venture for the purpose of pursuing the solar photovoltaic systems market within the United States; the joint venture will design, market, sell and manage the installation of systems for the generation of electrical power by solar photovoltaic means in primarily commercial/industrial and utility segments of such market (the "JV Systems Business"). Gloria Solar will own 55% of the joint venture and the Company will own 45% of the joint venture. In connection with the formation of the joint venture, (i) the Company agreed to contribute to the joint venture its assets primarily relating to the JV Systems Business, including certain intellectual property and know-how, access to information technology assets and relationships, relationships with current and previous customers, contract backlog and project opportunities, certain registered trademarks, and employment relationships with staff members and (ii) Gloria Solar agreed to contribute $5,000,000 in cash.

The Company believes it has sufficient resources to finance its current operations for the foreseeable future from operating cash flow and working capital.

Foreign Currency Fluctuation

The Company sells only in U.S. dollars, generally against an irrevocable confirmed letter of credit through a major United States bank. Therefore the Company is not directly affected by foreign exchange fluctuations on its current orders. However, fluctuations in foreign exchange rates do have an effect on the Company's customers' access to U.S. dollars and on the pricing competition on certain pieces of equipment that the Company sells in selected markets. The Company received Japanese yen in exchange for the sale of a license to its solar technology. In addition, purchases made and royalties received under the Company's Consortium Agreement with its Japanese partner will be in Japanese yen. The Company does not believe that foreign exchange fluctuations will materially affect its operations. The Company has committed to purchase certain pieces of equipment from European vendors; these commitments are denominated in Euros. The Company bears the risk of any currency fluctuations that may be associated with these commitments. The Company does not believe that foreign exchange fluctuations will materially affect its operations.

Related Party Transactions

The Company subleased 77,000 square-feet in a building leased by Mykrolis Corporation, who in turn leased the building from SPI-Trust, a Trust of which Roger Little, Chairman of the Board, Chief Executive Officer and President of the Company, is the sole trustee and principal beneficiary. The 1985 sublease, originally was for a period of ten years, was extended for a five-year period expiring on November 30, 2000 and was further extended for a five-year period expiring on November 30, 2005. The sublease agreement provided for minimum rental payments plus annual increases linked to the consumer price index. Effective December 1, 2005, the Company entered into a two-year Extension of Lease Agreement (the "Lease Extension") directly with SPI-Trust.

The Company assumed certain responsibilities of Mykrolis, the tenant under the former lease, as a result of the Lease Extension including payment of all building and real estate related expenses associated with the ongoing operations of the property. The Company will allocate a portion of these expenses to SPI-Trust based on pre-established formulas utilizing square footage and actual usage where applicable. These allocated expenses will be invoiced monthly and be paid utilizing a SPI-Trust escrow account of which the Company has sole withdrawal authority. SPI-Trust is required to maintain three (3) months of its anticipated operating costs within this escrow account. On December 1, 2006, the Company and SPI-Trust amended the Lease Extension. The amendment increases the leased area to 91,701 square feet. Rent expense under this lease, as extended and amended, for the three month period ended June 30, 2007 was approximately $340,000. In connection with this lease, the Company is invoiced and pays certain SPI-Trust related expenses, including building maintenance and insurance. The Company invoices SPI-Trust on a monthly basis and SPI-Trust reimburses the Company for all such costs. The Company believes that the terms of the Lease Extension, as amended, are commercially reasonable.

In conjunction with the acquisition of Bandwidth by the Company, SPI-Trust, a Trust of which Roger G. Little, Chairman of the Board, Chief Executive Officer and President of the Company, is sole trustee and principal beneficiary, purchased from Stratos Lightwave, Inc. (Bandwidth's former owner) the building that Bandwidth occupies in Hudson, New Hampshire for $3.7 million. Subsequently, the Company entered into a lease for the building (90,000 square feet) with SPI-Trust whereby the Company will pay $4.1 million to the SPI-Trust over an initial five-year term expiring in 2008 with a Company option to extend for five years. In addition to the rent payments the lease obligates the Company to keep on deposit with SPI-Trust the equivalent of three months rent ($304,000 as of June 30, 2007.) The lease agreement does not provide for a transfer of ownership at any point. Interest costs were assumed at 7%. For the three months ended June 30,

2007, interest expense was approximately $25,000. This lease has been classified as a related party capital lease and a summary of payments (including interest) follows:

Year	Rate Per Square Foot	Annual Rent	Monthly Rent	Security Deposit
June 1, 2003 - May 31, 2004	$6.00	$ 540,000	$45,000	$135,000
June 1, 2004 - May 31, 2005	7.50	675,000	56,250	168,750
June 1, 2005 - May 31, 2006	8.50	765,000	63,750	191,250
June 1, 2006 - May 31, 2007	10.50	945,000	78,750	236,250
June 1, 2007 - May 31, 2008	13.50	1,215,000	101,250	303,750
		$4,140,000		

At June 30, 2007, the remaining balance of capital lease obligation - related party in the amount of $1,065,000 is reflected as a current liability in the Company's consolidated balance sheet.

Critical Accounting Policies

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Among the significant estimates affecting our consolidated financial statements are those relating to revenue recognition, reserves for doubtful accounts and sales returns and allowances, reserve for excess and obsolete inventory, impairment of long-lived assets, income taxes, and warranty reserves. We regularly evaluate our estimates and assumptions based upon historical experience and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. To the extent actual results differ from those estimates; our future results of operations may be affected. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements. Refer to Footnote 2 of our notes to consolidated financial statements in our Annual Report on Form 10-KSB for the year ended December 31, 2006 for a description of our accounting policies.

REVENUE RECOGNITION

The Company derives its revenues from three primary sources: (1) commercial products including, but not limited to, solar energy manufacturing equipment, solar energy systems and hemodialysis catheters; (2) biomedical and semiconductor processing services; and (3) United States government funded research and development contracts.

We generally recognize product revenue upon shipment of products provided there are no uncertainties regarding customer acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable, and collectibility is reasonably assured. These criteria are generally met at the time of shipment when the risk of loss and title passes to the customer or distributor, unless a consignment arrangement exists. Revenue from consignment arrangements is recognized based on product usage indicating sales are complete.

The Company utilizes a distributor network to market and sell its hemodialysis catheters domestically. The Company generally recognizes revenue when the catheters are shipped to its distributors. Gross sales reflect reductions attributable to customer returns and various customer incentive programs including pricing discounts and rebates. Product returns are permitted in certain sales contracts and an allowance is recorded for returns based on the Company's history of actual returns. Certain customer incentive programs require management to estimate the cost of those programs. The allowance for these programs is determined through an analysis of programs offered, historical trends, expectations regarding customer and consumer participation, sales and payment trends, and experience with payment patterns associated with similar programs that had been previously offered. An analysis of the sales return and rebate activity for the three months ended June 30, 2007, is as follows:

	Rebates	Returns	Total
Balance - March 31, 2007	$ 110,600	$ 11,300	$ 121,900
Provision	60,419	8,148	68,567
Utilization	(67,619)	(6,848)	(74,467)
Balance - June 30, 2007	$ 103,400	$ 12,600	$ 116,000

- o Credits for rebates are recorded in the month of the actual sale.
- o Credits for returns are processed when the actual merchandise is received by the Company.
- o Substantially all rebates and returns are processed no later than three months after original shipment by the Company.

The reserve percentage has declined to 9%, of inventory held by distributors from approximately 15%, over the last two years. This reflects lower rebates and returns associated with the Company's new heparin coated catheters. The Company performs various sensitivity analyses to determine the appropriate reserve percentage to use. To date, actual quarterly reserve utilization has approximated the amount provided. The total inventory held by distributors covered by sales incentive programs was approximately $1,300,000 at June 30, 2007.

If sufficient history to make reasonable and reliable estimates of returns or rebates does not exist, revenue associated with such practices is deferred until the return period lapses or a reasonable estimate can be made. This deferred revenue will be recognized as revenue when the distributor reports to us that it has either shipped or disposed of the units (indicating that the possibility of return is remote).

The Company's OEM capital equipment solar energy business builds complex customized machines to order for specific customers. Substantially all of these orders are sold on a FOB Bedford, Massachusetts (or EX-Works Factory) basis. It is the Company's policy to recognize revenues for this equipment as the product is shipped to the customer, as customer acceptance is obtained prior to shipment and the equipment is expected to operate the same in the customer's environment as it does in the Company's environment. When an arrangement with the customer includes future obligations or customer acceptance, revenue is recognized when those obligations are met or customer acceptance has been achieved. The Company's solar energy systems business installs solar energy systems on customer-owned properties on a contractual basis. Generally, revenue is recognized once the systems have been installed and the title is passed to the customer. For arrangements with multiple elements, the Company allocates fair value to each element in the contract and revenue is recognized upon delivery of each element. If the Company is not able to establish fair value of undelivered elements, all revenue is deferred.

The Company recognizes revenues and estimated profits on long-term government contracts on the accrual basis where the circumstances are such that total profit can be estimated with reasonable accuracy and ultimate realization is reasonably assured. The Company accrues revenue and profit utilizing the percentage of completion method using a cost-to-cost methodology. A percentage of the contract revenues and estimated profits are determined utilizing the ratio of costs incurred to date to total estimated cost to complete on a contract by contract basis. Profit estimates are revised periodically based upon changes and facts, and any losses on contracts are recognized immediately. Some of the contracts include provisions to withhold a portion of the contract value as retainage until such time as the United States government performs an audit of the cost incurred under the contract. The Company's policy is to take into revenue the full value of the contract, including any retainage, as it performs against the contract since the Company has not experienced any substantial losses as a result of audits performed by the United States government.

IMPAIRMENT OF LONG-LIVED ASSETS

Long-lived assets, including fixed assets and intangible assets, are continually monitored and are evaluated at least annually for impairment. The determination of recoverability is based on an estimate of undiscounted cash flows expected to result from the use of an asset and its eventual disposition. The estimate of cash flows is based upon, among other things, certain assumptions about expected future operating performance. Our estimates of undiscounted cash flows may differ from actual cash flows due to, among other things, technological changes, economic conditions, changes to our business model or changes in our operating performance. If the sum of the undiscounted cash flows (excluding interest) is less than the carrying value, we recognize an impairment loss, measured as the amount by which the carrying value exceeds the fair value of the asset. The Company recorded a $78,000 charge, to cost of contract research and service revenues, for the impairment of production equipment which based on managements assessment had no future value to the Company. The products originally manufactured on the equipment were no longer economical to produce.

STOCK-BASED COMPENSATION

On January 1, 2006, the Company adopted the fair value recognition provisions of Financial Accounting Standards Board ("FASB") Statement No. 123(R), Share-Based Payment ("Statement 123(R)") using the modified prospective method. In accordance with the modified prospective method, the Company has not restated its consolidated financial statements for prior periods. Under this transition method, stock-based compensation expense for the first quarter of 2006

includes stock-based compensation expense for all of the Company's stock-based compensation awards granted prior to, but not yet vested as of, January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of FASB Statement No. 123, Accounting for Stock-Based Compensation ("Statement 123"). Stock-based compensation expense for all stock-based compensation awards granted on or after January 1, 2006 will be based on the grant-date fair value estimated in accordance with the provisions of Statement 123(R). The impact of Statement 123(R) on the Company's results of operations resulted in recognition of stock option expense of approximately $137,000 and $208,000 for the three and six months ended June 30, 2007.

Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements

The following table summarizes the Company's gross contractual obligations at June 30, 2007 and the maturity periods and the effect that such obligations are expected to have on its liquidity and cash flows in future periods:

	Payments Due by Period			
Contractual Obligations	Total	Less than 1 Year	2 - 3 Years	4 - 5 Years
Equipment line of credit (SVB)	$ 3,965,000	$ 1,416,000	$ 2,549,000	
Purchase obligations	$ 3,821,000	$ 3,762,000	$ 59,000	
Capital leases:				
Related party capital lease	$ 1,065,000	$ 1,065,000	--	
Operating leases:				
Unrelated party operating leases	$ 383,000	$ 125,000	$ 204,000	$ 5
Related party operating lease	$ 567,000	$ 567,000	--	

Purchase obligations include all open purchase orders outstanding regardless of whether they are cancelable or not.

Capital lease obligations outlined above include both the principal and interest components of these contractual obligations.

At June 30, 2007, the Company maintained a Japanese yen account that held approximately JPY 89,753 (approximately $1,000). Total currency translation loss for the quarter ended June 30, 2007 of approximately $4,000 is reflected in other expense, net in the accompanying unaudited condensed consolidated statement of operations.

Outstanding letters of credit totaled approximately $132,000 at June 30, 2007. The letters of credit principally secure performance obligations, and allow holders to draw funds up to the face amount of the letter of credit if the Company does not perform as contractually required. These letters of credit expire through 2007 and are 100% secured by cash.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk to which we are subject consists of the risk of loss arising from adverse changes in market interest rates and foreign exchange rates. Exposure to market rate risk for changes in interest rates relates to our investment portfolio. We have not used derivative financial instruments in our investment portfolio. We seek to place our investments with high-quality issuers and we have policies limiting, among other things, the amount of credit exposure to any one issuer. We seek to limit default risk by purchasing only investment-grade securities. We do not believe we have any material market risk with respect to our financial instruments.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Company carried out an evaluation under the supervision and with the participation of the Company's management, including the Chief Executive Officer and President and the Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures as of June 30, 2007. In designing and evaluating the Company's disclosure controls and procedures, the Company and its management recognize that there are inherent limitations to the effectiveness of any system

of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their desired control objectives. Additionally, in evaluating and implementing possible controls and procedures, the Company's management was required to apply its reasonable judgment. Based upon the required evaluation, the Chief Executive Officer and President and the Chief Financial Officer concluded that as of June 30, 2007, the Company's disclosure controls and procedures were effective to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

The Company has made significant strides in its monthly closing processes and expects that its internal controls will continue to improve.

Changes in Internal Control Over Financial Reporting

Except as noted below, there was no change in the Company's internal control over financial reporting that occurred during the first fiscal quarter of 2007 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

On May 22, 2007, the Company's Chief Accounting Officer resigned, effective June 8, 2007. The Company is actively seeking an individual to perform the former Chief Accounting Officer's functions.

PART II
OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

In a complaint filed July 11, 2007 in the U.S. District Court for the Eastern District of Pennsylvania, Medical Components, Inc. (the "Plaintiff") alleges that the Company and its wholly-owned subsidiary, Spire Biomedical, Inc., through the manufacture and sale of its multilumen catheter products infringes upon one of Plaintiff's patents. The Plaintiff seeks unspecified damages, including enhanced damages and attorneys fees and costs, and an injunction against certain manufacturing techniques. The Company believes it has meritorious defenses and intends to vigorously defend itself against the claim. The Company is currently in the process of evaluating this case, and has not concluded that a loss is probable or estimable.

ITEM 1A. RISK FACTORS

Other than as set forth below, there have been no material changes in the Risk Factors described in Part I, Item 1A ("Risk Factors") of our Annual Report on Form 10-KSB for the year ended December 31, 2006.

OUR JOINT VENTURE TRANSACTION WITH GLORIA SOLAR MAY NOT REALIZE ALL OF ITS INTENDED BENEFITS.

On July 17, 2007, we announced that we had entered into a contractual relationship with Gloria Solar, pursuant to which, among other things, we agreed to form a joint venture, to be owned 55% by Gloria Solar and 45% by us, for the purpose of pursuing the solar photovoltaic systems market within the United States; the joint venture will design, market, sell and manage the installation of systems for the generation of electrical power by solar photovoltaic means in primarily commercial/industrial and utility segments of such market (the "JV Systems Business"). In connection with the formation of the joint venture, (i) we agreed to contribute to the joint venture our assets primarily relating to the JV Systems Business, including certain intellectual property and know-how, access to information technology assets and relationships, relationships with current and previous customers, contract backlog and project opportunities, certain registered trademarks, and employment relationships with staff members and (ii) Gloria Solar agreed to contribute $5,000,000 in cash. In connection with the establishment of the joint venture, we may experience:

- o difficulties in integrating our and Gloria Solar's respective corporate cultures and business objectives into the new joint venture;

- o diversion of our management's time and attention from other business concerns;

- o higher than anticipated costs of integration at the joint venture;

- o difficulties in retaining key employees who are necessary to manage the joint venture; or

- difficulties in working with an entity based in Taiwan and thus remote or inconvenient to our Bedford, Massachusetts headquarters.

For any of these reasons or as a result of other factors, we may not realize the anticipated benefits of the joint venture, and cash flow or profits derived from our ownership interest in the joint venture may be less than the cash flow or profits that could have been derived had we retained the transferred assets and continued to operate the JV Systems Business ourselves. Either party has the right, at any time upon certain material breaches by the other party of obligations under the joint venture documents, to acquire all of the breaching party's interest in the joint venture at 90% fair market value. In addition, in the event of a "change in control" of a member, the other members may purchase such member's interest in the joint venture at fair market value. Furthermore, our further participation in the business of the joint venture is restricted; for a period of three (3) years, we may not mass manufacture, market or sell solar cell modules with less than 575 watt capacity, and may do so thereafter only outside the United States.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

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

On May 17, 2007, the Company held a Special Meeting in Lieu of Annual Meeting of Stockholders.

Proposal Number 1

The number of directors was fixed at eight, leaving one vacancy. Udo Henseler, David R. Lipinski, Mark C. Little, Roger G. Little, Michael J. Magliochetti, Guy L. Mayer and Roger W. Redmond were elected to the Board of Directors to hold office until the 2008 annual meeting of the stockholders. The results for Proposal Number 1 were as follows:

Nominee	Shares Voting For	Shares Voting Against or Authority Withheld	Shares Abstaining	Broke
Udo Henseler	6,198,216	486,607	--	
David R. Lipinski	5,609,496	1,075,327	--	
Mark C. Little	5,699,150	985,673	--	
Roger G. Little	5,684,177	1,000,646	--	
Michael J. Magliochetti	6,223,869	460,954	--	
Guy L. Mayer	6,224,246	460,577	--	
Roger W. Redmond	6,223,546	461,277	--	

Proposal Number 2

The Company's stockholders approved the adoption of the Company's 2007 Stock Equity Plan. The results for Proposal Number 2 were as follows:

	Shares Voting For	Shares Voting Against or Authority Withheld	Shares Abstaining	Broke
Proposal Number 2	4,926,739	66,708	21,650	1

ITEM 5. OTHER INFORMATION

None

ITEM 6. EXHIBITS

10(v) Spire Corporation 2007 Stock Equity Plan, incorporated by reference to Exhibit 4.1 to the Company's Form S-8 filed with the Securities and Exchange Commission on June 5, 2007.

10(w) Loan and Security Agreement, dated May 25, 2007, among the Company, Bandwidth Semiconductor, LLC and Silicon Valley Bank.

31.1 Certification of the Chairman of the Board, Chief Executive Officer and President pursuant to ss.302 of the Sarbanes-Oxley Act of 2002.

31.2 Certification of the Chief Financial Officer and Treasurer pursuant to ss.302 of the Sarbanes-Oxley Act of 2002.

32.1 Certification of the Chairman of the Board, Chief Executive Officer and President pursuant to 18 U.S.C. ss.1350, as adopted pursuant to ss.906 of the Sarbanes-Oxley Act of 2002.

32.2 Certification of the Chief Financial Officer and Treasurer pursuant to 18 U.S.C. ss.1350, as adopted pursuant to ss.906 of the Sarbanes-Oxley Act of 2002.

SIGNATURES

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

Spire Corporation

Dated: August 14, 2007 By: /s/ Roger G. Little

Roger G. Little
Chairman of the Board, Chief
Executive Officer and President

Dated: August 14, 2007 By: /s/ Christian Dufresne

Christian Dufresne, Ph. D.
Chief Financial Officer and Treasurer

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EXHIBIT INDEX

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