SPIRE CORP
Form 10-Q
August 13, 2008

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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, 2008; 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)	(Zip Code)

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 accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer |_|	Accelerated filer |_|
Non-accelerated filer |_| (Do not check if a smaller reporting company)	Smaller reporting company |X|

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

The number of shares of the registrant's common stock outstanding as of August 6, 2008 was 8,330,688.

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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, 2008	Decemb 20
ASSETS		
Current assets		
Cash and cash equivalents	$ 4,462,000	$ 2,3
Restricted cash - current portion	250,000	3
	4,712,000	2,7
Accounts receivable - trade, net	7,450,000	12,7
Inventories, net	23,211,000	18,5
Deposits on equipment for inventory	2,682,000	2,4
Prepaid expenses and other current assets	391,000	5
Total current assets	38,446,000	37,0
Property and equipment, net	6,108,000	6,2
Intangible and other assets, net	849,000	8
Available-for-sale investments, at quoted market value (cost of $1,696,000 and $1,696,000 at 6/30/08 and 12/31/07, respectively)	1,637,000	1,8
Equity investment in joint venture	1,911,000	2,2
Deposit - related party	304,000	3
Total other assets	4,701,000	5,2
Total assets	$ 49,255,000	$ 48,4
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Current portion of capital lease obligation - related party	$ --	$ 4
Current portion of equipment line of credit	1,167,000	1,1
Accounts payable	5,017,000	2,9
Accrued liabilities	5,889,000	6,0
Current portion of advances on contracts in progress	24,395,000	23,5
Total current liabilities	36,468,000	34,2
Long-term portion of equipment line of credit	1,166,000	1,7
Long-term portion of advances on contracts in progress	1,624,000	1,9
Deferred compensation	1,637,000	1,8
Other long-term liabilities	126,000	
Total long-term liabilities	4,553,000	5,5
Total liabilities	41,021,000	39,7
Stockholders' equity		
Common stock, $0.01 par value; 20,000,000 shares authorized;		

8,330,688 and 8,321,188 shares issued and outstanding at June 30, 2008 and December 31, 2007, respectively	83,000	
Additional paid-in capital	20,429,000	19,9
Accumulated deficit	(12,219,000)	(11,4
Accumulated other comprehensive income (loss), net	(59,000)	
Total stockholders' equity	8,234,000	8,7
Total liabilities and stockholders' equity	$ 49,255,000	$ 48,4

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
	2008	2007	2008
Net sales and revenues			
Sales of goods	$ 13,510,000	$ 6,100,000	$ 24,885,000
Contract research, service and license revenues	3,375,000	2,479,000	6,918,000
Total net sales and revenues	16,885,000	8,579,000	31,803,000
Costs of sales and revenues			
Cost of goods sold	9,068,000	5,168,000	17,927,000
Cost of contract research, services and licenses	2,342,000	2,322,000	4,716,000
Total cost of sales and revenues	11,410,000	7,490,000	22,643,000
Gross margin	5,475,000	1,089,000	9,160,000
Operating expenses			
Selling, general and administrative expenses	4,997,000	2,856,000	8,775,000
Internal research and development expenses	171,000	78,000	282,000
Total operating expenses	5,168,000	2,934,000	9,057,000
Income (loss) from operations	307,000	(1,845,000)	103,000
Interest income (expense), net	(48,000)	(15,000)	(108,000)
Loss on equity investment in joint venture	(234,000)	--	(364,000)
Foreign exchange loss	(294,000)	(4,000)	(408,000)
Total other expense, net	(576,000)	(19,000)	(880,000)

Net loss	$ (269,000)	$ (1,864,000)	$ (777,000)
Loss per share - basic and diluted	$ (0.03)	$ (0.23)	$ (0.09)
Weighted average number of common and common equivalent shares outstanding - basic and diluted	8,330,029	8,263,571	8,326,474

See accompanying notes to unaudited condensed consolidated financial statements.

SPIRE CORPORATION AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	SIX MONTHS ENDED	
	2008	
Cash flows from operating activities:		
Net loss	$ (777,000)	$
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,077,000	
Loss on impairment of capital equipment	--	
Loss on equity investment in joint venture	364,000	
Deferred compensation	(121,000)	
Stock-based compensation	409,000	
Decrease in accounts receivable reserves	(39,000)	
Increase (decrease) in inventory reserves	93,000	
Changes in assets and liabilities:		
Restricted cash	141,000	
Accounts receivable	5,355,000	
Inventories	(4,809,000)	
Deposits, prepaid expenses and other current assets	(56,000)	
Accounts payable, accrued liabilities and other liabilities	2,006,000	
Deposit - related party	--	
Advances on contracts in progress	470,000	
Net cash provided by (used in) operating activities	4,113,000	
Cash flows from investing activities:		
Proceeds from maturity of short-term investments	--	
Purchase of property and equipment	(925,000)	
Increase in intangible and other assets	(49,000)	
Net cash (used in) provided by investing activities	(974,000)	
Cash flows from financing activities:		

Principal payments on capital lease obligations - related parties	(486,000)	
Borrowings from (principal payments on) equipment line of credit, net	(584,000)	
Proceeds from exercise of stock options	21,000	
Net cash (used in) provided by financing activities	(1,049,000)	
Net increase in cash and cash equivalents	2,090,000	
Cash and cash equivalents, beginning of period	2,372,000	
Cash and cash equivalents, end of period	$ 4,462,000	$
Supplemental disclosures of cash flow information:		
Interest received	$ 11,000	$
Interest paid	$ 110,000	$
Interest paid - related party	$ 9,000	$
Income taxes paid	$ --	$

See accompanying notes to unaudited condensed consolidated financial statements.

SPIRE CORPORATION AND SUBSIDIARIES
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2008 AND 2007

1. DESCRIPTION OF THE BUSINESS

Spire Corporation ("Spire" or the "Company") is a Massachusetts corporation incorporated in 1969. The Company's principal offices are located at One Patriots Park, Bedford, Massachusetts, and its phone number is (781) 275-6000. The Company's SEC filings are available through its website, www.spirecorp.com. The Company's common stock trades on the Nasdaq Global Market under the symbol "SPIR".

The Company principally develops, manufactures and markets customized turnkey solutions for the solar industry, including manufacturing equipment and full turnkey lines for cell and module production and testing. The Company also offers through its subsidiary Spire Semiconductor concentrator cell and light-emitting diode ("LED") fabrication services and through its joint venture, Gloria Spire Solar, photovoltaic ("PV") system integration services. The Company also operates a line of business associated with advanced biomedical applications. The foundation for the Company's business is its industry-leading expertise in materials technologies and surface treatments; this proprietary knowledge enables the Company to further develop its offerings in solar equipment, optoelectronics and biomedical products and services.

In the PV 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 50 countries.

In addition to the Company's cell and module manufacturing solutions, it has a device fabrication facility where it produces, under contract with its

customers, gallium arsenide (GaAs) concentrator cells. Under the name Spire Semiconductor, this division produces GaAs concentrator cells, high performance LEDs, and other custom semiconductor foundry services for the Company's customers.

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 coated and uncoated 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.

In July 2007, the Company entered into a joint venture with Gloria Solar Co., Ltd., a leading module manufacturer in Taiwan, which designs, sells and manages installations of photovoltaic systems. The Company's 45% ownership stake in the joint venture, Gloria Spire Solar, LLC, was obtained through the contribution of its integrated photovoltaic business to Gloria Solar. This transaction has allowed the Company to focus more of its attention on its core solar business, while continuing to expand the Spire brand name in the marketplace.

The Company has been in the solar business for over 30 years and has been active in research and development in the space, with over $100 million of research and development conducted which has led to over 60 patents granted to date, as well as cell and module production, having been a pioneer in the early development of solar technology. This expertise has provided the platform and expertise for the Company's manufacturing equipment.

Operating results will depend upon revenue growth and product mix, as well as the timing of shipments of higher priced products from the Company's solar equipment line. Export sales, which amounted to 61% of net sales and revenues for the quarter ended June 30, 2008, continue to constitute a significant portion of the Company's net sales and revenues.

The Company has incurred significant operating losses in 2007 and 2006. Loss from operations, before gain on sales of trademarks, were $6.4 million and $8.3 million in 2007 and 2006, respectively. Income from operations for the six months ended June 30, 2008 was $103,000. Previous losses from operations have resulted in cash losses (loss from operations excluding gain on sales of trademark plus or minus non-cash adjustments) of approximately $5.9 million and $5.4 million in 2007 and 2006, respectively. The Company has funded these cash losses from cash receipts of $4.0 million from the sale of a solar PV module line along with the transfer of technology and rights to mark the modules with the Company's trademark to the joint venture in 2007 and $7.7 million from the sale of equity in 2006. For the six months ended June 30, 2008, the cash gain (income from operations plus or minus non-cash adjustments) was $1,886,000. As of June 30, 2008, the Company had unrestricted cash and cash equivalents of $4.5 million compared to unrestricted cash and

cash equivalents of $2.4 million as of December 31, 2007. While the Company has had positive cash flow from operations for the past three quarters, the Company continues to experience net losses. While the Company has numerous options on how to fund these losses, including but not limited to sales of equity or the sale or license of assets and technology, just as it has done the past; however, there are no assurances that the Company would be able to sell equity or sell or license those assets on a timely basis and at appropriate values. The Company has developed several plans to mitigate cash losses primarily from increased revenues and, if required, potential cost reduction efforts and outside financing. As a result, the Company believes it has sufficient resources to

continue as a going concern through at least June 30, 2009.

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, 2007, included in the Company's Annual Report on Form 10-K 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, 2008 and December 31, 2007 and the results of its operations and cash flows for the three and six months ended June 30, 2008 and 2007. The results of operations for the three and six months ended June 30, 2008 are not necessarily indicative of the results to be expected for the fiscal year ending December 31, 2008. The condensed consolidated balance sheet as of December 31, 2007 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-K for the year ended December 31, 2007.

New Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 141R ("FAS 141R"), BUSINESS COMBINATIONS, which revises FAS 141 and changes multiple aspects of the accounting for business combinations. Under the guidance in FAS 141R, the acquisition method must be used, which requires the acquirer to recognize most identifiable assets acquired, liabilities assumed, and non-controlling interests in the acquiree at their full fair value on the acquisition date. Goodwill is to be recognized as the excess of the consideration transferred plus the fair value of the non-controlling interest over the fair values of the identifiable net assets acquired. Subsequent changes in the fair value of contingent consideration classified as a liability are to be recognized in earnings, while contingent consideration classified as equity is not to be re-measured. Costs such as transaction costs are to be excluded from acquisition accounting, generally leading to recognizing expense, and, additionally, restructuring costs that do not meet certain criteria at acquisition date are to be subsequently recognized as post-acquisition costs. FAS 141R is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The Company is currently evaluating the impact, if any, that this standard will have on its financial position and results of operations.

In December 2007, the FASB issued SFAS No. 160 ("FAS 160"), NON-CONTROLLING INTEREST IN CONSOLIDATED FINANCIAL STATEMENTS - AN AMENDMENT OF ARB NO. 151. FAS 160 requires that a non-controlling interest in a subsidiary (i.e. minority interest) be reported in the equity section of the balance sheet instead of being reported as a liability or in the mezzanine section between debt and equity. It also requires that the consolidated income statement include

consolidated net income attributable to both the parent and non-controlling interest of a consolidated subsidiary. A disclosure must be made on the face of the consolidated income statement of the net income attributable to the parent and to the non-controlling interest. Also, regardless of whether the parent purchases additional ownership interest, sells a portion of its ownership interest in a subsidiary or the subsidiary participates in a transaction that changes the parent's ownership interest, as long as the parent retains controlling interest, the transaction is considered an equity transaction. FAS 160 is effective for annual periods beginning after December 15, 2008. The Company is currently evaluating the impact, if any, that this standard will have on its financial position and results of operations.

In March 2008, the FASB issued SFAS No. 161 ("FAS 161"), DISCLOSURES ABOUT DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES--AN AMENDMENT OF FASB STATEMENT NO. 133. FAS 161 requires enhanced disclosures about an entity's derivative and hedging activities. Entities are required to provide enhanced disclosures about (a) how and why an entity uses

derivative instruments, (b) how derivative instruments and related hedged items are accounted for under Statement No. 133 and its related interpretations, and (c) how derivative instruments and related hedged items affect an entity's financial position, financial performance, and cash flows. FAS 161 is effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008, with early application encouraged. FAS 161 encourages, but does not require, comparative disclosures for earlier periods at initial adoption. The Company is currently evaluating the impact, if any, that this standard will have on its financial position and results of operations.

In May 2008, the FASB issued SFAS No. 162 ("FAS 162"), THE HIERARCHY OF GENERALLY ACCEPTED ACCOUNTING Principles. FAS 162 identifies the sources of accounting principles and the framework for selecting the principles to be used in the preparation of financial statements that are presented in conformity with generally accepted accounting principles in the United States. FAS 162 is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, THE MEANING OF PRESENT FAIRLY IN CONFORMITY WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPLES. The Company is currently evaluating the impact, if any, that this standard will have on its financial position and results of operations.

In May 2008, the FASB issued SFAS No. 163, ("FAS 163") ACCOUNTING FOR FINANCIAL GUARANTEE INSURANCE CONTRACTS - AN INTERPRETATION OF FASB STATEMENT NO. 60. FAS 163 requires that an insurance enterprise recognize a claim liability prior to an event of default when there is evidence that credit deterioration has occurred in an insured financial obligation. It also clarifies how Statement 60 applies to financial guarantee insurance contracts, including the recognition and measurement to be used to account for premium revenue and claim liabilities, and requires expanded disclosures about financial guarantee insurance contracts. It is effective for financial statements issued for fiscal years beginning after December 15, 2008, except for some disclosures about the insurance enterprise's risk-management activities. FAS 163 requires that disclosures about the risk-management activities of the insurance enterprise be effective for the first period beginning after issuance. Except for those disclosures, earlier application is not permitted. The Company is currently evaluating the impact, if any, that this standard will have on its financial position and results of operations.

3. ACCOUNTS RECEIVABLE/ADVANCES ON CONTRACTS IN PROGRESS

Net accounts receivable, trade consists of the following:

	June 30, 2008	December 31, 2007
Amounts billed	$ 6,611,000	$ 11,142,000
Retainage	8,000	8,000
Accrued revenue	1,022,000	1,846,000
	7,641,000	12,996,000
Less: Allowance for sales returns and doubtful accounts	(191,000)	(230,000)
Net accounts receivable, trade	$ 7,450,000	$ 12,766,000
Advances on contracts in progress	$ 26,019,000	$ 25,549,000

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. The government's most recent audit was as of December 31, 2006, with no adverse impact.

Accrued revenue represents revenues recognized on contracts for which billings have not been presented to customers as of the balance sheet date. These amounts are billed and generally collected within one year.

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 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, either as deposits or progress payments against future shipments, but revenue has not been recognized.

4. INVENTORIES

Inventories, net of $447,000 and $354,000 of reserves at June 30, 2008 and December 31, 2007, respectively, consist of the following at:

	June 30, 2008	December 31, 2007
Raw materials	$ 5,629,000	$ 4,989,000
Work in process	12,009,000	12,951,000
Finished goods	5,573,000	566,000
	$ 23,211,000	$ 18,506,000

5. INCOME (LOSS) PER SHARE

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

	Three Months Ended June 30,		Six
	2008	2007	2
Weighted average number of common and common equivalent shares outstanding - basic	8,330,029	8,263,571	8,3
Add: Net additional common shares upon assumed exercise of common stock options	--	--	
Adjusted weighted average number of common and common equivalents shares outstanding - diluted	8,330,029	8,263,571	8,3

For the three and six months ended June 30, 2008, 168,834 and 188,760 shares, respectively, and for the three and six months ended June 30, 2007, 125,360 and 106,230 shares, respectively, of common stock related to stock options were excluded from the calculation of dilutive shares because the inclusion of such shares would be anti-dilutive due to the Company's net loss position.

In addition, for the three and six months ended June 30, 2008, 39,500 and zero shares, respectively, and for the three and six months ended June 30, 2007, 6,250 and 91,250 shares, respectively, of common stock issuable relative to stock options were excluded from the calculation of diluted shares because their inclusion would have been anti-dilutive, due to their exercise prices exceeding the average market price of the stock for the periods.

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
For the three months ended June 30, 2008			
Net sales and revenues	$ 12,647,000	$ 2,858,000	$ 1,380,000
Income (loss) from operations	$ 1,127,000	$ (181,000)	$ (639,000)
For the three months ended June 30, 2007			
Net sales and revenues	$ 4,975,000	$ 2,827,000	$ 777,000
Loss from operations	$ (725,000)	$ (215,000)	$ (905,000)
For the six months ended June 30, 2008			
Net sales and revenues	$ 23,320,000	$ 5,666,000	$ 2,817,000
Income (loss) from operations	$ 1,455,000	$ (357,000)	$ (995,000)
For the six months ended June 30, 2007			
Net sales and revenues	$ 8,568,000	$ 5,353,000	$ 1,655,000
Loss from operations	$ (1,308,000)	$ (726,000)	$ (1,566,000)

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

	Three Months Ended June 30,				Six Months Ended June 3			
	2008	%	2007	%	2008	%	200	
United States	$ 6,532,000	39%	$ 4,901,000	57%	$12,347,000	39%	$ 8,112	
Europe/Africa	3,104,000	18	2,047,000	24	8,323,000	26	3,749	
Asia	7,100,000	42	1,425,000	17	10,747,000	34	3,422	
Rest of the world	149,000	1	206,000	2	386,000	1	293	
	$16,885,000	100%	$ 8,579,000	100%	$31,803,000	100%	$15,576	

Revenues from contracts with United States government agencies for the three months ended June 30, 2008 and 2007 were approximately $353,000 and $225,000, or 2% and 3% of consolidated net sales and revenues, respectively.

Revenues from contracts with United States government agencies for the six months ended June 30, 2008 and 2007 were approximately $753,000 and $520,000, or 2% and 3% of consolidated net sales and revenues, respectively.

One customer accounted for approximately 11% and two customers accounted for approximately 37% of the Company's gross sales during the three months ended June 30, 2008 and 2007, respectively. One customer accounted for approximately 15% and three customers accounted for approximately 41% of the Company's gross sales during the six months ended June 30, 2008 and 2007, respectively. Two customers represented 23% of trade account receivables at June 30, 2008 and two customers represented 46% of trade account receivables at December 31, 2007.

7. INTANGIBLE AND OTHER ASSETS

Patents amounted to $117,000, net of accumulated amortization of

$713,000, at June 30, 2008. Licenses amounted to $83,000, net of accumulated amortization of $242,000, at June 30, 2008. 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 $640,000 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
2008 remaining 6 months	$104,000
2009	178,000
2010	173,000
2011	167,000
2012 and beyond	218,000
	$840,000

Also included in other assets at June 30, 2008 are approximately $9,000 of unamortized expenses that were prepaid.

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, 2008	December 31, 2007
Equity investments	$1,363,000	$1,411,000
Government bonds	222,000	303,000
Cash and money market funds	52,000	86,000
	$1,637,000	$1,800,000

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. As of June 30, 2008, the unrealized loss on these marketable securities was $59,000.

Effective January 1, 2008, the Company adopted SFAS No. 157, "Fair Value Measurements" ("FAS 157"). In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, "Effective Date of FASB Statement No. 157," which provides a one year deferral of the effective date of FAS 157 for non-financial assets and non-financial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. Therefore, the Company has adopted the provisions of FAS 157 with respect to its financial assets and liabilities only. FAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The new standard provides a consistent definition of fair value which focuses on an

exit price which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard also prioritizes, within the measurement of fair value, the use of market-based information over entity specific information and establishes a three-level hierarchy for fair value measurements based on the nature of inputs used in the valuation of an asset or liability as of the measurement date.

The hierarchy established under FAS 157 gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). As required by FAS 157, the Company's available for sale investments are classified within the fair value hierarchy based on the lowest level of input that is significant to the fair value measurement. The three levels of the fair value hierarchy under FAS 157, and its applicability to the Company's available for sale investments, are described below:

Level 1 - Pricing inputs are quoted prices available in active markets for identical investments as of the reporting date. As required by FAS 157, the Company does not adjust the quoted price for these investments, even in situations where the Company holds a large position and a sale could reasonably impact the quoted price.

Level 2 - Pricing inputs are quoted prices for similar investments, or inputs that are observable, either directly or indirectly, for substantially the full term through corroboration with observable market data. Level 2 includes investments valued at quoted prices adjusted for legal or contractual restrictions specific to these investments.

Level 3 - Pricing inputs are unobservable for the investment, that is, inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability. Level 3 includes investments that are supported by little or no market activity.

The following table presents the financial instruments carried at fair value as of June 30, 2008 by FAS 157 valuation hierarchy (as defined above).

	Level 1	Level 2	Level 3	Total
Available for sale investments	$1,372,000	$ 265,000	--	$1,637,000
Percent of total	84%	16%	--	100%

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, Spire Semiconductor, LLC, entered into a Loan and Security Agreement (the "Equipment Credit Facility") with Silicon Valley Bank (the "Bank"). Under the Equipment Credit Facility, for a one-year period, the Company and Spire Semiconductor could borrow up to $3,500,000 in the aggregate to finance certain equipment purchases (including reimbursement of certain previously-made purchases). Advances made under the Equipment Credit Facility would bear interest at the Bank's prime rate, as determined, plus 0.5% and payable in thirty-six (36) consecutive monthly payments following the funding date of that advance.

On March 31, 2008, the Company entered into a second Loan and Security

Agreement (the "Revolving Credit Facility") with the Bank. Under the terms of the Revolving Credit Facility, the Bank agreed to provide the Company with a credit line up to $5,000,000. The Company's obligations under the Equipment Credit Facility are secured by substantially all of its assets and advances under the Revolving Credit Facility are limited to 80% of eligible receivables and the lesser of 25% of the value of its eligible inventory, as defined, or $2,500,000 if the inventory is backed by a customer letter of credit. Interest on outstanding borrowings accrues at a rate per annum equal to the greater of Prime Rate plus one percent (1.0%) or seven percent (7%). In addition, the Company agreed to pay to the Bank a collateral monitoring fee of $750 per month in the event the Company is in default of its covenants and agreed to the following additional terms: (i) $50,000 commitment fee; (ii) an unused line fee in the amount of 0.75% per annum of the average unused portion of the revolving line; and (iii) an early termination fee of 0.5% of the total credit line if the Company terminates the Revolving Credit Facility prior to 12 months from the Revolving Credit Facility's effective date. The Revolving Credit Facility, if not sooner terminated in accordance with its terms, expires on March 30, 2009. In addition, on March 31, 2008 the Company's existing Equipment Credit Facility was amended whereby the Bank granted a waiver for the Company's defaults for not meeting its December 31, 2007 quarter liquidity and profit covenants and for not meeting its January and February 2008 liquidity covenants. Further, the covenants were amended to match the covenants as discussed below contained in the Revolving Credit Facility. The Company's interest rate under the Equipment Credit Facility was also modified from Bank Prime plus one half percent to the greater of Bank Prime plus one percent (1%) or seven percent (7%).

On May 13, 2008, the Bank amended the Equipment Credit Facility and the Revolving Credit Facility, modifying the Company's net income profitability covenant requirements in exchange for a three quarters percent (0.75%) increase in the Company's interest rate (7.75% at June 30, 2008) and waiver restructuring fee equal to one half percent (0.5%) of amounts outstanding under the Equipment Credit Facility and committed under the Revolving Credit Facility. In addition, the Company's term loan balance will be factored in when calculating the Company's borrowing base under the Revolving Credit Facility.

Under the amended terms of both credit facilities, as long as any commitment remains outstanding under the facilities, the Company must comply with an adjusted quick ratio covenant and a minimum monthly net income covenant. In addition, until all amounts under the credit facilities with the Bank are repaid, covenants under the credit facilities impose restrictions on the Company's ability to, among other things, incur additional indebtedness, create or permit liens on the Company'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 and its subsidiaries. Any failure by the Company to comply with the covenants and obligations under the credit facilities could result in an event of default, in which case the Bank may be entitled to declare all amounts owed to be due and payable immediately. The Company's obligations under the credit facilities are secured by substantially all of its assets.

At June 30, 2008, the Company's outstanding borrowings from the Equipment Credit Facility amounted to $2,333,000 and there were no borrowings from the Revolving Credit Facility. The Company was in compliance with its covenants as of June 30, 2008.

10. STOCK OPTION PLAN AND STOCK-BASED COMPENSATION

On January 1, 2006, the Company adopted the fair value recognition

provisions of 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, for the three months ended June 30, 2008 and 2007, the Company applied 8% and 14% forfeiture rates, respectively, to stock options outstanding in determining its Statement 123(R) stock-based compensation expense which it believes are reasonable forfeiture estimates for the periods. The impact of Statement 123(R) on the Company's results of operations resulted in recognition of stock-based compensation expense of approximately $213,000 and $137,000 for the three months ended June 30, 2008 and 2007, respectively, and approximately $409,000 and $208,000 for the six months ended June 30, 2008 and 2007, respectively. 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 Mont
	2008	2007	2008
Cost of contract research, services and licenses	$ 14,000	$ 14,000	$ 27,0
Cost of goods sold	36,000	6,000	68,0
Administrative and selling	163,000	117,000	314,0
Total stock-based compensation	$ 213,000	$ 137,000	$ 409,0

At June 30, 2008 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. Accordingly, future grants may be made only under the 2007 Plan.

A summary of options outstanding under the 2007 Plan and 1996 Plan as of June 30, 2008 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, 2007	495,177	$ 7.10	
Granted	40,000	$ 13.87	
Exercised	(9,500)	$ 2.22	
Cancelled/expired	(12,000)	$ 9.56	
Options Outstanding at June 30, 2008	513,677	$ 7.67	7.
Options Exercisable at June 30, 2008	265,927	$ 6.47	6.

The per-share weighted-average fair value of stock options granted during the three and six months ended June 30, 2008 was $9.15 and $7.96, respectively, and $6.45 for both periods in 2007, 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 Factor
2008	--	2.73%	4.5 years	70.6%

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 Si
	2008	2007	2008
Net loss	$ (269,000)	$ (1,864,000)	$ (777,0
Other comprehensive income (loss):			
Unrealized gain (loss) on available for sale marketable securities, net of tax	(59,000)	48,000	(121,0
Total comprehensive loss	$ (328,000)	$ (1,816,000)	$ (898,0

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. OUR 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-K FOR THE YEAR ENDED DECEMBER 31, 2007. THE FOLLOWING DISCUSSION AND ANALYSIS OF OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS SHOULD BE READ IN LIGHT OF THOSE FACTORS AND IN CONJUNCTION WITH OUR ACCOMPANYING CONSOLIDATED FINANCIAL STATEMENTS, INCLUDING THE NOTES THERETO.

OVERVIEW

We principally develop, manufacture and market customized turnkey solutions for the solar industry, including manufacturing equipment and full turnkey lines for cell and module production and testing. We also offer through our subsidiary Spire Semiconductor concentrator cell and light-emitting diode ("LED") fabrication services and through our joint venture Gloria Spire Solar photovoltaic ("PV") system integration services. We also operate a line of business associated with advanced biomedical applications. The foundation for our business is our industry-leading expertise in materials technologies and surface treatments; this proprietary knowledge enables us to further develop our offerings in solar equipment, optoelectronics and biomedical products and services.

Our initial focus on high-energy physics led to the development of our first product, the SPI-PULSE electron beam generator, to support research in radiation effects testing. We moved into the space solar cell business after signing a contract to develop solar cell coverslip for radiation hardening. In addition, we began to develop a new technology based on ion implantation and pulsed electron beam annealing of silicon solar cells. As a result of the energy crisis in the early 1980s, which forced the United States to consider photovoltaics for terrestrial applications, we received our first terrestrial solar cell contract for low cost production using our ion implantation technology. We leveraged this knowledge to develop our state-of-the-art manufacturing equipment, in addition to our offerings in the optoelectronics and biomaterials industries.

As photovoltaic cell and module manufacturers ramp up production to meet increasing demand, they will first need to acquire greater quantities of turnkey equipment in order to produce more photovoltaic cells and modules. We believe that we are one of the world's leading suppliers of the manufacturing equipment and technology needed to produce solar photovoltaic power systems. Our individual manufacturing equipment products and our SPI-LINETM integrated turnkey cell and module production lines can be highly scaled, customized, and automated with high throughput. These systems are designed to meet the needs of

a broad range of customers ranging from manufacturers relying on mostly manual processes, to some of the largest photovoltaic manufacturing companies in the world.

In addition to our cell and module manufacturing solutions, we have a device fabrication facility where we produce, under contract with our customers, gallium arsenide (GaAs) concentrator cells. The state-of-the-art semiconductor fabrication and foundry facility is the foundation of our solar cell process technology for silicon, polysilicon, thin film and GaAs concentrator cells. Under the name Spire Semiconductor, this division produces GaAs concentrator cells, high performance LEDs, and other custom semiconductor foundry services for our customers.

In July 2007, we entered into a joint venture with Gloria Solar Co., Ltd., a leading module manufacturer in Taiwan, which designs, sells and manages installations of photovoltaic systems. Our 45% ownership stake in the joint venture, Gloria Spire Solar, LLC, was obtained through the contribution of our integrated photovoltaic business to Gloria Solar. This transaction has allowed us to focus more of our attention on our core solar business, while continuing to expand the Spire brand name in the marketplace.

Capitalizing on our expertise in surface treatments, we also have a biomedical division which manufactures medical devices and provides advanced medical device surface treatment processes to our customers. Our medical device business develops, manufactures and sells premium products for vascular access in chronic kidney disease patients. Our surface treatment business modifies the surfaces of medical devices to improve their performance.

We have been in the solar business for over 30 years and have been active in research and development in the space, with over $100 million of research and development conducted which has led to over 60 patents granted to date, as well

as cell and module production, having been a pioneer in the early development of solar technology. This expertise has provided the platform and expertise for our manufacturing equipment. We have equipment deployed in approximately 50 countries.

Operating results will depend upon revenue growth and product mix, as well as the timing of shipments of higher priced products from our solar equipment line. Export sales, which amounted to 61% of net sales and revenues for the six months ended June 30, 2008, continue to constitute a significant portion of our net sales and revenues.

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 End
	2008	2007	2008
Net sales and revenues	100%	100%	100%
Cost of sales and revenues	68	87	71
Gross profit	32	13	29
Selling, general and administrative expenses	30	34	27
Internal research and development expenses	1	1	1

Income (loss) from operations	1	(22)	1
Other expense, net	(3)	--	(3)
Net loss	(2%)	(22%)	(2%)

OVERALL

Our total net sales and revenues for the six months ended June 30, 2008 were $31,803,000 as compared to $15,576,000 for the six months ended June 30, 2007, which represents an increase of $16,227,000 or 104%. The increase was primarily attributable to a $14,752,000 increase in solar sales and a $1,162,000 increase in optoelectronics sales.

SOLAR BUSINESS UNIT

Sales in our solar business unit increased 172% during the six months ended June 30, 2008 to $23,320,000 as compared to $8,568,000 in the six months ended June 30, 2007. The increase is the result of shipments of solar equipment reflecting the overall increase in activity in the solar power industry. We have focused our sales and marketing efforts on establishing ourselves as one of the premier suppliers of equipment to the solar power industry for the manufacture of photovoltaic power modules.

BIOMEDICAL BUSINESS UNIT

Revenues of our biomedical business unit increased 6% during the six months ended June 30, 2008 to $5,666,000 as compared to $5,353,000 in the six months ended June 30, 2007. The increase reflects increased revenues from our research and development contracts and orthopedics coatings services offset by reduced revenues from catheter products.

OPTOELECTRONICS BUSINESS UNIT

Revenues in our optoelectronics business unit increased 70% to $2,817,000 during the six months ended June 30, 2008 as compared to $1,655,000 in the six months ended June 30, 2007. 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.

Three and Six Months Ended June 30, 2008 Compared to Three and Six Months Ended June 30, 2007

NET SALES AND REVENUES

The following table categorizes our net sales and revenues for the periods presented:

	Three Months Ended June 30,		
	2008	2007	$
Sales of goods	$ 13,510,000	$ 6,100,000	$ 7,410,0
Contract research, services and license revenues	3,375,000	2,479,000	896,0
Net sales and revenues	$ 16,885,000	$ 8,579,000	$ 8,306,0

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The 121% increase in sales of goods for the three months ended June 30, 2008 as compared to the three months ended June 30, 2007 was primarily due to an increase in solar equipment revenues, partially offset by a decrease in catheter products sales. Solar equipment sales increased 150% in 2008 as compared to 2007 primarily due to an overall increase in solar power industry activity. Sales of catheters decreased approximately 20%.

The 36% increase in contract research, services and license revenues for the three months ended June 30, 2008 as compared to the three months ended June 30, 2007 is primarily attributable to an increase in optoelectronics and research and development activities, partially offset by a decrease in orthopedics. Revenue from our optoelectronics processing services (Spire Semiconductor) increased 77% in 2008 compared to 2007 as a result of 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. Revenues from our research and development activities increased 110% in 2008 as compared to 2007 primarily due to an increase in the number and value of contracts associated with funded research and development. Revenues from our orthopedic activities decreased slightly in 2008 as compared to 2007.

The following table categorizes the our net sales and revenues for the periods presented:

	Six Months Ended June 30,		
	2008	2007	$
Sales of goods	$ 24,885,000	$ 10,439,000	$ 14,446,0
Contract research, services and license revenues	6,918,000	5,137,000	1,781,0
Net sales and revenues	$ 31,803,000	$ 15,576,000	$ 16,227,0

The 138% increase in sales of goods for the six months ended June 30, 2008 as compared to the six months ended June 30, 2007 was primarily due to an increase in solar equipment revenues, partially offset by a decrease in catheter products sales. Solar equipment sales increased 174% in 2008 as compared to 2007 primarily due to an overall increase in solar power industry activity. Sales of catheters decreased approximately 12%.

The 35% increase in contract research, services and license revenues for the six months ended June 30, 2008 as compared to the six months ended June 30, 2007 is primarily attributable to an increase in orthopedics, optoelectronics services and research and development activities. Revenues from our orthopedic activities increased 4% in 2008 as compared to 2007. Revenue from Spire's optoelectronics processing services (Spire Semiconductor) increased 70% in 2008 compared to 2007 as a result of increased demand for Spire Semiconductor's services and commercial production runs of products from its development efforts. Revenues from our research and development activities increased 84% in 2008 as compared to 2007 primarily due to an increase in the number and value of contracts associated with funded research and development.

COST OF SALES AND REVENUES

The following table categorizes our 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,				
	2008	%	2007	%	
Cost of goods sold	$ 9,068,000	67%	$ 5,168,000	85%	$ 3,
Cost of contract research, services and licenses	2,342,000	69%	2,322,000	94%	
Net cost of sales and revenues	$ 11,410,000	68%	$ 7,490,000	87%	$ 3,

Cost of goods sold increased 75% for the three months ended June 30, 2008 as compared to the three months ended June 30, 2007, primarily as a result of the 121% increase in related revenues. As a percentage of sales, cost of goods sold was 67% of sales of goods in 2008 as compared to 85% of sales in 2007. This reduction in the percentage of sales in 2008 is due to a favorable product mix with improved margins along with better utilization of solar manufacturing overhead.

Cost of contract research, services and licenses increased 1% for the three months ended June 30, 2008 as compared to the three months ended June 30, 2007, primarily as a result of the 36% increase in related revenues and increased costs at our optoelectronics facility (Spire Semiconductor) along with increased costs of our contract research activities due to higher volumes. Cost of contract research, services and licenses as a percentage of revenue decreased to 69% of revenues in 2008 from 94% in 2007, primarily due to the absorption of overhead costs improving margins in biomedical and optoelectronic services.

Cost of sales and revenues also includes approximately $50,000 and $20,000 of stock-based compensation for the three months ending June 30, 2008 and 2007, respectively.

The following table categorizes our 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,				
	2008	%	2007	%	
Cost of goods sold	$ 17,927,000	72%	$ 8,739,000	84%	$ 9,
Cost of contract research, services and licenses	4,716,000	68%	4,450,000	87%	
Net cost of sales and revenues	$ 22,643,000	71%	$ 13,189,000	85%	$ 9,

The $9,188,000 (105%) increase in cost of goods sold for the six months ended June 30, 2008 as compared to the six months ended June 30, 2007 was primarily due to increased costs within our solar equipment product line corresponding to the 174% increase in solar equipment sales. As a percentage of

sales, cost of goods sold was 72% of sales of goods in 2008 as compared to 84% of sales in 2007. This reduction in the percentage of sales in 2008 is due to a favorable product mix with improved margins along with better utilization of solar manufacturing overhead.

Cost of contract research, services and licenses increased 6% in the six months ended June 30, 2008 as compared to the six months ended June 30, 2007, primarily as a result of the 35% increase in related revenues and increased costs at our optoelectronics facility (Spire Semiconductor) along with increased costs of our contract research activities due to higher volumes. Cost of contract research, services and licenses as a percentage of revenue decreased to 68% of revenues in 2008 from 87% in 2007, primarily due to the absorption of overhead costs improving margins in biomedical and optoelectronic services.

Cost of sales and revenues also includes approximately $95,000 and $27,000 of stock-based compensation for the six months ending June 30, 2008 and 2007, respectively.

OPERATING EXPENSES

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

	Three Months Ended June 30,				
	2008	%	2007	%	
Selling, general and administrative	$ 4,997,000	30%	$ 2,856,000	33%	$ 2,
Internal research and development	171,000	1%	78,000	1%	
Operating expenses	$ 5,168,000	31%	$ 2,934,000	34%	$ 2,

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

Selling, general and administrative expense increased 75% in the three months ended June 30, 2008 as compared to the three months ended June 30, 2007, primarily as a result of an increase in stock-based compensation, marketing activities, professional services used by us and higher head count and related employee costs. In addition, commissions to our network of independent sales representatives related to sales of solar equipment were up due to increased sales and revenues. Selling, general and administrative expense decreased to 30% of sales and revenues in 2008 as compared to 33% in 2007. The reduction was primarily due to the absorption of overhead related costs by the 97% increase in sales and revenues.

Operating expenses includes approximately $163,000 and $117,000 of stock-based compensation for the three months ending June 30, 2008 and 2007, respectively.

INTERNAL RESEARCH AND DEVELOPMENT

Internal research and development expense increased 119% in the three months ended June 30, 2008 as compared to the three months ended June 30, 2007, primarily as a result of our cost sharing contract with the National Renewable Energy Laboratory ("NREL") reducing 2007 costs. In addition, Spire Semiconductor had higher head count and related employee costs for the period. As a percentage of sales and revenue, however, internal research and development expenses remained at 1% for both periods.

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

	Six Months Ended June 30,				
	2008	%	2007	%	
Selling, general and administrative	$ 8,775,000	28%	$ 5,864,000	38%	$ 2,
Internal research and development	282,000	1%	123,000	1%	
Operating expenses	$ 9,057,000	29%	$ 5,987,000	38%	$ 3,

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

Selling, general and administrative expense increased 50% in the six months ended June 30, 2008 as compared to the six months ended June 30, 2007, primarily as a result of an increase in stock-based compensation, marketing activities, professional services used by us and higher head count and related employee costs. In addition, commissions to our network of independent sales representatives related to sales of solar equipment were up due to increased sales and revenues. Selling, general and administrative expense decreased to 28% of sales and revenues in 2008 as compared to 38% in 2007. The reduction was primarily due to the absorption of overhead related costs by the 104% increase in sales and revenues.

Operating expenses includes approximately $314,000 and $181,000 of stock-based compensation for the six months ending June 30, 2008 and 2007, respectively.

INTERNAL RESEARCH AND DEVELOPMENT

Internal research and development expense increased 130% in the six months ended June 30, 2008 as compared to the six months ended June 30, 2007, primarily as a result of our cost sharing contract with the NREL reducing 2007 costs. In addition, Spire Semiconductor had higher head count and related employee costs for the period. As a percentage of sales and revenue, however, internal research and development expenses remained at 1% for both periods.

OTHER INCOME (EXPENSE), NET

We earned $2,000 and $9,000 of interest income for the three months ended June 30, 2008 and 2007, respectively. The decreased interest income is due to lower cash balances held by us during 2008 compared with 2007. We incurred interest expense of $50,000 and $24,000 for the three months ended June 30, 2008 and 2007, respectively. The increased interest expense is due to higher interest payments associated with the Equipment Credit Facility outstanding with Silicon

Valley Bank compared with 2007 interest expenses primarily associated with interest incurred on capital leases associated with the semiconductor foundry. We recorded a $234,000 loss on equity investment in joint venture with Gloria Solar for the three months ended June 30, 2008. Due to the conversion of U.S. dollars into Japanese Yen, we lost approximately $294,000 and $4,000 during the three months ended June 30, 2008 and 2007, respectively.

We earned $11,000 and $53,000 of interest income for the six months ended June 30, 2008 and 2007, respectively. The decreased interest income is due to lower cash balances held by us during 2008 compared with 2007. We incurred interest expense of $119,000 and $50,000 for the six months ended June 30, 2008 and 2007, respectively. The increased interest expense is due to higher interest payments associated with the Equipment Credit Facility outstanding with Silicon Valley Bank compared with 2007 interest expenses primarily associated with interest incurred on capital leases associated with the semiconductor foundry. We recorded a $364,000 loss on equity investment in joint venture with Gloria Solar for the six months ended June 30, 2008. Due to the conversion of U.S. dollars into Japanese Yen, we lost approximately $408,000 and $13,000 during the six months ended June 30, 2008 and 2007, respectively.

INCOME TAXES

We did not record an income tax benefit for the three and six months ended June 30, 2008 and 2007. 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 INCOME

We reported a net loss for the three months ended June 30, 2008 and 2007 of approximately $269,000 and $1,864,000, respectively. The net loss decreased approximately $1,595,000 primarily due to the increase in sales and revenues and the improvement in gross margins.

We reported a net loss for the six months ended June 30, 2008 and 2007 of approximately $777,000 and $3,611,000, respectively. The net loss decreased approximately $2,834,000 primarily due to the increase in sales and revenues and the improvement in gross margins.

Liquidity and Capital Resources

	June 30, 2008	December 31, 2007	Increase/(Decrease) $	Increase/(Decrease) %
Cash and cash equivalents	$ 4,462,000	$ 2,372,000	$ 2,090,000	88%
Working capital	$ 1,978,000	$ 2,834,000	$ (856,000)	(30%)

Cash and cash equivalents increased due to cash provided by operating activities, partially offset by cash used in investing and financing activities. The overall reduction in working capital is due to an increase in current liabilities, partially offset by operating cash flow. We have historically funded our operating cash requirements using operating cash flow, proceeds from the sale and licensing of technology and proceeds from the sale of equity securities.

We had a $2,000,000 Loan Agreement with Citizens Bank of Massachusetts which expired on June 26, 2007. On May 25, 2007, we and our wholly-owned subsidiary, Spire Semiconductor, LLC, entered into a Loan and Security Agreement (the "Equipment Credit Facility") with Silicon Valley Bank (the "Bank"). Under the Equipment Credit Facility, for a one-year period, we and Spire Semiconductor could borrow up to $3,500,000 in the aggregate to finance certain equipment purchases (including reimbursement of certain previously-made purchases). Advances made under the Equipment Credit Facility would bear interest at the

Bank's prime rate, as determined, plus 0.5% and payable in thirty-six (36) consecutive monthly payments following the funding date of that advance.

On March 31, 2008, we entered into a second Loan and Security Agreement (the "Revolving Credit Facility") with the Bank. Under the terms of the Revolving Credit Facility, the Bank agreed to provide us with a credit line up to $5,000,000. Our obligations under the Equipment Credit Facility are secured by substantially all of our assets and advances under the Revolving Credit Facility are limited to 80% of eligible receivables and the lesser of 25% of the value of our eligible inventory, as defined, or $2,500,000 if the inventory is backed by a customer letter of credit. Interest on outstanding borrowings accrues at a rate per annum equal to the greater of Prime Rate plus one percent (1.0%) or seven percent (7%). In addition, we agreed to pay to the Bank a collateral monitoring fee of $750 per month in the event we are in default of

our covenants and agreed to the following additional terms: (i) $50,000 commitment fee; (ii) an unused line fee in the amount of 0.75% per annum of the average unused portion of the revolving line; and (iii) an early termination fee of 0.5% of the total credit line if we terminate the Revolving Credit Facility prior to 12 months from the Revolving Credit Facility's effective date. The Revolving Credit Facility, if not sooner terminated in accordance with its terms, expires on March 30, 2009. In addition, on March 31 our existing Equipment Credit Facility was amended whereby the Bank granted a waiver for our defaults for not meeting our December 31, 2007 quarter liquidity and profit covenants and for not meeting our January and February 2008 liquidity covenants. Further, the covenants were amended to match the covenants as discussed below contained in the Revolving Credit Facility. Our interest rate under the Equipment Credit Facility was also modified from Bank Prime plus one half percent to the greater of Bank Prime plus one percent (1%) or seven percent (7%).

On May 13, 2008, the Bank amended the Equipment Credit Facility and the Revolving Credit Facility, modifying our net income profitability covenant requirements in exchange for a three quarters percent (0.75%) increase in our interest rate (7.75% at June 30, 2008) and waiver restructuring fee equal to one half percent (0.5%) of amounts outstanding under the Equipment Credit Facility and committed under the Revolving Credit Facility. Interest on outstanding borrowings accrues at a rate per annum equal to the greater of Prime Rate plus one percent (1.0%) or seven percent (7%). In addition, our term loan balance will be factored in when calculating our borrowing base under the Revolving Credit Facility.

Under the amended terms of both credit facilities, as long as any commitment remains outstanding under the facilities, we must comply with an adjusted quick ratio covenant and a minimum monthly net income covenant. In addition, until all amounts under the credit facilities with the Bank are repaid, covenants under the credit facilities impose restrictions on our ability to, among other things, incur additional indebtedness, create or permit liens on our 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 us and our subsidiaries. Any failure by us to comply with the covenants and obligations under the credit facilities could result in an event of default, in which case the Bank may be entitled to declare all amounts owed to be due and payable immediately. Our obligations under the credit facilities are secured by substantially all of our assets.

At June 30, 2008, we had outstanding borrowings from the Equipment Credit Facility amounting to $2,333,000 and there were no borrowings from the Revolving

Credit Facility. We were in compliance with our covenants as of June 30, 2008.

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to pay amounts due. We 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 when it is probable that a loss has been incurred and we can reasonably estimate the amount of the loss. We do 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 us for capital expenditures. At June 30, 2008, our accumulated deficit was approximately $12,219,000, compared to accumulated deficit of approximately $11,442,000 as of December 31, 2007.

We have an effective shelf registration statement on file with the Securities and Exchange Commission allowing us to sell up to $60 million of common stock. We believe it is prudent to maintain shelf registration capacity in order to facilitate future capital raising activities. To date there have been no issuances of common stock under this shelf registration statement.

We believe we have sufficient resources to finance our current operations for the foreseeable future from operating cash flow and working capital. We may, however, raise additional capital through the sale of equity or equity-related securities, under the shelf registration statement or otherwise, under appropriate circumstances.

Foreign Currency Fluctuation

We sell only in U.S. dollars, generally against an irrevocable confirmed letter of credit through a major United States bank. Accordingly, we are not directly affected by foreign exchange fluctuations on our current orders. However, fluctuations in foreign exchange rates do have an effect on our customers' access to U.S. dollars and on the pricing competition on certain pieces of equipment that we sell in selected markets. We received Japanese yen

in exchange for the sale of a license to our solar technology. In addition, purchases made and royalties received under our Consortium Agreement with our Japanese partner are in Japanese yen. We have committed to purchase certain pieces of equipment from European vendors; these commitments are denominated in Euros. We bear the risk of any currency fluctuations that may be associated with these commitments. We attempt to hedge when possible known transactions to minimize foreign exchange risk.

Related Party Transactions

We 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, our Chairman of the Board, Chief Executive Officer and President, 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, we entered into a two-year Extension of Lease Agreement (the "Lease Extension") directly with SPI-Trust.

We 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. We 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 we have 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, we and SPI-Trust amended the Lease Extension to include the lease of an additional 15,000 square feet from SPI-Trust for a one-year term. The additional space was leased at a rate of $8.06 per square foot on annual basis. The additional space was used to expand our solar operations.

On November 30, 2007, we entered into a new Lease Agreement (the "New Lease") with SPI-Trust, with respect to 144,230 square feet of space comprising the entire building in which we have occupied space since December 1, 1985. The term of the New Lease commenced on December 1, 2007 and continues for five (5) years until November 30, 2012. We have the right to extend the term of the New Lease for an additional five (5) year period. The annual rental rate for the first year of the Lease is $12.50 per square foot on a triple net basis, whereby the tenant is responsible for operating expenses, taxes and maintenance of the building. The annual rental rate increases on each anniversary by $0.75 per square foot. If we exercises our right to extend the term of the New Lease, the annual rental rate for the first year of the extended term will be the greater of (a) the rental rate in effect immediately preceding the commencement of the extended term or (b) the market rate at such time, and on each anniversary of the commencement of the extended term the rental rate will increase by $0.75 per square foot. We believe that the terms of the New Lease are commercially reasonable. Rent expense under the New Lease for the three and six months ended June 30, 2008 was $505,000 and $1,010,000, respectively.

In conjunction with our acquisition of Spire Semiconductor in May 2003, SPI-Trust purchased from Stratos Lightwave, Inc. (Spire Semiconductor's former owner) the building that Spire Semiconductor occupies in Hudson, New Hampshire for $3.7 million. Subsequently, we entered into a lease for the building (90,000 square feet) with SPI-Trust whereby we agreed to pay $4.1 million to the SPI-Trust over an initial five-year term expiring in May 2008 with an option for us to extend for five years. In addition to the rent payments, the lease obligates us to keep on deposit with SPI-Trust the equivalent of three months rent ($304,000 as of June 30, 2008.) The lease agreement does not provide for a transfer of ownership at any point. Interest costs were assumed at 7%. Interest expense was approximately $1,600 for the three months ended June 30, 2008. 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		

Upon the expiration of the lease in May 2008, we did not exercise our option to extend the lease for an additional 5 years. On May 20, 2008, we agreed with SPI-Trust to continue the current lease, under the current terms and conditions on a month-to-month basis for a maximum of three (3) months beyond the current term, up to August 23, 2008.

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 it believes 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 the notes to consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2007 for a description of our significant accounting policies.

REVENUE RECOGNITION

We derive our 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 recognizes 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.

We utilize a distributor network to market and sell our hemodialysis catheters domestically. We generally recognizes revenue when the catheters are shipped to our 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 our 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, 2008, is as follows:

	Rebates	Returns	Total
Balance - March 31, 2008	$ 86,000	$ 10,000	$ 96,000
Provision	123,000	8,000	131,000
Utilization	(113,000)	(9,000)	(122,000)
Balance - June 30, 2008	$ 96,000	$ 9,000	$ 105,000

- Credits for rebates are recorded in the month of the actual sale.
- Credits for returns are processed when we receive the actual returned merchandise.
- Substantially all rebates and returns are processed no later than three months after our original shipment.

The reserve percentage of inventory held by distributors over the past quarters has increased to approximately 10.5% at June 30, 2008, when compared to 8% at December 31, 2007. We perform 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 was approximately $912,000 at June 30, 2008.

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).

Our OEM capital equipment solar energy business builds complex customized machines to order for specific customers. Most of these orders are sold on a FOB Bedford, Massachusetts (or EX-Works Factory) basis. It is our 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 our 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. For arrangements with multiple elements, we allocate fair value to each element in the contract and revenue is recognized upon delivery of each element. If we are not able to establish fair value of undelivered elements, all revenue is deferred.

We recognize 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. We accrue revenue and profit utilizing the percentage of completion method using a cost-to-cost methodology. A percentage of the contract revenues and estimated profits is 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. Our policy is to take into revenue the full value of the contract, including any retainage, as we perform against the contract because we have 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.

STOCK-BASED COMPENSATION

On January 1, 2006, we 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, we have not restated our consolidated financial statements for prior periods. Under this transition method, stock-based compensation expense includes stock-based compensation expense for all of our 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 is based on the grant-date fair value estimated in accordance with the provisions of Statement 123(R). The impact of Statement 123(R) on our results of operations resulted in recognition of stock option expense of approximately $213,000 and $137,000 for the three months ended June 30, 2008 and 2007, respectively. Stock option expense was $409,000 and $208,000 for the six months ended June 30, 2008 and 2007, respectively.

Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements

The following table summarizes our gross contractual obligations at June 30, 2008 and the maturity periods and the effect that such obligations are expected to have on our 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 Credit Facility (SVB)	$ 2,524,000	$ 1,308,000	$ 1,216,000	--
Revolving Credit Facility (SVB)	--	--	--	--
Purchase obligations	$15,249,000	$14,968,000	$ 281,000	--
Capital leases:				
Related party capital lease	--	--	--	--

Operating leases:				
Unrelated party operating leases	$ 314,000	$ 135,000	$ 179,000	--
Related party operating lease	$ 9,044,000	$ 1,866,000	$ 4,056,000	$ 3,122,000

Purchase obligations include all open purchase orders outstanding regardless of whether they are cancelable or not. Included in purchase obligations are raw material and equipment needed to fulfill customer orders.

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

Total foreign exchange loss for the quarter ended June 30, 2008 of approximately $294,000 is reflected in other income (expense), net in the accompanying unaudited condensed consolidated statement of operations.

Outstanding letters of credit totaled approximately $250,000 at June 30, 2008. 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 we do not perform as contractually required. These letters of credit expire through 2008 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 4T. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, under the supervision of and with the participation of the Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) as of the end of the period covered by this report, June 30, 2008.

Based on its evaluation, and taking into consideration the material weaknesses in internal control over financial reporting referenced below, our management, including the Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were not effective as of June 30, 2008.

As previously reported in our Annual Report on Form 10-K, as filed with the Securities and Exchange Commission (SEC) on March 31, 2008, in connection with our assessment of the effectiveness of our internal control over financial reporting at the end of our last fiscal year, management identified material weaknesses in the internal control over financial reporting as of December 31, 2007.

We had an ineffective control environment. This has been previously disclosed in prior filings. Efforts to remediate deficiencies were impeded by an evolving control environment brought on by the rapid expansion in our business over the past twelve months. We did not maintain an effective financial reporting process, ensure timely and accurate completion of financial statements and we did not maintain effective monitoring controls including reconciliations and analysis of key accounts. We did not have a sufficient level of staffing with the necessary knowledge, experience and training to ensure the completeness and accuracy of our financial statements. Specifically, the financial reporting organization structure was not adequate to support the size, complexity or activities of our Company.

This affected our ability to maintain effective monitoring controls and related segregation of duties over automated and manual transactions processes. Specifically, inadequate segregation of duties led to untimely identification and resolution of accounting and disclosure matters and failure to perform timely and effective supervision and reviews. We did not maintain effective controls over our IT environment. Specifically, we did not perform a review of restricted user access in our application software system and file server critical worksheet directories. We lacked sufficient business continuity and back-up polices and procedures.

As a result of the foregoing, management concluded that our internal control over financial reporting was not effective as of December 31, 2007.

Changes in Internal Control Over Financial Reporting

Except as described below, there have been no changes during our fiscal quarter ended June 30, 2008 in our internal control over financial reporting that may have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management is actively addressing the above noted material weaknesses and other operational, financial and internal control remediation efforts are also underway. New policies and procedures are being created and existing policies and procedures are being reviewed and will be modified as part of our documentation and testing of internal control over financial reporting. Management believes these new internal control policies and procedures, when fully implemented, along with the training of key personnel and testing of these key controls will be effective in remediating these material weaknesses. In February 2008, we hired a Director of Financial Reporting who will have the primary responsibility for the financial close and reporting process and our internal control and monitoring environment related to financial reporting. In July 2008, we hired a Senior Financial Analyst, who will be actively involved in the financial close and reporting process and assisting us in our remediation efforts. We have implemented new IT policies and inventory procedures and progress was made in addressing the controls over IT and Inventory.

Further, the we have hired an outside consulting firm to finish our Sarbanes-Oxley efforts started in 2007. As a smaller reporting company, our management will perform an evaluation of our internal control over financial reporting at the end of the year; however, our independent registered public accounting firm is not required to issue an opinion on the design or effectiveness on our internal control over financial reporting for the 2008 fiscal year.

PART II
OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

During the second quarter of 2005 a suit was filed by Arrow International, Inc. against Spire Biomedical, Inc., our wholly owned subsidiary, alleging patent infringement by us. The complaint claimed one of our catheter products induced and contributed to infringement when medical professionals inserted it. We responded to the complaint denying all allegations and filed certain counterclaims. We also filed a motion for summary judgment, asserting patent invalidity resulting from plaintiff's failure to follow the administrative procedures of the U.S. Patent and Trademark Office ("USPTO"). On August 4, 2006, the Court granted our motion and dismissed this lawsuit without prejudice. Plaintiffs applied to revive the applicable patent, which application was granted by the USPTO in August 2006. Plaintiffs refiled their lawsuit against us in September 2006. We have filed our answer and resumed our defense. We have filed summary judgment motions with the Court and a hearing date on the motions has been set for the late fall of 2008. Based on information presently available to us, we believe we have meritorious legal defenses with respect to this action. If we are unsuccessful in our defenses, a portion of our product line may be enjoined or we may need to redesign certain products to avoid future infringement. However, if the plaintiff's patent is found valid and infringed, the parties have already agreed to a stipulated calculation of damages based on a pre-specified royalty rate.

ITEM 1A. RISK FACTORS

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-K for the year ended December 31, 2007.

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 22, 2008, we held a Special Meeting in Lieu of Annual Meeting of Stockholders. At the meeting, stockholders voted on the following:

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 2009 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	Broker Non-Votes
Udo Henseler	6,893,524	235,492	--	--

David R. Lipinski	6,238,583	890,433	--	--
Mark C. Little	6,227,827	901,189	--	--
Roger G. Little	6,240,954	888,062	--	--
Michael J. Magliochetti	6,897,578	231,438	--	--
Guy L. Mayer	6,897,393	231,623	--	--
Roger W. Redmond	6,894,193	234,823	--	--

ITEM 5. OTHER INFORMATION

None

ITEM 6. EXHIBITS

10(ac) Second Loan Modification Agreement, dated May 13, 2008, to the Loan and Security Agreement, dated May 25, 2007, among Spire Corporation, Bandwidth Semiconductor, LLC and Silicon Valley Bank.

10(ad) Waiver and First Loan Modification Agreement, dated May 13, 2008, to Loan and Security Agreement, dated March 31, 2008, among Spire Corporation, Spire Solar, Inc., Spire Biomedical, Inc., Spire 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 12, 2008

By: /s/ Roger G. Little

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

Dated: August 12, 2008

By: /s/ Christian Dufresne

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

EXHIBIT INDEX

Exhibit	Description
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