

SPIRE CORP  
Form 10-Q  
August 11, 2010

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

FORM 10-Q

Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934  
For the quarterly period ended June 30, 2010; 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  
(State or other jurisdiction of incorporation or  
organization)

04-2457335  
(I.R.S. Employer Identification Number)

One Patriots Park, Bedford, Massachusetts  
(Address of principal executive offices)

01730-2396  
(Zip Code)

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

Indicate by check mark 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  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

The number of shares of the registrant’s common stock outstanding as of August 03, 2010 was 8,338,188.

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PART I  
FINANCIAL INFORMATION

Item 1. Unaudited Condensed Consolidated Financial Statements

SPIRE CORPORATION AND SUBSIDIARIES  
UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS  
(in thousands, except share amounts)

	June 30, 2010	December 31, 2009
Assets		
Current assets		
Cash and cash equivalents	\$8,003	\$8,999
Restricted cash – current portion	1,476	1,501
	9,479	10,500
Accounts receivable – trade, net	7,694	5,890
Inventories, net	15,015	20,489
Deferred cost of goods sold	3,282	6,588
Deposits on equipment for inventory	672	583
Prepaid expenses and other current assets	633	777
Current assets of discontinued operations and assets held for sale	5	154
Total current assets	36,780	44,981
Property and equipment, net	5,104	5,364
Intangible and other assets, net	849	742
Available-for-sale investments, at quoted market value (cost of \$1,720 and \$1,714 at June 30, 2010 and December 31, 2009, respectively)	1,842	1,948
Deposit – related party	300	300
Non-current assets of discontinued operations and assets held for sale	—	58
Total other assets	2,991	3,048
Total assets	\$44,875	\$53,393
Liabilities and Stockholders' Equity		
Current liabilities		
Current portion of capital lease obligation	\$42	\$39
Current portion of equipment and revolving line of credit	—	1,925
Accounts payable	6,812	8,676
Accrued liabilities	4,536	7,233
Current portion of advances on contracts in progress	18,103	21,708
Liabilities of discontinued operations	1,098	1,682
Total current liabilities	30,591	41,263
Long-term portion of capital lease obligation	81	102
Long-term portion of revolving line of credit	1,357	—
Long-term portion of advances on contracts in progress	2	4
Deferred compensation	1,842	1,948
Other long-term liabilities	639	572
Total long-term liabilities	3,921	2,626
Total liabilities	34,512	43,889

Stockholders' equity		
Common stock, \$0.01 par value; 20,000,000 shares authorized; 8,338,188 and 8,334,688 shares issued and outstanding on June 30, 2010 and December 31, 2009, respectively	83	83
Additional paid-in capital	21,647	21,383
Accumulated deficit	(11,489)	(12,196)
Accumulated other comprehensive income	122	234
Total stockholders' equity	10,363	9,504
Total liabilities and stockholders' equity	\$44,875	\$53,393

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**SPIRE CORPORATION AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in thousands, except share and per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	2009	2010	2009
Net sales and revenues				
Sales of goods	\$ 18,984	\$ 19,028	\$ 34,285	\$ 27,550
Contract research, service and license revenues	3,361	3,145	6,925	6,010
Total net sales and revenues	22,345	22,173	41,210	33,560
Costs of sales and revenues				
Cost of goods sold	16,026	18,127	28,539	25,985
Cost of contract research, services and licenses	2,661	2,269	5,251	4,433
Total cost of sales and revenues	18,687	20,396	33,790	30,418
Gross margin	3,658	1,777	7,420	3,142
Operating expenses				
Selling, general and administrative expenses	4,461	5,182	9,207	8,949
Internal research and development expenses	358	251	659	562
Total operating expenses	4,819	5,433	9,866	9,511
Gain on termination of contracts	—	200	837	1,735
Loss from continuing operations	(1,161)	(3,456)	(1,609)	(4,634)
Interest expense, net	(32)	(76)	(139)	(134)
Loss on equity investment in joint venture	—	(743)	—	(1,023)
Foreign exchange gain (loss)	7	(70)	(13)	139
Total other expense, net	(25)	(889)	(152)	(1,018)
Loss from continuing operations before income tax benefit (provision)	(1,186)	(4,345)	(1,761)	(5,652)
Income tax benefit (provision) – continuing operations	979	(14)	979	(41)
Net loss from continuing operations	(207)	(4,359)	(782)	(5,693)
Loss from discontinued operations before sale of business unit	(36)	(201)	(123)	(391)
Gain on sale of business unit	2,604	—	2,604	—
Income tax provision - discontinued operations	(992)	—	(992)	—
Net income (loss) from discontinued operations, net of tax	1,576	(201)	1,489	(391)
Net income (loss)	\$ 1,369	\$ (4,560)	\$ 707	\$ (6,084)
Basic and diluted income (loss) per share:				
From continuing operations after income taxes	\$(0.03)	\$(0.52)	\$(0.09)	\$(0.68)

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From discontinued operations, net of taxes	0.19	(0.03	)	0.18	(0.05	)
Income (loss) per share – basic and diluted	\$0.16	\$(0.55	)	\$0.09	\$(0.73	)
Weighted average number of common and common equivalent shares outstanding – basic	8,336,303	8,334,688		8,335,500	8,333,915	
Weighted average number of common and common equivalent shares outstanding – diluted	8,337,508	8,334,688		8,344,166	8,333,915	

See accompanying notes to unaudited condensed consolidated financial statements.

SPIRE CORPORATION AND SUBSIDIARIES  
 UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS  
 (in thousands)

	Six months ended June 30,	
	2010	2009
Cash flows from operating activities:		
Net income (loss)	\$707	\$(6,084 )
Less: Net income (loss) from discontinued operations, net of tax	1,489	(391 )
Net loss from continuing operations	(782 )	(5,693 )
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	821	712
Loss on equity investment in joint venture	—	1,023
Deferred tax benefit	(992 )	—
Deferred compensation	(112 )	403
Stock-based compensation	255	326
Provision for accounts receivable reserves	(121 )	(26 )
Provision for inventory reserve	50	141
Changes in assets and liabilities:		
Restricted cash	25	2,625
Accounts receivable	(1,683 )	2,660
Inventories	5,424	(241 )
Deferred cost of goods sold	3,306	(2,341 )
Deposits, prepaid expenses and other current assets	55	1,123
Accounts payable, accrued liabilities and other liabilities	(4,494 )	123
Advances on contracts in progress	(3,607 )	(2,039 )
Net cash used in operating activities of continuing operations	(1,855 )	(1,204 )
Net cash (used in) provided by operating activities of discontinued operations	(551 )	86
Net cash used in operating activities	(2,406 )	(1,118 )
Cash flows from investing activities:		
Purchase of property and equipment	(542 )	(529 )
Increase in intangible and other assets	(126 )	(284 )
Net cash used in investing activities of continuing operations	(668 )	(813 )
Net cash provided by (used in) investing activities of discontinued operations	2,655	(18 )
Net cash provided by (used in) investing activities	1,987	(831 )
Cash flows from financing activities:		
Principal payments on capital lease obligations – related parties	(18 )	—
Principal payments on equipment line of credit	(568 )	(583 )
Proceeds from exercise of stock options	9	24
Net cash used in financing activities	(577 )	(559 )
Net decrease in cash and cash equivalents	(996 )	(2,508 )
Cash and cash equivalents, beginning of period	8,999	5,971
Cash and cash equivalents, end of period	\$8,003	\$3,463

Supplemental disclosures of cash flow information:



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Interest paid	\$150	\$149
Interest received	\$11	\$14
Income taxes paid (refunded), net	\$(3	) \$48

See accompanying notes to unaudited condensed consolidated financial statements.

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SPIRE CORPORATION AND SUBSIDIARIES  
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

June 30, 2010 and 2009

1. Description of the Business

Spire Corporation (“Spire” or the “Company”) develops, manufactures and markets highly-engineered products and services in three principal business areas: (i) capital equipment for the PV solar industry, (ii) biomedical and (iii) optoelectronics, generally bringing to bear expertise in materials technologies, surface science and thin films across all three business areas, discussed below.

In the PV solar area, the Company develops, manufactures and markets specialized equipment for the production of terrestrial photovoltaic modules from solar cells, provides photovoltaic systems for application to powering buildings with connection to the utility grid and supplies photovoltaic materials. The Company’s equipment has been installed in approximately 200 factories in 50 countries.

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; and performs sponsored research programs into practical applications of advanced biomedical and biophotonic technologies.

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

On December 14, 2009, the Company completed the sale of its medical products business unit, which develops and markets coated and uncoated hemodialysis catheters and related devices for the treatment of chronic kidney disease (the “Medical Products Business Unit”), to Bard Access Systems, Inc. (“Bard”). Accordingly, the results of operations, assets and liabilities of the Medical Products Business Unit are being presented herein as discontinued operations and assets held for sale. See Note 14 to the unaudited condensed consolidated financial statements.

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, delivery of solar systems and solar materials. Export sales amounted to 56% and 41% of net sales and revenues for the three and six months ended June 30, 2010, respectively. Export sales amounted to 64% and 56% of net sales and revenues for the three and six months ended June 30, 2009, respectively.

The Company has incurred operating losses before non-recurring gains in 2010 and 2009. Loss from continuing operations, before gains on termination of contracts, was \$1.2 million and \$2.4 million for the three and six months ended June 30, 2010, respectively. Loss from continuing operations, before gains on termination of contracts, was \$3.7 million and \$6.4 million for the three and six months ended June 30, 2009, respectively. As of June 30, 2010, the Company had unrestricted cash and cash equivalents of \$8.0 million compared to \$9.0 million as of December 31, 2009. The Company has numerous options on how to fund future operational losses or working capital needs, including but not limited to unrestricted cash balances on hand, sales of equity, bank debt or the sale or license of assets and technology, as it has done in the past; however, there are no assurances that the Company will be able to sell equity, obtain or access bank debt, or sell or license assets or technology on a timely basis and at appropriate values. The Company has developed several plans including cost containment efforts and outside financing to offset a

decline in business due to the recent global economic recession. As a result, the Company believes it has sufficient resources to finance its current operations through at least June 30, 2011.

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, 2009, 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, 2010 and December 31, 2009 and the results of its operations and cash flows for the three and six months ended June 30, 2010 and 2009. The results of operations for the three and six months ended June 30, 2010 are not necessarily indicative of the results to be expected for the fiscal year ending December 31, 2010. The unaudited condensed consolidated balance sheet as of December 31, 2009 has been derived from audited financial statements as of that date. During the second quarter of 2009, the Company began pursuing an exclusive sales process of its Medical Products Business Unit. On December 14, 2009, the Company completed the sale of the Medical Products Business Unit to Bard. Accordingly, the results of operations, assets and liabilities of the Medical Products Business Unit are being presented herein as discontinued operations and assets held for sale. See Note 14 to the unaudited condensed consolidated financial statements.

The significant accounting policies followed by the Company are set forth in Note 2 to the Company's consolidated financial statements in its Annual Report on Form 10-K for the year ended December 31, 2009.

### New Accounting Pronouncements

In October 2009, the Financial Accounting Standards Board ("FASB") issued an amendment to Accounting Standards Codification ("ASC") 605, Revenue Recognition, on the subtopic 605-25, Multiple-Element Arrangements. The amendment impacts the determination of when the individual deliverables included in a multiple-element arrangement may be treated as separate units of accounting. Additionally, the amendment modifies the manner in which the transaction consideration is allocated across the separately identified deliverables by no longer permitting the residual method of allocating arrangement consideration. The amendment is effective for revenue arrangements entered or materially modified in fiscal years beginning on or after June 15, 2010, however early adoption is permitted. The Company does not expect these new standards to significantly impact its consolidated financial statements.

In January 2010, the FASB issued ASU 2010-06, Improving Disclosures about Fair Value Measurements, which requires interim disclosures regarding significant transfers in and out of Level 1 and Level 2 fair value measurements. Additionally, this ASU requires disclosure for each class of assets and liabilities and disclosures about the valuation techniques and inputs used to measure fair value for both recurring and non-recurring fair value measurements. These disclosures are required for fair value measurements that fall in either Level 2 or Level 3. Further, the ASU requires separate presentation of Level 3 activity for the fair value measurements. The Company adopted the provisions of this standard on January 1, 2010, which did not have a material impact on its consolidated financial statements.

### 3. Accounts Receivable/Advances on Contracts in Progress

Net accounts receivable, trade consists of the following:

(in thousands)	June 30, 2010	December 31, 2009
Amounts billed	\$ 7,470	\$ 5,625
Accrued revenue	331	746
	7,801	6,371
Less: Allowance for sales returns and doubtful accounts	(107 )	(481 )
Net accounts receivable - trade	\$ 7,694	\$ 5,890
Advances on contracts in progress	\$ 18,105	\$ 21,712

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.

Advances on contracts in progress represent contracts for which billings have been presented to the customer, as either deposits or progress payments against future shipments, but revenue has not been recognized.

## 4. Inventories and Deferred Costs of Goods Sold

Inventories, net of \$400 thousand and \$420 thousand of reserves at June 30, 2010 and December 31, 2009, respectively, consist of the following at:

(in thousands)	June 30, 2010	December 31, 2009
Raw materials	\$ 2,710	\$ 2,390
Work in process	9,241	8,170
Finished goods	3,064	9,929
Net inventory	\$ 15,015	\$ 20,489
Deferred cost of goods sold	\$ 3,282	\$ 6,588

Deferred costs of goods sold represents costs on equipment that has shipped to the customer and title has passed. The Company defers these costs until related revenue is recognized.

## 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, 2010	2009	Six Months Ended June 30, 2010	2009
Weighted average number of common and common equivalent shares outstanding – basic	8,336,303	8,334,688	8,335,500	8,333,915
Add: Net additional common shares upon assumed exercise of common stock options	1,205	—	8,666	—
Adjusted weighted average number of common and common equivalents shares outstanding – diluted	8,337,508	8,334,688	8,344,166	8,333,915

For the three and six months ended June 30, 2009, 76,542 and 61,544 shares, respectively, issuable relative to stock options were excluded from the calculation of diluted shares because their inclusion would have been anti-dilutive due to the Company's net loss position.

In addition, for the three and six months ended June 30, 2010, 743,177 and 643,321 shares, respectively, and for the three and six months ended June 30, 2009, 528,448 and 493,947 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 period.

## 6. Operating Segments and Related Information

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

(in thousands)	Solar	Biomedical	Optoelectronics	Total Company
For the three months ended June 30, 2010				
Net sales and revenues	\$18,984	\$2,143	\$1,218	\$22,345
Income (loss) from continuing operations	\$(853)	) \$252	\$(560)	) \$(1,161)
For the three months ended June 30, 2009				
Net sales and revenues	\$19,038	\$2,252	\$883	\$22,173
Income (loss) from continuing operations	\$(3,077)	) \$238	\$(617)	) \$(3,456)
For the six months ended June 30, 2010				
Net sales and revenues	\$34,285	\$4,386	\$2,539	\$41,210
Income (loss) from continuing operations	\$(1,282)	) \$792	\$(1,119)	) \$(1,609)
For the six months ended June 30, 2009				
Net sales and revenues	\$27,611	\$4,409	\$1,540	\$33,560
Income (loss) from continuing operations	\$(5,311)	) \$595	\$82	) \$(4,634)

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

(in thousands)	Three Months Ended June 30,				Six Months Ended June 30,			
	2010	%	2009	%	2010	%	2009	%
United States	\$9,725	44	\$7,916	36	\$24,452	59	\$14,741	44
Europe/Africa	8,596	38	11,335	51	10,332	25	14,266	42
Asia	4,014	18	2,882	13	6,400	16	4,260	13
Rest of the world	10	—	40	—	26	—	293	1
	\$22,345	100	\$22,173	100	\$41,210	100	\$33,560	100

Revenues from contracts with United States government agencies for the three months ended June 30, 2010 and 2009 were approximately \$4.5 million and \$5.2 million or 20% and 24% of consolidated net sales and revenues, respectively.

Revenues from contracts with United States government agencies for the six months ended June 30, 2010 and 2009 were approximately \$15.6 million and \$7.3 million or 38% and 22% of consolidated net sales and revenues, respectively.

Revenues from the delivery of a solar equipment module line and recurring revenue from the sale of solar cell materials to the same customer account for 3% and 13%, respectively, of total net sales and revenue for the three month period ended June 30, 2010. Revenues from the delivery of a solar equipment cell line and solar equipment module line to the same customer account for 34% and 2%, respectively, of total net sales and revenue for the three month period ended June 30, 2010.

Revenues from the delivery of a solar equipment module line and recurring revenue from the sale of solar cell materials to the same customer account for 14% and 19%, respectively, of total net sales and revenue for the six

month period ended June 30, 2010. Revenues from the delivery of a solar equipment cell line and solar equipment module line to the same customer account for 19% and 1%, respectively, of total net sales and revenue for the six month period ended June 30, 2010.

Recurring revenue from the sale of solar cell materials to one customer account for 21% of total net sales and revenue for the three month period ended June 30, 2009. Revenues from the delivery of an automated solar equipment module line to one customer account for 48% of total net sales and revenue for the three month period ended June 30, 2009.

Revenues from the delivery of a solar module equipment and recurring revenue from the sale of solar cell materials to the same customer account for 1% and 18%, respectively, of total net sales and revenue for the six month period ended June 30, 2009. Revenues from the delivery of an automated solar equipment module line to one customer account for 32% of total net sales and revenue for the six month period ended June 30, 2009.



Two customers represented approximately 20% and 15%, respectively, of net accounts receivable, trade at June 30, 2010 and one customer represented approximately 24% of net accounts receivable, trade at December 31, 2009.

#### 7. Intangible and Other Assets

Patents amounted to \$80 thousand and \$98 thousand net of accumulated amortization of \$729 thousand and \$712 thousand, at June 30, 2010 and December 31, 2009, respectively. Licenses amounted to \$73 thousand, net of accumulated amortization of \$2 thousand, at June 30, 2010. 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. Amortization expense, relating to patents and licenses, was approximately \$10 thousand and \$6 thousand for the three months ended June 30, 2010 and 2009, respectively, and approximately \$19 thousand and \$12 thousand for the six months ended June 30, 2010 and 2009, respectively.

For disclosure purposes, the table below includes future amortization expense for patents and licenses owned by the Company as well as estimated amortization expense related to patents that remain pending at June 30, 2010 of \$446 thousand. This estimated expense for patents pending assumes that the patents are issued immediately, and therefore are being amortized over five years on a straight-line basis. Estimated amortization expense for the periods ending December 31, is as follows:

(in thousands)	Amortization Expense
2010 remaining 6 months	\$ 65
2011	123
2012	112
2013	107
2014 and beyond	192
	\$ 599

Also included in other assets are approximately \$250 thousand of refundable deposits made by the Company at June 30, 2010 and December 31, 2009.

#### 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:

(in thousands)	June 30, 2010	December 31, 2009
Cash and short term investments	\$ 23	\$ 44
Fixed income	446	377
Equities	1,373	1,527
	\$ 1,842	\$ 1,948

These investments have been classified as available-for-sale investments and are reported at fair value, with unrealized gains and losses included in accumulated other comprehensive income. The unrealized gain on these marketable securities was \$122 thousand and \$234 thousand as of June 30, 2010 and December 31, 2009, respectively.

9. Fair Value Measurements

The Company follows ASC 820-10, Fair Value Measurements and Disclosures (“ASC 820-10”), for fair value measurements. ASC 820-10 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The 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 ASC 820-10 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 ASC 820-10, 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 ASC 820-10, 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 ASC 820-10, 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.

In January 2010, the FASB issued ASU 2010-06, Improving Disclosures about Fair Value Measurements, which requires interim disclosures regarding significant transfers in and out of Level 1 and Level 2 fair value measurements. Additionally, this ASU requires disclosure for each class of assets and liabilities and disclosures about the valuation techniques and inputs used to measure fair value for both recurring and non-recurring fair value measurements. These disclosures are required for fair value measurements that fall in either Level 2 or Level 3. Further, the ASU requires separate presentation of Level 3 activity for the fair value measurements. The Company adopted the provisions of this standard on January 1, 2010, which did not have a material impact on its consolidated financial statements.

#### Valuation Techniques

Fair value is a market-based measure considered from the perspective of a market participant who would buy the asset or assume the liability rather than the Company's own specific measure. All of the Company's fixed income securities are priced using a variety of daily data sources, largely readily-available market data and broker quotes. To validate these prices, the Company compares the fair market values of the Company's fixed income investments using market data from observable and corroborated sources. The Company also performs the fair value calculations for its equity securities using market data from observable and corroborated sources. In periods of market inactivity, the observability of prices and inputs may be reduced for certain instruments. This condition could cause an instrument to be reclassified from Level 1 to Level 2 or from Level 2 to Level 3. During the three and six months ended June 30, 2010, none of the Company's instruments were reclassified between Level 1, Level 2 or Level 3.

The following table presents the financial instruments related to the Company's non-qualified deferred compensation plan carried at fair value on a recurring basis as of June 30, 2010 by ASC 820-10 valuation hierarchy (as defined above).

(in thousands)	Balance as of June 30, 2010	Level 1	Level 2	Level 3
Cash and short term investments	\$23	\$23	\$—	\$—
Common stock	315	315	—	—
Mutual funds – closed-end fund	162	162	—	—
Mutual funds – open-end fund	896	—	896	—
Fixed income	446	—	446	—

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Total available-for-sale investments (1)	\$1,842	\$500	\$1,342	\$—
Percent of total	100%	27%	73%	—

(1) Changes in the fair value of available-for-sale investments are recorded in accumulated other comprehensive income, a component of stockholders' equity, in the Company's unaudited condensed consolidated balance sheets.

The carrying amounts reflected in the Company's unaudited condensed consolidated balance sheets for cash, accounts receivable, prepaid expenses and other current assets, assets of discontinued operations and assets held for sale, accounts payable, accrued expenses, and capital lease obligations approximate fair value due to their short-term maturities. The fair value of the Company's long term debt has been estimated by management based on the terms that it believes it could obtain in the current market for debt of the same terms and remaining maturities. Due to the short-term nature of the remaining maturities, frequency of amendments to its terms and the variable interest rates, the carrying value of the long-term debt approximates fair value at June 30, 2010.

## 10. Notes Payable and Credit Arrangements

On June 15, 2010, the Company and Silicon Valley Bank (the “Bank” or “SVB”) entered into (i) the First Loan Modification Agreement amending certain terms of the Second Amended and Restated Loan and Security Agreement (the “Second Restated Revolving Credit Facility”) and (ii) the First Loan Modification Agreement amending certain terms of the Amended and Restated Export-Import Bank Loan and Security Agreement (the “Restated Ex-Im Facility”) (collectively, the “Loan Modifications”). Pursuant to the terms of the Loan Modifications, the Company and the Bank agreed to (i) create a letter of credit sub-facility within the Company’s existing credit line, (ii) decrease the interest rate with regard to financed eligible accounts from SVB Prime Rate plus 3.0% per annum to SVB Prime Rate plus 2.5% per annum while (iii) reducing the interest rate floor from 6.0% per annum to 4.0% per annum and (iv) extending the maturity date of the Second Restated Revolving Credit Facility and Restated Ex-Im Facility to December 31, 2011. In addition to the above, in the event the Company achieves certain levels of liquidity, based on cash on hand and availability under the credit facility, the Bank will waive the requirement that the Company cash collateralize any letters of credit issued by the Bank pursuant to the new letter of credit sub-facility in an aggregate amount up to \$1.5 million. Finally, because the Company has made all the required payments under the Equipment Term Loan, the Bank acknowledged that the Equipment Term Loan has been paid in full and all references to it in the Second Restated Revolving Credit Facility have been deleted.

Advances outstanding under the Second Restated Revolving Credit Facility were \$1.4 million and \$1.0 million at June 30, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were zero and \$340 thousand at June 30, 2010 and December 31, 2009, respectively. The Equipment Term Loan’s principal balance outstanding was zero and \$583 thousand at June 30, 2010 and December 31, 2009, respectively. As of June 30, 2010, the interest rate per annum on the Second Restated Revolving Credit Facility and Restated Ex-Im Facility was 6.0% and 6.0%, respectively. Availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$1.3 million and \$1.7 million, respectively, as of June 30, 2010. At June 30, 2010, the Company has classified advances outstanding under the Second Restated Revolving Credit Facility as long-term due to (i) the maturity date extending at least one year beyond the date of this quarterly report, (ii) there being no accelerated payment clauses which would require the Company to pay down the advances outstanding prior to the maturity date and (iii) the Company does not expect advances outstanding to exceed the lowest borrowing base during the next year.

## 11. Stock Option Plan and Stock-Based Compensation

The Company has recognized stock-based compensation expense of approximately \$134 thousand and \$177 thousand for the three months ended June 30, 2010 and 2009, respectively, and \$255 thousand and \$326 thousand for the six months ended June 30, 2010 and 2009, 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:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	2009	2010	2009
Cost of contract research, services and licenses	\$12	\$11	\$17	\$18
Cost of goods sold	26	35	38	64
Administrative and selling	96	131	200	244
Total stock-based compensation	\$134	\$177	\$255	\$326

At June 30, 2010, the Company had outstanding options under two option plans: the 1996 Equity Incentive Plan (the “1996 Plan”) and the 2007 Stock Equity Plan (the “2007 Plan”, together the “Plans”). 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.

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A summary of options outstanding under the Plan as of June 30, 2010 and changes during the six-month period is as follows:

(in thousands, except share and per share data)	Number of Shares	Weighted-Average Exercise Price	Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Options Outstanding at December 31, 2009	781,677	\$ 7.10		
Granted	27,500	\$ 4.32		
Exercised	(3,500 )	\$ 2.50		
Cancelled/expired	(42,500 )	\$ 9.23		
Options Outstanding at June 30, 2010	763,177	\$ 6.90	6.65	\$ —
Options Exercisable at June 30, 2010	532,517	\$ 6.77	5.96	\$ —

Compensation expense related to stock options to be charged in future periods amounts to approximately \$783 thousand at June 30, 2010 and will be recognized over a weighted-average period of 2.25 years.

The per-share weighted-average fair value of stock options granted during the three and six months ended June 30, 2010 was \$2.34 and \$2.81, respectively, and \$3.99 and \$3.79 for the three and six months ended June 30, 2009, respectively, on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

Year	Expected Dividend Yield	Risk-Free Interest Rate	Expected Option Life	Expected Volatility Factor
2010	—	2.20%	4.8 years	82.5%
2009	—	2.10%	4.5 years	82.8%

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 Plans. 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.

## 12. Comprehensive Income (Loss)

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

(in thousands)	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2010	2009	2010	2009
Net income (loss)	\$ 1,369	\$ (4,560 )	\$ 707	\$ (6,084 )
Other comprehensive income (loss):				
Unrealized gain (loss) on available for sale marketable securities, net of tax	(176 )	356	(112 )	403
Total comprehensive income (loss)	\$ 1,193	\$ (4,204 )	\$ 595	\$ (5,681 )

13. Gains on Termination of Contracts

On August 29, 2008, the Company delivered to Principia Lightworks, Inc. (“Principia”) a Notice of Breach and Pending Termination of a certain Manufacturing Agreement, dated August 29, 2006, by and between Spire Semiconductor and Principia (the “Manufacturing Agreement”). Under the terms of the Manufacturing Agreement, Principia made an up-front payment for nonrecurring engineering and facility access costs and was required to make monthly facility availability payments throughout the term of the agreement. As a result of Principia’s failure to make monthly facility availability payments in 2008, the Company has fully reserved \$225 thousand against Principia’s accounts receivable balance. The Company entered into a mutual standstill agreement with Principia, which expired on March 15, 2009. The purpose of the standstill was to give the parties additional time to negotiate a resolution.

On March 27, 2009, Spire Semiconductor and Principia mutually agreed to terminate the Manufacturing Agreement for convenience and entered into a separation and novation agreement (the “Novation Agreement”). Under the terms of the Novation Agreement, both parties agreed to terminate technology licenses that were granted to each other under the terms of the Manufacturing Agreement and Spire Semiconductor was released from its production requirements to Principia. Principia was released from paying its future facility availability payments due under the Manufacturing Agreement but will be required to pay facility availability payments of \$300 thousand. Spire Semiconductor holds 67,500 shares of Principia stock as collateral against the outstanding facility availability payments. During the three months ended March 31, 2009, the Company accelerated the amortization of deferred revenue and recognized \$1.5 million as a gain on termination of contracts related to the termination of the Manufacturing Agreement.



On June 18, 2009, the Company entered into a settlement agreement with Marubeni Corporation with respect to the License to Manufacture and Distribute Equipment Agreement (the "License Agreement") dated April 1, 2003 for the license of manufacturing and distribution in Japan of the Company's solar photovoltaic modular manufacturing equipment. Under the terms of the settlement agreement, both parties agreed to terminate the License Agreement including but not limited to the eighteen (18) month non-compete obligation. As a result of the settlement, the Company received a payment and recognized a gain on termination of contracts of \$200 thousand in the second quarter of 2009.

In the fourth quarter of 2009, the Company determined that three purchase and sale agreements with Jiangxi Gemei Sci-Tech., LLC ("Jiangxi") related to a module equipment line and cell equipment line were terminated due to a breach of contract by Jiangxi. Jiangxi had failed to make payments as required by the agreements and has not responded to numerous communications by the Company. The Company made commitments to purchase equipment on behalf of Jiangxi and due to Jiangxi not making contractual payments, the Company entered into settlement agreements with these vendors in the first quarter of 2010 and fourth quarter of 2009. As a result of the settlement agreement entered into in the first quarter of 2010 and deposits paid by Jiangxi less settlements paid to vendors, the Company recognized a gain on termination of contracts of \$837 thousand for the three months ended March 31, 2010.

#### 14. Discontinued Operations and Assets Held for Sale

In accordance with ASC 205-20, Presentation of Financial Statements – Discontinued Operations, the accompanying unaudited condensed consolidated balance sheets, statements of operations and cash flows present the results and assets of the Medical Products Business Unit as discontinued operations and assets held for sale. During the second quarter of 2009, the Company began pursuing an exclusive sales process of the Medical Products Business Unit. The Company (i) determined that the Medical Products Business Unit was a separate component of the Company's business as, historically, management reviewed separately the Medical Products Business Unit's financial results apart from the Company's ongoing continuing operations, (ii) eliminated the Medical Products Business Unit's financial results from ongoing operations and (iii) determined that the Company will have no further continuing involvement in the operations of the Medical Products Business Unit or cash flows from the Medical Products Business Unit after the sale.

On December 14, 2009, the Company completed the sale of the Medical Products Business Unit to Bard Access Systems, Inc. The purchase price for the Medical Products Business Unit was \$12.4 million, including (i) \$9.4 million that was paid in cash to the Company at closing, (ii) \$100 thousand that was paid in cash at closing to two of the Company's employees, including Mark Little, Chief Executive Officer of Spire Biomedical, as consideration for their execution of non-competition agreements, and (iii) \$2.9 million that was paid in cash to the Company in the second quarter of 2010 based on the achievement of certain milestones described below (the "Contingent Purchase Price").

Certain of the assets were transferred to Bard at the closing, and certain other assets (the "Contingent Deferred Assets") were transferred to Bard upon the completion of a product recall related to such assets, which occurred in the second quarter of 2010. Until the Contingent Deferred Assets were transferred by the Company, it continued to manufacture and supply to Bard certain hemodialysis catheter products under the terms of a distribution agreement (the "Transition Period"). The Contingent Deferred Assets were transferred to Bard and Bard paid \$1.5 million of the Contingent Purchase Price to the Company in the second quarter of 2010. In addition, Bard paid \$1.4 million of the remaining Contingent Purchase Price to the Company in the second quarter of 2010 based upon the achievement of milestones related to the manufacture and supply of certain quantities of hemodialysis catheter products under the distribution agreement. The transfer price for hemodialysis catheter products delivered to Bard under the distribution agreement were equal to our standard costs of goods, including related overhead, without mark-up and calculated in accordance with U.S. generally accepted accounting principles.

The Company initiated a voluntary recall of certain catheters based upon three field complaints of catheter malfunctions received in the third quarter of 2009. No patient injury or complications resulted from the malfunction. It was determined that under certain molding conditions, there was a possibility that insufficient bonding may occur which could cause the catheter to malfunction. As it could not be isolated to a particular lot, the Company initiated a voluntary recall of any inventory held by our distributors and their customers. As the manufacturer of record, the Company is responsible for ensuring that the product meets the product specifications and the associated product liability that may result in failure those specifications. Not included in discontinued operations are certain indirect costs of the Medical Products Business Unit that have been reclassified to selling, general and administrative expense of \$71 thousand and \$162 thousand for the three and six months ended June 30, 2010, respectively, and \$115 thousand and \$234 thousand for the three and six months ended June 30, 2009, respectively. The voluntary recall was initiated in October 2009 and in February 2010, the Company determined that it had achieved a 100% effectiveness rating based upon the recall criteria. The U.S. Food and Drug Administration advised the Company in June 2010 that the recalls were terminated.

Spire Biomedical warrants that any of its catheter products found to be defective will be replaced. No warranty is made that the failure of the product will not occur, and Spire disclaims any responsibility for any medical complications. Spire Biomedical warrants that its services only will meet the agreed upon specifications.

The assets and liabilities of the Medical Products Business Unit as of June 30, 2010 and December 31, 2009 are as follows:

(in thousands)	June 30, 2010	December 31, 2009
Assets of Discontinued Operations and Assets Held for Sale		
Current assets of discontinued operations and assets held for sale		
Accounts receivable – trade, net	\$—	\$104
Inventories, net	—	50
Deposits on equipment for inventory	5	—
Total current assets of discontinued operations and assets held for sale	5	154
Property and equipment, net	—	9
Intangible and other assets, net	—	49
Total non-current assets of discontinued operations and assets held for sale	5	58
Total assets of discontinued operations and assets held for sale	\$5	\$212
Liabilities of Discontinued Operations		
Current liabilities of discontinued operations		
Accounts payable	\$812	\$593
Accrued liabilities	286	1,089
Total current liabilities of discontinued operations	1,098	1,682
Total liabilities of discontinued operations	\$1,098	\$1,682

Included in accrued liabilities are reserves of zero and \$782 thousand related to the recall, as discussed above, at June 30, 2010 and December 31, 2009, respectively.

Condensed results of operations relating to the Medical Products Business Unit are as follows:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	2009	2010	2009
Net sales and revenues	\$1,439	\$687	\$1,656	\$1,594
Gross margin	\$(64	) \$196	\$(136	) \$403
Loss from discontinued operations before sale of business unit	\$(36	) \$(201	) \$(123	) \$(391
Gain on sale of business unit	2,604	—	2,604	—
Income tax provision	(992	) —	(992	) —
Net income (loss) from discontinued operations, net of tax	\$1,576	\$(201	) \$1,489	\$(391

## 15. Subsequent Events

The Company evaluated subsequent events through the date of this filing and had no subsequent events to report.



## 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 the Annual Report on Form 10-K for the year ended December 31, 2009 and in subsequent period reports filed with the Securities and Exchange Commission, including this report. 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 develop, manufacture and market highly-engineered products and services in three principal business areas: (i) capital equipment for the PV solar industry, (ii) biomedical and (iii) optoelectronics, generally bringing to bear expertise in materials technologies, surface science and thin films across all three business areas, discussed below.

In the PV solar area, we develop, manufacture and market specialized equipment for the production of terrestrial photovoltaic modules from solar cells, provide photovoltaic systems for application to powering buildings with connection to the utility grid and supply photovoltaic materials. Our equipment has been installed in approximately 200 factories in 50 countries. The equipment market is very competitive with major competitors located in Japan and Germany. Our flagship product is our Sun Simulator, which tests module performance. Our other product offerings include turnkey module lines and to a lesser extent other individual equipment. To compete we offer other services including training and assistance with module certification. At times, we supply materials such as solar cells to certain customers. We also provide turnkey services to our customers to support backend integration to solar cell manufacturing.

During 2009, we dissolved our joint venture, Gloria Spire Solar. We received a return of capital, hired several key employees, received pending customer contracts and have restarted a photovoltaic systems business. Our photovoltaic systems business provides an application for powering buildings with connection to the utility grid. We do not manufacture modules, but rather procure them from multiple suppliers based upon our industry knowledge of the supply chain.

In the optoelectronics area, we provide custom compound semiconductor foundry and fabrication services on a merchant basis to customers involved in biomedical/biophotonic instruments, telecommunications and defense applications. Services include compound semiconductor wafer growth, other thin film processes and related device processing and fabrication services. We also provide materials testing services and perform services in support of sponsored research into practical applications of optoelectronic technologies. We are developing solar concentrator cell technology to provide to high efficient cells to the industry.

In the biomedical area, we 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; and performs sponsored research programs into practical applications of advanced biomedical and biophotonic technologies.

On December 14, 2009, we completed the sale of our medical products business unit, which develops and markets coated and uncoated hemodialysis catheters and related devices for the treatment of chronic kidney disease (the “Medical Products Business Unit”), to Bard Access Systems, Inc. Accordingly, the results and assets of the Medical Products Business Unit are being presented herein as discontinued operations and assets held for sale. See Note 14 to the unaudited condensed consolidated financial statements.

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, delivery of solar systems and solar materials. Export sales amounted to 56% and 64% of net sales and revenues for the three months ended June 30, 2010 and 2009, respectively, and 41% and 56% of net sales and revenues for the six months ended June 30, 2010 and 2009, respectively.

## 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 Ended June 30,			
	2010		2009		2010		2009	
Net sales and revenues	100	%	100	%	100	%	100	%
Cost of sales and revenues	84		92		82		91	
Gross margin	16		8		18		9	
Selling, general and administrative expenses	(20	)	(24	)	(22	)	(26	)
Internal research and development expenses	(1	)	(1	)	(2	)	(2	)
Gains on termination of contracts	—		1		2		5	
Income (loss) from continuing operations	(5	)	(16	)	(4	)	(14	)
Other expense, net	—		(4	)	—		(3	)
Income (loss) from continuing operations before income tax benefit (provision)	(5	)	(20	)	(4	)	(17	)
Income tax benefit (provision) - continuing operations	4		—		2		—	
Loss from continuing operations	(1	)	(20	)	(2	)	(17	)
Loss from discontinued operations, net of tax	7		(1	)	4		(1	)
Net income (loss)	6	%	(21	%)	2	%	(18	%)

## Overall

Our total net sales and revenues for the six months ended June 30, 2010 were \$41.2 million as compared to \$33.6 million for the six months ended June 30, 2009, which represents an increase of \$7.6 million or 23%. The increase was primarily attributable to a \$6.7 million increase in solar sales and \$1.0 million increase in optoelectronics revenue, partially offset slight decrease in biomedical revenue.

## Solar Business Unit

Sales in our solar business unit increased 24% during the six months ended June 30, 2010 to \$34.3 million as compared to \$27.6 million in the six months ended June 30, 2009. The increase is the result of sales related to a cell manufacturing line completed in the second quarter of 2010 and an increase in solar cell materials during 2010, partially offset by a decrease in solar equipment sales.

## Biomedical Business Unit

Revenues of our biomedical business unit remained relatively flat at \$4.4 million for the six months ended June 30, 2010 and 2009. Increase in revenues from our orthopedics coatings services was offset by a decrease in revenue from research and development contracts.

## Optoelectronics Business Unit

Revenues in our optoelectronics business unit increased 65% to \$2.5 million during the six months ended June 30, 2010 as compared to \$1.5 million in the six months ended June 30, 2009. The increase was primarily attributable to

revenue from a government cost share contract and new optoelectronic and research and development projects started in the second quarter of 2010.

Three and Six Months Ended June 30, 2010 Compared to Three and Six Months Ended June 30, 2009

Net Sales and Revenues

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

(in thousands)	Three Months Ended June 30,		Increase/(Decrease)	
	2010	2009	\$	%
Sales of goods	\$18,984	\$19,028	\$(44)	) —%
Contract research, services and license revenues	3,361	3,145	216	7%
Net sales and revenues	\$22,345	\$22,173	\$172	1%



The slight decrease in sales of goods for the three months ended June 30, 2010 as compared to the three months ended June 30, 2009 was primarily due to a decline of \$6.9 million in solar equipment revenues and a decline of \$1.6 million in solar cell materials, partially offset by an increase in sales of solar cell manufacturing equipment of \$7.7 million and an increase in solar system revenue of \$852 thousand. Solar module equipment decreased 48% in 2010 as compared to 2009 primarily due to the completion of an automated module line in 2009 worth \$10.6 million. Sales of solar cell materials, all to one customer, decreased 35% in 2010 as compared to 2009 primarily due to a contractual decrease in delivered cells in the second quarter of 2010. Sales of solar cell equipment included the completion of a solar cell manufacturing line to one customer worth \$7.7 million in 2010. Sales of solar systems included the completion of two solar system projects totaling \$778 thousand in 2010.

The 7% increase in contract research, services and license revenues for the three months ended June 30, 2010 as compared to the three months ended June 30, 2009 is primarily attributable to an increase in optoelectronics and orthopedics service revenue, partially offset by a decrease in research and development contracts. Revenue from our optoelectronics processing services (Spire Semiconductor) increased 38% in 2010 compared to 2009 as a result of revenue from a government cost share contract and new optoelectronic and research and development projects started in the second quarter of 2010. Revenues from our orthopedic activities increased 3% in 2010 as compared to 2009. Revenues from our research and development activities decreased 29% in 2010 as compared to 2009 primarily due to a decrease in the number and value of contracts associated with funded research and development.

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

(in thousands)	Six Months Ended June 30,		Increase	
	2010	2009	\$	%
Sales of goods	\$ 34,285	\$ 27,550	\$ 6,735	24%
Contract research, services and license revenues	6,925	6,010	915	15%
Net sales and revenues	\$ 41,210	\$ 33,560	\$ 7,650	23%

The 24% increase in sales of goods for the six months ended June 30, 2010 as compared to the six months ended June 30, 2009 was primarily due to an increase in sales of solar cell manufacturing equipment of \$7.8 million, an increase in sales of solar cell materials of \$1.9 million and an increase in solar system revenue of \$852 thousand, partially offset by a decline of \$3.8 million in solar equipment revenues. Sales of solar cell equipment included the completion of a solar cell manufacturing line to one customer worth \$7.7 million in 2010. Sales of solar materials, all to one customer, increased 32% in 2010 as compared to 2009 primarily due to a shift of scheduled shipments from the fourth quarter of 2009 into the first quarter of 2010. Sales of solar systems included the completion of two solar system projects totaling \$778 thousand in 2010. Solar module equipment decreased 18% in 2010 as compared to 2009 primarily due to the completion of an automated module line in 2009 worth \$10.6 million.

The 15% increase in contract research, services and license revenues for the six months ended June 30, 2010 as compared to the six months ended June 30, 2009 is primarily attributable to an increase in optoelectronics and orthopedics service revenue, partially offset by a decrease in research and development contracts. Revenue from our optoelectronics processing services (Spire Semiconductor) increased 65% in 2010 compared to 2009 as a result of revenue from a government cost share contract and new optoelectronic and research and development projects started in the second quarter of 2010. Revenues from our orthopedic activities increased 7% in 2010 as compared to 2009. Revenues from our research and development activities decreased 28% in 2010 as compared to 2009 primarily due to a decrease 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:

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(in thousands)	Three Months Ended June 30,				Increase/(Decrease)	
	2010	%	2009	%	\$	%
Cost of goods sold	\$ 16,026	84%	\$ 18,127	95%	\$ (2,101 )	(12%)
Cost of contract research, services and licenses	2,661	79%	2,269	72%	392	17%
Net cost of sales and revenues	\$ 18,687	84%	\$ 20,396	92%	\$ (1,709 )	(8%)

Cost of goods sold decreased 12% for the three months ended June 30, 2010 as compared to the three months ended June 30, 2009, primarily as a result of reduced costs related to solar module equipment and solar cell materials, partially offset by increased costs related to solar cell equipment and solar systems. As a percentage of sales, cost of goods sold was 84% of sales of goods in 2010 as compared to 95% of sales of goods in 2009. This decrease in the percentage of sales in 2010 is due to a favorable product mix with higher margins in solar module equipment sales.

Cost of contract research, services and licenses increased 17% for the three months ended June 30, 2010 as compared to the three months ended June 30, 2009, primarily as a result of increased costs at our optoelectronics facility (Spire Semiconductor) due to higher associated revenues and slightly higher cost in our orthopedics service, partially offset by decreased costs of our contract research activities due to lower volumes. Cost of contract research, services and licenses as a percentage of revenue increased to 79% of revenues in 2010 from 72% in 2009, primarily due to unfavorable margin related to our optoelectronics facility, partially offset by favorable margins in orthopedic services in 2010.

Cost of sales and revenues also includes approximately \$38 thousand and \$46 thousand of stock-based compensation for the three months ended June 30, 2010 and 2009, 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:

(in thousands)	Six Months Ended June 30,				Increase	
	2010	%	2009	%	\$	%
Cost of goods sold	\$ 28,539	83%	\$ 25,985	94%	\$ 2,554	10%
Cost of contract research, services and licenses	5,251	76%	4,433	74%	818	18%
Net cost of sales and revenues	\$ 33,790	82%	\$ 30,418	91%	\$ 3,372	11%

Cost of goods sold increased 10% for the six months ended June 30, 2010 as compared to the six months ended June 30, 2009, primarily as a result of increased costs related to solar cell equipment, solar cell materials and solar systems, partially offset by a decrease in costs related to solar module equipment. As a percentage of sales, cost of goods sold was 83% of sales of goods in 2010 as compared to 94% of sales of goods in 2009. This decrease in the percentage of sales in 2010 is due primarily to favorable margins in solar module equipment in 2010.

Cost of contract research, services and licenses increased 18% for the six months ended June 30, 2010 as compared to the six months ended June 30, 2009, primarily as a result of increased costs at our optoelectronics facility (Spire Semiconductor) due to higher associated revenues. Cost of contract research, services and licenses as a percentage of revenue increased to 76% of revenues in 2010 from 74% in 2009, primarily due to unfavorable margin related to our optoelectronics facility in 2010.

Cost of sales and revenues also includes approximately \$55 thousand and \$82 thousand of stock-based compensation for the six months ended June 30, 2010 and 2009, 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:

(in thousands)	2010	Three Months Ended June 30,		%	Increase/(Decrease)	
		%	2009		\$	%
Selling, general and administrative	\$ 4,461	20%	\$ 5,182	24%	\$ (721 )	(14%)
Internal research and development	358	2%	251	1%	107	43%
Operating expenses	\$ 4,819	22%	\$ 5,433	25%	\$ (614 )	(11%)

### Selling, General and Administrative Expenses

Selling, general and administrative expense decreased 14% in the three months ended June 30, 2010 as compared to the three months ended June 30, 2009, primarily as a result of a decrease in marketing and legal expenses and commissions paid to our agents, partially offset by an increase in employee related expenses. Selling, general and administrative expense decreased to 20% of sales and revenues in 2010 as compared to 24% in 2009. The decrease was primarily due to the absorption of lower selling, general and administrative overhead costs by the slight increase in sales and revenues.

Operating expenses includes approximately \$96 thousand and \$131 thousand of stock-based compensation for the three months ended June 30, 2010 and 2009, respectively.

### Internal Research and Development

Internal research and development expense increased 43% in the three months ended June 30, 2010 as compared to the three months ended June 30, 2009, primarily as a result of higher levels of research and development spent in the solar group. As a percentage of sales and revenue, internal research and development expenses increased slightly to 2% of sales and revenues in 2010 as compared to 1% in 2009.

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

(in thousands)	Six Months Ended June 30,				Increase	
	2010	%	2009	%	\$	%
Selling, general and administrative	\$ 9,207	22%	\$ 8,949	26%	\$ 258	3%
Internal research and development	659	2%	562	2%	97	17%
Operating expenses	\$ 9,866	24%	\$ 9,511	28%	\$ 355	4%

### Selling, General and Administrative Expenses

Selling, general and administrative expense increased 3% in the six months ended June 30, 2010 as compared to the six months ended June 30, 2009, primarily as a result of an increase in employee related costs, partially offset a decrease in marketing and legal expenses and commissions paid to our agents. Selling, general and administrative expense decreased to 22% of sales and revenues in 2010 as compared to 26% in 2009. The decrease was primarily due to the absorption of lower selling, general and administrative overhead costs by the slight increase in sales and revenues.

Operating expenses includes approximately \$200 thousand and \$244 thousand of stock-based compensation for the six months ended June 30, 2010 and 2009, respectively.

### Internal Research and Development

Internal research and development expense increased 17% in the six months ended June 30, 2010 as compared to the six months ended June 30, 2009, primarily as a result of higher levels of research and development spent in the solar group. As a percentage of sales and revenue, internal research and development expenses remained at 2% of sales and revenues in 2010 and 2009.

### Gains on Termination of Contracts

On August 29, 2008, we delivered to Principia Lightworks, Inc. (“Principia”) a Notice of Breach and Pending Termination of a certain Manufacturing Agreement, dated August 29, 2006, by and between Spire Semiconductor and Principia (the “Manufacturing Agreement”). Under the terms of the Manufacturing Agreement, Principia made an up-front payment for nonrecurring engineering and facility access costs and was required to make monthly facility availability payments throughout the term of the agreement. As a result of Principia’s failure to make monthly facility availability payments in 2008, we have fully reserved \$225 thousand against Principia’s accounts receivable balance. We entered into a mutual standstill agreement with Principia, which expired on March 15, 2009. The purpose of the standstill was to give the parties additional time to negotiate a resolution.

On March 27, 2009, Spire Semiconductor and Principia mutually agreed to terminate the Manufacturing Agreement for convenience and entered into a separation and novation agreement (the “Novation Agreement”). Under the terms of the Novation Agreement, both parties agreed to terminate technology licenses that were granted to each other under the terms of

the Manufacturing Agreement and Spire Semiconductor was released from its production requirements to Principia. Principia was released from paying its future facility availability payments due under the Manufacturing Agreement but will be required to pay facility availability payments of \$300 thousand. Spire Semiconductor holds 67,500 shares of Principia stock as collateral against the outstanding facility availability payments. During the three months ended March 31, 2009, we accelerated the amortization of deferred revenue and recognized \$1.5 million as a gain on termination of contracts related to the termination of the Manufacturing Agreement. See Note 13 to the unaudited condensed consolidated financial statements.

On June 18, 2009, we entered into a settlement agreement with Marubeni Corporation with respect to the License to Manufacture and Distribute Equipment Agreement (the "License Agreement") dated April 1, 2003 for the license of manufacturing and distribution in Japan of the Company's solar photovoltaic modular manufacturing equipment. Under the terms of the settlement agreement, both parties agreed to terminate the License Agreement including but not limited to the eighteen (18) month non-compete obligation. As a result of the settlement, we received a payment and recognized a gain on termination of contracts of \$200 thousand in the second quarter of 2009.

In the fourth quarter of 2009, we determined that three purchase and sale agreements with Jiangxi Gemei Sci-Tech., LLC ("Jiangxi") related to a module equipment line and cell equipment line were terminated. Jiangxi had failed to make payments as required by the agreements and has not responded to numerous communications by us. We made commitments to purchase equipment on behalf of Jiangxi and due to Jiangxi not making contractual payments, we entered into settlement agreements with these vendors in the first quarter of 2010 and fourth quarter of 2009. As a result of the settlement agreement entered into in the first quarter of 2010 and deposits paid by Jiangxi less settlements paid to vendors, we have recognized a gain on termination of contracts of \$837 thousand for the three months ended March 31, 2010. See Note 13 to the unaudited condensed consolidated financial statements.

#### Other Income (Expense), Net

We earned \$11 thousand and \$3 thousand of interest income for the three months ended June 30, 2010 and 2009, respectively. We incurred interest expense of \$43 thousand and \$79 thousand for the three months ended June 30, 2010 and 2009, respectively. We recorded a loss of \$743 thousand on equity investment in joint venture with Gloria Solar for the three months ended June 30, 2009. We had a currency exchange gain of approximately \$7 thousand and a currency exchange loss of \$70 thousand during the three months ended June 30, 2010 and 2009, respectively.

We earned \$11 thousand and \$14 thousand of interest income for the six months ended June 30, 2010 and 2009, respectively. We incurred interest expense of \$150 thousand and \$148 thousand for the six months ended June 30, 2010 and 2009, respectively. We recorded a loss of \$1.0 million on equity investment in joint venture with Gloria Solar for the six months ended June 30, 2009. We had a currency exchange loss of approximately \$13 thousand and a currency exchange gain of \$139 thousand during the six months ended June 30, 2010 and 2009, respectively.

#### Income Taxes

We recorded a tax benefit on our loss from continuing operations of \$979 thousand, which was offset by a provision on our income from discontinued operation of \$992 thousand for the three and six months ended June 30, 2010. Gross federal net operating loss carryforwards were approximately \$7.8 million as of December 31, 2009 and expire at various times through 2029. We recorded a provision for income taxes of \$14 thousand and \$41 thousand for the three and six months ended June 30, 2009, respectively. 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.

#### Income (Loss) from Discontinued Operations

During the second quarter of 2009, we began pursuing an exclusive sales process of our Medical Products Business Unit. On December 14, 2009, we completed the sale of the Medical Products Business Unit to Bard Access Systems, Inc. Accordingly, the results of operations, assets and liabilities of the Medical Products Business Unit are being presented herein as discontinued operations and assets held for sale.

We recorded net income from discontinued operations of \$1.6 million and \$1.5 million for the three and six months ended June 30, 2010. Included in discontinued operations for the three and six months ended June 30, 2010 is a gain on sale of business unit to Bard of \$2.6 million and an income tax provision of \$1.0 million. Not included in discontinued operations are certain indirect costs of the Medical Products Business Unit that have been reclassified to selling, general and administrative expense of \$71 thousand and \$162 thousand for the three and six months ended June 30, 2010, respectively. See Note 14 to the consolidated financial statements. Included in the gain of \$2.6 million is proceeds received from Bard of \$2.9 million, less licenses transferred to Bard of \$42 thousand and less legal and professional fees related to complete the sale of \$204 thousand.



We recorded a loss from discontinued operations of \$201 thousand and \$391 thousand for the three and six months ended June 30, 2009, respectively. Not included in discontinued operations are certain indirect costs of the Medical Products Business Unit that have been reclassified to selling, general and administrative expense of \$115 thousand and \$234 thousand for the three and six months ended June 30, 2009, respectively. See Note 14 to the unaudited condensed consolidated financial statements.

#### Net Income (Loss)

We reported net income of \$1.4 million and a net loss of \$4.6 million for the three months ended June 30, 2010 and 2009, respectively. The improvement of approximately \$6.0 million is primarily due to improved margins in solar equipment sales and net income from discontinued operations, net of tax.

We reported net income of \$707 thousand and a net loss of \$6.1 million for the six months ended June 30, 2010 and 2009, respectively. The improvement of approximately \$6.8 million is primarily due to improved margins in solar equipment sales and net income from discontinued operations, net of tax.

#### Liquidity and Capital Resources

(in thousands)	June 30, 2010	December 31, 2009	\$	Increase (Decrease) %
Cash and cash equivalents	\$8,003	\$8,999	\$(996	) (11%)
Working capital	\$6,189	\$3,718	\$2,471	66%

Cash and cash equivalents decreased due to cash used in operating activities and to a lesser extent financing activities, partially offset by cash provided by investing activities, primarily due to one-time payments received in the second quarter of 2010 totaling \$2.9 million related to the sale of the Medical Products Business Unit included in discontinued operations. The overall increase in working capital is due to a decrease in current liabilities, primarily accounts payable, accrued liabilities, advances on contracts in process and the current portion of revolving line of credit moving to long-term liabilities, partially offset by a reduction to inventories and deferred cost of goods sold. We have historically funded our operating cash requirements using operating cash flow, proceeds from the sale and licensing of technology and assets and proceeds from the sale of equity securities.

There are no material commitments by us for capital expenditures. At June 30, 2010, our accumulated deficit was approximately \$11.5 million, compared to accumulated deficit of approximately \$12.2 million as of December 31, 2009.

We have numerous options on how to fund future operational losses or working capital needs, including but not limited to sales of equity, bank debt or the sale or license of assets and technology, as we have done in the past; however, there are no assurances that we will be able to sell equity, obtain or access bank debt, or sell or license assets or technology on a timely basis and at appropriate values. We have developed several plans including cost containment efforts and outside financing to offset a decline in business due to the recent global economic recession. As a result, we believe we have sufficient resources to finance our current operations through at least June 30, 2011.

#### Loan Agreements

On June 15, 2010, we entered into with Silicon Valley Bank (the “Bank” or “SVB”) (i) the First Loan Modification Agreement amending certain terms of the Second Amended and Restated Loan and Security Agreement (the “Second Restated Revolving Credit Facility”) and (ii) the First Loan Modification Agreement amending certain terms of the Amended and Restated Export-Import Bank Loan and Security Agreement (the “Restated Ex-Im Facility”) (collectively,

the “Loan Modifications”). Pursuant to the terms of the Loan Modifications, we agreed to (i) create a letter of credit sub-facility within the our existing credit line, (ii) decrease the interest rate with regard to financed eligible accounts from SVB Prime Rate plus 3.0% per annum to SVB Prime Rate plus 2.5% per annum while (iii) reducing the interest rate floor from 6.0% per annum to 4.0% per annum and (iv) extending the maturity date of the Second Restated Revolving Credit Facility and Restated Ex-Im Facility to December 31, 2011. In addition to the above, in the event we achieve certain levels of liquidity, based on cash on hand and availability under the credit facility, the Bank will waive the requirement that we cash collateralize any letters of credit issued by the Bank pursuant to the new letter of credit sub-facility in an aggregate amount up to \$1.5 million. Finally, because we has made all the required payments under the Equipment Term Loan, the Bank acknowledged that the Equipment Term Loan has been paid in full and all references to it in the Second Restated Revolving Credit Facility have been deleted.

Advances outstanding under the Second Restated Revolving Credit Facility were \$1.4 million and \$1.0 million at June 30, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were zero and \$340 thousand at June 30, 2010 and December 31, 2009, respectively. The Equipment Term Loan's principal balance outstanding was zero and \$583 thousand at June 30, 2010 and December 31, 2009, respectively. As of June 30, 2010, the interest rate per annum on the Second Restated Revolving Credit Facility and Restated Ex-Im Facility was 6.0% and 6.0%, respectively. Availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$1.3 million and \$1.7 million, respectively, as of June 30, 2010. At June 30, 2010, we have classified advances outstanding under the Second Restated Revolving Credit Facility as long-term due to (i) the maturity date extending at least one year beyond the date of this quarterly report, (ii) there being no accelerated payment clauses which would require us to pay down the advances outstanding prior to the maturity date and (iii) we do not expect advances outstanding to exceed the lowest borrowing base during the next year.

#### Gain on Termination of Contracts

On August 29, 2008, we delivered to Principia Lightworks, Inc. ("Principia") a Notice of Breach and Pending Termination of a certain Manufacturing Agreement, dated August 29, 2006, by and between Spire Semiconductor and Principia (the "Manufacturing Agreement"). Under the terms of the Manufacturing Agreement, Principia made an up-front payment for nonrecurring engineering and facility access costs and was required to make monthly facility availability payments throughout the term of the agreement. As a result of Principia's failure to make monthly facility availability payments in 2008, we have fully reserved \$225 thousand against Principia's accounts receivable balance. We entered into a mutual standstill agreement with Principia, which expired on March 15, 2009. The purpose of the standstill was to give the parties additional time to negotiate a resolution.

On March 27, 2009, Spire Semiconductor and Principia mutually agreed to terminate the Manufacturing Agreement for convenience and entered into a separation and novation agreement (the "Novation Agreement"). Under the terms of the Novation Agreement, both parties agreed to terminate technology licenses that were granted to each other under the terms of the Manufacturing Agreement and Spire Semiconductor was released from its production requirements to Principia. Principia was released from paying its future facility availability payments due under the Manufacturing Agreement but will be required to pay facility availability payments of \$300 thousand. Spire Semiconductor holds 67,500 shares of Principia stock as collateral against the outstanding facility availability payments. During the three months ended March 31, 2009, we accelerated the amortization of deferred revenue and recognized \$1.5 million as a gain on termination of contracts related to the termination of the Manufacturing Agreement. See Note 13 to the unaudited condensed consolidated financial statements.

On June 18, 2009, we entered into a settlement agreement with Marubeni Corporation with respect to the License to Manufacture and Distribute Equipment Agreement (the "License Agreement") dated April 1, 2003 for the license of manufacturing and distribution in Japan of our solar photovoltaic modular manufacturing equipment. Under the terms of the settlement agreement, both parties agreed to terminate the License Agreement including but not limited to the eighteen (18) month non-compete obligation. As a result of the settlement, we received a payment and recognized a gain on termination of contracts of \$200 thousand in the second quarter of 2009.

In the fourth quarter of 2009, we determined that three purchase and sale agreements with Jiangxi Gemei Sci-Tech., LLC ("Jiangxi") related to a module equipment line and cell equipment line were terminated. Jiangxi had failed to make payments as required by the agreements and has not responded to numerous communications by us. We made commitments to purchase equipment on behalf of Jiangxi and due to Jiangxi not making contractual payments, we entered into settlement agreements with these vendors. As a result of deposits paid by Jiangxi less settlements paid to vendors and inventory written off, we have recognized a gain on termination of contracts of \$837 thousand and \$1.4 million for the three months ended March 31, 2010 and December 31, 2009, respectively. See Note 13 to the unaudited condensed consolidated financial statements.

Foreign Currency Fluctuation

We sell almost exclusively 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 have committed to purchase certain pieces of equipment from European and Japanese vendors; these commitments are denominated in Euros and Yen, respectively. We bear the risk of any currency fluctuations that may be associated with these commitments. We attempt to hedge known

transactions when possible to minimize foreign exchange risk. There were no hedging activities during the first two quarters of 2010 and 2009. Foreign exchange gain (loss) included in other expense was \$7 thousand and \$(70) thousand for the three months ended June 30, 2010 and 2009, respectively and \$(13) thousand and \$139 thousand for the six months ended June 30, 2010 and 2009, respectively.

#### Related Party Transactions

On November 30, 2007, we entered into a new Lease Agreement (the “Bedford Lease”) with SPI-Trust, a Trust of which Roger G. Little, Chairman of the Board, Chief Executive Officer and President of the Company, is the sole trustee and principal beneficiary, 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 Bedford 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 Bedford 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 exercise our right to extend the term of the Bedford 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 Bedford Lease are commercially reasonable. Rent expense under the Bedford Lease was \$505 thousand for each of the three months ended June 30, 2010 and 2009 and was \$1.0 million for each of the six months ended June 30, 2010 and 2009.

On August 29, 2008, we entered into a new Lease Agreement (the “Hudson Lease”) with SPI-Trust, with respect to 90 thousand square feet of space comprising the entire building in which Spire Semiconductor has occupied space since June 1, 2003. The term of the Hudson Lease commenced on September 1, 2008, and continues for seven (7) years until August 31, 2015. We have the right to extend the term of the Hudson Lease for an additional five (5) year period. The annual rental rate for the first year of the Hudson 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 exercise our right to extend the term of the Hudson 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. In addition, we are required to deposit with SPI-Trust \$300 thousand as security for performance by the Company for its covenants and obligations under the Hudson Lease. SPI-Trust is responsible, at its sole expense, to make certain defined tenant improvements to the building. We believe that the terms of the Hudson Lease are commercially reasonable and reflective of market rates. The lease agreement does not provide for a transfer of ownership at any point. The Hudson Lease is classified as a related party operating lease. Rent expense under the Hudson Lease was \$332 thousand for each of the three months ended June 30, 2010 and 2009 and was \$664 thousand for each of the six months ended June 30, 2010 and 2009.

#### 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, stock-based compensation, income taxes, and warranty reserves. We regularly evaluate our estimates and assumptions based upon historical experience and various other factors that we believe to be reasonable under the circumstances, the results of which

form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. To the extent actual results differ from those estimates, our future results of operations may be affected. Refer to Note 2 of the notes to consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2009 for a description of our significant accounting policies.

#### Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements

The following table summarizes our gross contractual obligations at June 30, 2010 and the maturity periods and the effect that such obligations are expected to have on our liquidity and cash flows in future periods:

Contractual Obligations (in thousands)	Total	Payments Due by Period			
		Less than 1 Year	2 - 3 Years	4 - 5 Years	More Than 5 Years
Second Restated Revolving Credit Facility (SVB)	\$ 1,357	—	\$ 1,357	—	—
Purchase obligations	\$ 3,839	\$ 3,780	\$ 31	\$ 28	—
Unrelated party capital leases	\$ 146	\$ 54	\$ 76	\$ 16	—
Operating leases:					
Unrelated party operating leases	\$ 263	\$ 119	\$ 135	\$ 9	—
Related party operating leases	\$ 12,378	\$ 3,331	\$ 5,822	\$ 2,970	\$ 255

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.

The Second Restated Revolving Credit Facility does not include an interest component to the contractual obligation. At June 30, 2010, we have classified advances outstanding under the Second Restated Revolving Credit Facility as long-term due to (i) the maturity date extending at least one year beyond the date of this quarterly report, (ii) there being no accelerated payment clauses which would require us to pay down the advances outstanding prior to the maturity date and (iii) we do not expect advances outstanding to exceed the lowest borrowing base during the next year.

Outstanding letters of credit totaled \$1.5 million at June 30, 2010 and December 31, 2009. The letters of credit secure performance obligations and purchase commitments, 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 are due to expire in 2010 and are 100% secured by cash, short-term investments and the Second Restated Revolving Credit Facility.

### Item 3. Quantitative and Qualitative Disclosures about Market Risk

Not required as we are a smaller reporting company.

### Item 4. 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, 2010.

Based on this 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 as of June 30, 2010, our disclosure controls and procedures were not effective, due to material weaknesses in internal control over financial reporting, for the purpose of ensuring that the information required to be disclosed in the reports that the Company files or submits under the Exchange Act with the Securities and Exchange Commission is recorded, processed, summarized and reported within the time period specified by the Securities and Exchange Commission's rules and forms, and is accumulated and communicated to the Company's management, including its principal executive and financial officers, as appropriate to allow timely decisions regarding disclosure.

As previously reported in our Annual Report on Form 10-K, as filed with the Securities and Exchange Commission (SEC) on March 31, 2010, 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, 2009.



We did not maintain an effective control environment. The control environment, which is the responsibility of senior management, sets the tone of the organization, influences the control consciousness of its people, and is the foundation for all other components of internal control over financial reporting. We did not maintain effective monitoring controls to determine the adequacy of our internal control over financial reporting and related policies and procedures. Due to material weaknesses in the control environment, we did not establish and maintain effective controls over certain of our period-end financial close and reporting. This has been previously disclosed in prior filings. Management has designed and implemented some effective controls, however, these controls are not sufficient and are not operating effectively. As a result of the foregoing, management concluded that our internal control over financial reporting was not effective as of June 30, 2010.

Management, in coordination with the input, oversight and support of our Audit Committee, has identified the following measures to strengthen our internal control over financial reporting and to address the material weaknesses described above.

- (1) We hired a Corporate Controller during April of 2009, who was promoted to Chief Accounting Officer in October of 2009 and then to Chief Financial Officer in April 2010, who added accounting knowledge, experience and application of US GAAP.
- (2) We also hired a Corporate Controller to fill the position previously held by the Chief Accounting Officer and assume the duties of the Assistant Controller who retired prior to the filing of this report.
- (3) Management is actively addressing operational and internal control remediation efforts including software upgrades, new application controls and considering additional software purchases and implementation of procedures to increase staff efficiencies and accuracy of information. New policies and procedures have been created and existing policies and procedures reviewed and modified as part of our documentation of internal control over financial reporting. Management believes these new controls, policies and procedures, training of key personnel and testing of these key controls will be effective in remediating these material weaknesses. Management reports quarterly to our Audit Committee on the status of the remediation effort.
- (4) We purchased a network upgrade and additional servers during June of 2009 and May 2010 to ensure the IT department has adequate tools necessary to mitigate an industry-standard set of risk statements following guidelines outlined in the Control Objectives for Information Technology (COBIT) promulgated jointly by the IT Governance Institute and the Information Systems Audit and Control Association (ISACA).

The changes in staffing has and will continue to assist us address the identified weakness in the knowledge and experience required for completeness and accuracy of our financial statements and also improve our overall financial close and reporting process. The staff addition will also allow for proper segregation of duties within our financial department. Further, we have contracted with a Consultant to assist us in our operational and financial controls re-design, testing and remediation efforts.

While we expect these remedial actions to be essentially implemented in calendar year 2010, some may not be in place for a sufficient period of time to help us certify that material weaknesses have been fully remediated as of the end of calendar year 2010. We will continue to develop our remediation plans and implement additional measures during calendar year 2010 and possibly into calendar year 2011.

#### Changes in Internal Control Over Financial Reporting

Except as described above, there have been no changes during our fiscal quarter ended June 30, 2010 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.

PART II

OTHER INFORMATION

Item 1. Legal Proceedings

There have been no material changes to the legal proceedings disclosure included in Part I, Item 3 ("Legal Proceedings") of our Annual Report on Form 10-K for the year ended December 31, 2009.

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, 2009.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

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Item 3. Defaults Upon Senior Securities

None.

Item 5. Other Information

None.

Item 6. Exhibits

10(aw) First Loan Modification Agreement (Domestic), dated June 15, 2010, among Spire Corporation, Spire Solar, Inc., Spire Biomedical, Inc., Spire Semiconductor, LLC and Silicon Valley Bank.

10(ax) First Loan Modification Agreement (Exim), dated June 15, 2010, 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 §302 of the Sarbanes-Oxley Act of 2002.

31.2 Certification of the Chief Financial Officer and Treasurer pursuant to §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. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002.

32.2 Certification of the Chief Financial Officer and Treasurer pursuant to 18 U.S.C. §1350, as adopted pursuant to §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 11, 2010

By: /s/ Roger G. Little  
Roger G. Little  
Chairman of the Board, Chief  
Executive Officer and President  
(Principal Executive Officer)

Dated: August 11, 2010

By: /s/ Robert S. Lieberman  
Robert S. Lieberman  
Chief Financial Officer and Treasurer  
(Principal Financial Officer and Principal  
Accounting Officer)

EXHIBIT INDEX

Exhibit	Description
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