

SPIRE CORP  
Form 10-Q  
May 14, 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 March 31, 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

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to submit and post such files). Yes  No

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

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

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 May 6, 2010 was 8,334,688.

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## PART I

## FINANCIAL INFORMATION

## Item 1. Unaudited Condensed Consolidated Financial Statements

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

	March 31, 2010	December 31, 2009
Assets		
Current assets		
Cash and cash equivalents	\$3,319	\$ 8,999
Restricted cash – current portion	1,793	1,501
	5,112	10,500
Accounts receivable – trade, net	8,725	5,890
Inventories, net	16,595	20,489
Deferred cost of goods sold	7,316	6,588
Deposits on equipment for inventory	758	583
Prepaid expenses and other current assets	698	777
Current assets of discontinued operations and assets held for sale	824	154
Total current assets	40,028	44,981
Property and equipment, net	5,191	5,364
Intangible and other assets, net	828	742
Available-for-sale investments, at quoted market value (cost of \$1,719 and \$1,714 at March 31, 2010 and December 31, 2009, respectively)	2,017	1,948
Deposit – related party	300	300
Non-current assets of discontinued operations and assets held for sale	55	58
Total other assets	3,200	3,048
Total assets	\$48,419	\$ 53,393
Liabilities and Stockholders' Equity		
Current liabilities		
Current portion of capital lease obligation	\$41	\$ 39
Current portion of equipment and revolving line of credit	1,648	1,925
Accounts payable	6,102	8,676
Accrued liabilities	4,779	7,233
Current portion of advances on contracts in progress	22,425	21,708
Liabilities of discontinued operations	1,680	1,682
Total current liabilities	36,675	41,263
Long-term portion of capital lease obligation	92	102
Long-term portion of advances on contracts in progress	3	4
Deferred compensation	2,017	1,948
Other long-term liabilities	605	572
Total long-term liabilities	2,717	2,626

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Total liabilities	39,392	43,889
Stockholders' equity		
Common stock, \$0.01 par value; 20,000,000 shares authorized; 8,334,688 shares issued and outstanding on March 31, 2010 and December 31, 2009	83	83
Additional paid-in capital	21,504	21,383
Accumulated deficit	(12,858 )	(12,196 )
Accumulated other comprehensive income	298	234
Total stockholders' equity	9,027	9,504
Total liabilities and stockholders' equity	\$48,419	\$ 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 March 31,	
	2010	2009
Net sales and revenues		
Sales of goods	\$ 15,301	\$ 8,522
Contract research, service and license revenues	3,564	2,865
Total net sales and revenues	18,865	11,387
Cost of sales and revenues		
Cost of goods sold	12,513	7,858
Cost of contract research, services and licenses	2,590	2,164
Total cost of sales and revenues	15,103	10,022
Gross margin	3,762	1,365
Operating expenses		
Selling, general and administrative expenses	4,746	3,767
Internal research and development expenses	301	311
Total operating expenses	5,047	4,078
Gain on termination of contracts	837	1,535
Loss from continuing operations	(448 )	(1,178 )
Interest expense, net	(107 )	(58 )
Loss on equity investment in joint venture		(280 )
Other (expense) income	(20 )	209
Total other expense, net	(127 )	(129 )
Loss from continuing operations before income tax provision	(575 )	(1,307 )
Income tax provision – continuing operations		(27 )
Net loss from continuing operations	(575 )	(1,334 )
Loss from discontinued operations, net of tax	(87 )	(190 )
Net loss	\$ (662 )	\$ (1,524 )
Basic and diluted loss per share:		
From continuing operations after income tax	\$ (0.07 )	\$ (0.16 )
From discontinued operations, net of tax	(0.01 )	(0.02 )
Basic and diluted loss per share	\$ (0.08 )	\$ (0.18 )
Weighted average number of common and common equivalent shares outstanding – basic and diluted	8,334,688	8,333,132

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





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

	Three Months Ended March 31,	
	2010	2009
Cash flows from operating activities:		
Net loss	\$(662 )	\$(1,524 )
Less: Net loss from discontinued operations, net of tax	(87 )	(190 )
Net loss from continuing operations	(575 )	(1,334 )
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	408	352
Loss on equity investment in joint venture	—	280
Deferred compensation	64	47
Stock-based compensation	121	149
Provision for accounts receivable reserves	(128 )	(36 )
Provision for inventory reserve	73	37
Changes in assets and liabilities:		
Restricted cash	(292 )	123
Accounts receivable	(2,707 )	(87 )
Inventories	3,821	(2,437 )
Deferred cost of goods sold	(728 )	(813 )
Deposits, prepaid expenses and other current assets	(96 )	(650 )
Accounts payable, accrued liabilities and other long-term liabilities	(4,995 )	3,703
Advances on contracts in progress	716	(2,131 )
Net cash used in operating activities of continuing operations	(4,318 )	(2,797 )
Net cash (used in) provided by operating activities of discontinued operations	(756 )	1
Net cash used in operating activities	(5,074 )	(2,796 )
Cash flows from investing activities:		
Purchase of property and equipment	(226 )	(551 )
Increase (decrease) in intangible and other assets	(95 )	12
Net cash used in investing activities of continuing operations	(321 )	(539 )
Net cash used in investing activities of discontinued operations	—	(40 )
Net cash used in investing activities	(321 )	(579 )
Cash flows from financing activities:		
Principal payments on capital lease obligations	(8 )	—
Principal payments on equipment and revolving line of credit, net	(277 )	(291 )
Proceeds from exercise of stock options	—	24
Net cash used in financing activities	(285 )	(267 )
Net decrease in cash and cash equivalents	(5,680 )	(3,642 )
Cash and cash equivalents, beginning of period	8,999	5,971
Cash and cash equivalents, end of period	\$3,319	\$2,329
Supplemental disclosures of cash flow information:		
Interest paid	\$107	\$69

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Interest received	\$—	\$11
Income taxes paid (refunded), net	\$(19	) \$25

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

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SPIRE CORPORATION AND SUBSIDIARIES  
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

March 31, 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 22% and 40% of net sales and revenues for the three months ended March 31, 2010 and 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 \$1.3 million and \$2.7 million for the three months ended March 31, 2010 and 2009, respectively. As of March 31, 2010, the Company had unrestricted cash and cash equivalents of \$3.3 million compared to \$9.0 million as of December 31, 2009. The sale of the Medical Products Business Unit allows for up to \$3.0 million in additional proceeds on the achievement of certain milestones. See Note 14 to the unaudited condensed consolidated financial statements. 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 March 31, 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 March 31, 2010 and December 31, 2009 and the results of its operations and cash flows for the three months ended March 31, 2010 and 2009. The results of operations for the three months ended March 31, 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)	March 31, 2010	December 31, 2009
Amounts billed	\$ 8,411	\$ 5,625
Accrued revenue	631	746
	9,042	6,371
Less: Allowance for sales returns and doubtful accounts	(317 )	(481 )
Net accounts receivable - trade	\$ 8,725	\$ 5,890
Advances on contracts in progress	\$ 22,428	\$ 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 \$494 thousand and \$420 thousand of reserves at March 31, 2010 and December 31, 2009, respectively, consist of the following at:

(in thousands)	March 31, 2010	December 31, 2009
Raw materials	\$ 2,449	\$ 2,390
Work in process	9,405	8,170
Finished goods	4,741	9,929
Net inventory	\$ 16,595	\$ 20,489
Deferred cost of goods sold	\$ 7,316	\$ 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. Loss Per Share

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

	Three Months Ended March 31,	
	2010	2009
Weighted average number of common and common equivalent shares outstanding – basic	8,334,688	8,333,132
Add: Net additional common shares upon assumed exercise of common stock options	—	—
Adjusted weighted average number of common and common equivalents shares outstanding – diluted	8,334,688	8,333,132

For the three months ended March 31, 2010 and 2009, 26,640 and 32,811 shares of common stock, respectively, issuable relative to stock options were excluded from the calculation of diluted shares since their inclusion would have been anti-dilutive due to the net loss of the Company.

In addition, for the three months ended March 31, 2010 and 2009, 573,821 and 414,447 shares of common stock, respectively, 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 operating division information in accordance with the provisions of ASC 280, Segment Reporting.

(in thousands)	Solar	Biomedical	Optoelectronics	Total Company
For the three months ended March 31, 2010				
Net sales and revenues	\$ 15,301	\$ 2,243	\$ 1,321	\$ 18,865
Income (loss) from continuing operations	\$ (429)	\$ 540	\$ (559)	\$ (448)
For the three months ended March 31, 2009				
Net sales and revenues	\$ 8,574	\$ 2,157	\$ 656	\$ 11,387
Income (loss) from continuing operations	\$ (2,234)	\$ 356	\$ 700	\$ (1,178)

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

(in thousands)	2010	Three Months Ended March 31,		2009		
		%			%	
United States	\$ 14,727	78	%	\$ 6,825	60	%
Europe/Africa	1,736	9	%	2,931	26	%
Asia	2,386	13	%	1,379	12	%
Rest of the world	16	—		252	2	%
	\$ 18,865	100	%	\$ 11,387	100	%

Revenues from contracts with United States government agencies for the three months ended March 31, 2010 and 2009 were approximately \$11.1 million and \$2.3 million or 59% and 20% 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 27% and 27%, respectively, of total net sales and revenue for the three month period ended March 31, 2010. Total revenues from this customer accounted for approximately 54% of total net sales and revenue for the three month period ended March 31, 2010.

Revenues from the delivery of two solar equipment module lines to two different customers account for 21% and 13% of total net sales and revenue for the three months ended March 31, 2009 and recurring revenue from the sale of solar cell materials and module equipment to another customer accounted for 15% of total net sales and revenue during the same period.

Two customers represented approximately 18% and 17% of net accounts receivable, trade at March 31, 2010 and one customer represented approximately 24% of net accounts receivable, trade at December 31, 2009.

## 7. Intangible and Other Assets

Patents amounted to \$89 thousand and \$98 thousand net of accumulated amortization of \$721 thousand and \$712 thousand, at March 31, 2010 and December 31, 2009, respectively. Licenses amounted to \$75 thousand, net of



accumulated amortization of zero, at March 31, 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 \$9 thousand and \$5 thousand for the three months ended March 31, 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 March 31, 2010 of \$414 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:

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(in thousands)	Amortization Expense
2010 remaining 9 months	\$ 93
2011	117
2012	106
2013	100
2014 and beyond	162
	\$ 578

Also included in other assets are approximately \$250 thousand of refundable deposits made by the Company at March 31, 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)	March 31, 2010	December 31, 2009
Cash and short term investments	\$ 28	\$ 44
Fixed income	397	377
Equities	1,592	1,527
	\$ 2,017	\$ 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 \$298 thousand and \$234 thousand as of March 31, 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 months ended March 31, 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 March 31, 2010 by ASC 820-10 valuation hierarchy (as defined above).

(in thousands)	Balance as of			
	March 31, 2010	Level 1	Level 2	Level 3
Cash and short term investments	\$ 28	\$ 28	\$ —	\$ —
Fixed income	397	—	397	—
Equities	1,592	595	997	—
Total available-for-sale investments (1)	\$ 2,017	\$ 623	\$ 1,394	\$ —
Percent of total	100	% 31	% 69	% —

(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 mature 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 March 31, 2010.

### 10. Notes Payable and Credit Arrangements

The Equipment Term Loan's principal balance outstanding was \$292 thousand and \$583 thousand at March 31, 2010 and December 31, 2009, respectively. Advances outstanding under the Second Restated Revolving Credit Facility were \$1.4 million and \$1.0 million at March 31, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were \$340 thousand at December 31, 2009. As of March 31, 2010, the interest rate per annum on the Equipment Term Loan, Second Restated Revolving Credit Facility and Restated Ex-Im Facility was 7.75%, 8.0% and 8.0%, respectively. Availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$1.5 million and \$2.0 million, respectively, as of March 31, 2010. The maturity date for each of these facilities is May 31, 2010.

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

The Company has recognized stock-based compensation expense of approximately \$121 thousand and \$149 thousand for the three months ended March 31, 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 March 31,	
	2010	2009
Cost of contract research, services and licenses	\$ 5	\$ 7
Cost of goods sold	12	29
Selling, general and administrative	104	113
Total stock-based compensation	\$ 121	\$ 149

At March 31, 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.

A summary of options outstanding under the Plans as of March 31, 2010 and changes during the three-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	17,500	\$ 4.80		
Exercised	—	\$ —		
Cancelled/expired	(24,500 )	\$ 10.92		
Options Outstanding at March 31, 2010	774,677	\$ 6.93	6.86	\$ 16
Options Exercisable at March 31, 2010	482,207	\$ 6.76	5.86	\$ 13

Compensation expense related to stock options to be charged in future periods amounts to approximately \$942 thousand at March 31, 2010 and will be recognized over a weighted-average period of 2.41 years.

The per-share weighted-average fair value of stock options granted during the three months ended March 31, 2010 and 2009 was \$3.07 and \$2.18, 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	—	2.29%	4.6 years	82.1%
2009	—	1.64%	4.5 years	81.0%

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 Loss

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

For the Three Months Ended March 31,

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(in thousands)	2010	2009
Net loss	\$ (662 )	\$ (1,524 )
Other comprehensive income:		
Unrealized gain on available for sale marketable securities, net of tax	64	47
Total comprehensive loss	\$ (598 )	\$ (1,477 )

13. Gain on Termination of Contract

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.

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 the 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 maximum purchase price payable for the Medical Products Business Unit is \$12.5 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) up to \$3.0 million payable in cash 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") will be transferred to Bard upon the completion of a product recall related to such assets, which is expected to occur in the second quarter of 2010. Until the Contingent Deferred Assets are transferred by the Company, it will continue to manufacture and supply to Bard certain hemodialysis catheter products under the terms of a distribution agreement (the "Transition Period"). Upon the transfer of the Contingent Deferred Assets to Bard, Bard will pay \$1.5 million of the Contingent Purchase Price to the Company. Bard will pay up to \$1.5 million of the remaining Contingent Purchase Price to the Company 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 will be 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 \$91 thousand and \$119 thousand for the three months ended March 31, 2010 and 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 and have submitted a request to the U.S. Food and Drug Administration requesting to close the recall action. This request is currently pending.

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 March 31, 2010 and December 31, 2009 are as follows:

(in thousands)	March 31, 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	\$68	\$104
Inventories, net	705	50
Deposits on equipment for inventory	51	—
Total current assets of discontinued operations and assets held for sale	824	154

Property and equipment, net	9	9
Intangible and other assets, net	46	49
Total non-current assets of discontinued operations and assets held for sale	55	58
Total assets of discontinued operations and assets held for sale	\$879	\$212

Liabilities of Discontinued Operations

Current liabilities of discontinued operations		
Accounts payable	\$503	\$593
Accrued liabilities	1,176	1,089
Current portion of advances on contracts in process	1	—
Total current liabilities of discontinued operations	1,680	1,682
Total liabilities of discontinued operations	\$1,680	\$1,682

Included in accrued liabilities are reserves of \$694 thousand and \$782 thousand related to the recall, as discussed above, at March 31, 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 March 31,	
	2010	2009
Net sales and revenues	\$ 217	\$ 907
Gross margin	\$ (72 )	\$ 207
Loss from discontinued operations	\$ (87 )	\$ (190 )

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 22% and 40% of net sales and revenues for the three months ended March 31, 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			
	March 31,			
	2010		2009	
Net sales and revenues	100	%	100	%
Cost of sales and revenues	80		88	
Gross profit	20		12	
Selling, general and administrative expenses	(25	)	(33	)
Internal research and development expenses	(1	)	(2	)
Gains on termination of contracts	4		13	
Income (loss) from continuing operations	(2	)	(10	)
Other expense, net	(1	)	(1	)
Loss from continuing operations before income tax provision	(3	)	(11	)
Income tax provision	—		—	
Loss from continuing operations	(3	)	(11	)
Loss from discontinued operations, net of tax	(1	)	(2	)
Net loss	(4	%)	(13	%)

## Overall

Our total net sales and revenues for the three months ended March 31, 2010 were \$18.9 million as compared to \$11.4 million for the three months ended March 31, 2009, which represents an increase of \$7.5 million or 66%. The increase was primarily attributable to a \$6.7 million increase in solar sales, a \$665 thousand increase in optoelectronics sales and an \$86 thousand increase in biomedical sales.

## Solar Business Unit

Sales in our solar business unit increased 78% during the three months ended March 31, 2010 to \$15.3 million as compared to \$8.6 million for the three months ended March 31, 2009. The increase is the result of higher solar materials revenue due to a shift of scheduled shipments from the fourth quarter of 2009 into the first quarter of 2010 and a large solar module line partially delivered in the first quarter of 2010.

## Biomedical Business Unit

Revenues of our biomedical business unit increased 4% during the three months ended March 31, 2010 to \$2.2 million. The increase reflects increased revenues from our orthopedics coatings services partially offset by a decrease in revenue from research and development contracts.

## Optoelectronics Business Unit

Revenues in our optoelectronics business unit increased 101% to \$1.3 million during the three months ended March 31, 2010 as compared to \$656 thousand for the three months ended March 31, 2009. The increase was primarily attributable to revenue from a government cost share contract recognized in the first quarter of 2010.

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Three Months Ended March 31, 2010 Compared to Three Months Ended March 31, 2009

Net Sales and Revenues

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

(in thousands)	Three Months Ended		\$	Increase	
	2010	March 31, 2009			
Sales of goods	\$ 15,301	\$ 8,522	\$ 6,779	80%	
Contract research, services and license revenues	3,564	2,865	699	24%	
Net sales and revenues	\$ 18,865	\$ 11,387	\$ 7,478	66%	

The 80% increase in sales of goods for the three months ended March 31, 2010 as compared to the three months ended March 31, 2009 was primarily due to an increase in sales of solar materials of \$3.5 million and an increase in solar module equipment revenues of \$3.1 million in 2010. Sales of solar materials, all to one customer, increased 236% 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. Solar module equipment increased 44% in 2010 as compared to 2009 primarily due to a large solar module line partially delivered in the first quarter of 2010.

The 24% increase in contract research, services and license revenues for the three months ended March 31, 2010 as compared to the three months ended March 31, 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 101% in 2010 compared to 2009 as a result of revenue from a government cost share contract recognized in the first quarter of 2010. Revenues from our orthopedic activities increased 10% in 2010 as compared to 2009. Revenues from our research and development activities decreased 27% 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:

(in thousands)	Three Months Ended March 31,				Increase	
	2010	%	2009	%	\$	%
Cost of goods sold	\$ 12,513	82%	\$ 7,858	92%	\$ 4,655	59%
Cost of contract research, services and licenses and licenses	2,590	73%	2,164	76%	426	20%
Net cost of sales and revenues	\$ 15,103	80%	\$ 10,022	88%	\$ 5,081	51%

Cost of goods sold increased 59% for the three months ended March 31, 2010 as compared to the three months ended March 31, 2009, primarily as a result of costs related to solar materials and an increase in solar module equipment costs related to an increase in associated revenue. As a percentage of sales, cost of goods sold was 82% of sales of goods in 2010 as compared to 92% 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 20% for the three months ended March 31, 2010 as compared to the three months ended March 31, 2009, primarily as a result of increased costs at our optoelectronics facility (Spire Semiconductor) related to a government cost share contract. Cost of contract research, services and licenses as a percentage of revenue decreased to 73% of revenues in 2010 from 76% in 2009, primarily due to favorable margin related to our orthopedic services in 2010, partially offset by unfavorable margin related to our optoelectronics facility.

Cost of sales and revenues also includes approximately \$17 thousand and \$36 thousand of stock-based compensation for the three months ending March 31, 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:



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(in thousands)	2010	Three Months Ended March 31,		%	\$	Increase/(Decrease)	
		%	2009			%	%
Selling, general and administrative	\$ 4,746	25%	\$ 3,767	33%	\$ 979		26%
Internal research and development	301	2%	311	3%	(10 )		(3%)
Operating expenses	\$ 5,047	27%	\$ 4,078	36%	\$ 969		24%

### Selling, General and Administrative Expenses

Selling, general and administrative expense increased 26% in the three months ended March 31, 2010 as compared to the three months ended March 31, 2009, primarily as a result of increased corporate staffing levels and related employee costs to support our overall growth, partially offset by a decrease in professional services. Selling, general and administrative expense decreased to 25% of sales and revenues in 2010 as compared to 33% in 2009. The decrease was primarily due to the absorption of selling, general and administrative overhead costs by the 66% increase in sales and revenues.

Operating expenses includes approximately \$104 thousand and \$113 thousand of stock-based compensation for the three months ending March 31, 2010 and 2009, respectively.

### Internal Research and Development

Internal research and development expense decreased 3% in the three months ended March 31, 2010 as compared to the three months ended March 31, 2009. As a percentage of sales and revenue, internal research and development expenses decreased slightly to 2% of sales and revenues in 2010 as compared to 3% in 2009.

### Gain on Termination of Contract

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.

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 the 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 of interest income for the three months ended March 31, 2009. We incurred interest expense of \$107 thousand and \$69 thousand for the three months ended March 31, 2010 and 2009, respectively. We recorded a loss of \$280 thousand on equity investment in joint venture with Gloria Solar for the three months ended March 31, 2009. We had a currency exchange loss of approximately \$20 thousand and a currency exchange gain of \$209 thousand during the three months ended March 31, 2010 and 2009, respectively.

## Income Taxes

We did not record an income tax provision or benefit for the three months ending March 31, 2010 due to the ability to offset taxable income with net operating loss carryforwards. 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 \$27 thousand for the three months ended March 31, 2009. 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.

## 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 a loss from discontinued operations of \$87 thousand and \$190 thousand for the three months ended March 31, 2010 and 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 \$91 thousand and \$119 thousand for the three months ended March 31, 2010 and 2009, respectively. See Note 14 to the unaudited condensed consolidated financial statements.

## Net Loss

We reported a net loss for the three months ended March 31, 2010 and 2009 of approximately \$662 thousand and \$1.5 million, respectively. The net loss decreased approximately \$862 thousand primarily due to the increase in sales and revenue and increased margins, partially offset by increased operating expenses and a decrease in gain on termination of contracts.

## Liquidity and Capital Resources

(in thousands)	March 31, 2010	December 31, 2009	Decrease	
			\$	%
Cash and cash equivalents	\$ 3,319	\$ 8,999	\$ (5,680 )	(63%)
Working capital	\$ 3,353	\$ 3,718	\$ (365 )	(10%)

Cash and cash equivalents decreased due to cash used in operating activities, primarily accounts receivable, accounts payable and accrued liabilities, and to a lesser extent investing and financing activities. The overall reduction in working capital is due to a decrease in cash and inventories, partially offset by a decrease in accounts payable and accrued liabilities. 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 March 31, 2010, our accumulated deficit was approximately \$12.9 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. Additionally, the sale of the Medical Products Business Unit allows for up to \$3.0 million in additional proceeds on the achievement of certain milestones. See Note 14 to the unaudited condensed consolidated financial statements. As a result, we believe we have sufficient resources to finance our current operations through at least March 31, 2011.

## Loan Agreements

The Equipment Term Loan's principal balance outstanding was \$292 thousand and \$583 thousand at March 31, 2010 and December 31, 2009, respectively. Advances outstanding under our Second Restated Revolving Credit Facility was \$1.4 million and \$1.0 million at March 31, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were \$340 thousand at December 31, 2009. As of March 31, 2010, the interest rate per annum on the Equipment Term Loan, Second Restated Revolving Credit Facility and Restated Ex-Im Facility was 7.75%, 8.0% and 8.0%, respectively. Availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$1.5 million and \$2.0 million, respectively, as of March 31, 2010.

## 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.

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 quarter of 2010 and 2009. Foreign exchange gain (loss) included in other expense was \$(20) thousand and \$209 thousand for the three months ended March 31, 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 for the three months ended March 31, 2010 and 2009 was \$505 thousand for both periods.

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 for the three months ended March 31, 2010 and 2009 was \$332 thousand for both periods.

#### 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 March 31, 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
Equipment Credit Facility (SVB)	\$296	\$296	—	—	—
Second Restated Revolving Credit Facility (SVB)	\$1,356	\$1,356	—	—	—
Purchase obligations	\$5,025	\$5,025	—	—	—
Unrelated party capital leases	\$159	\$54	\$86	\$19	
Operating leases:					
Unrelated party operating leases	\$333	\$169	\$143	\$21	—



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Related party operating leases	\$13,181	\$3,287	\$6,320	\$2,936	\$638
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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.

Equipment Credit Facility obligations outlined above include both the principal and interest components of these contractual obligations. The Second Restated Revolving Credit Facility does not include an interest component to the contractual obligation.

Outstanding letters of credit totaled \$1.8 million and \$1.5 million at March 31, 2010 and December 31, 2009, respectively. 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 4T. Controls and Procedures

#### Evaluation of Disclosure Controls and Procedures

Our management, under the supervision of and with the participation of the Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) as of the end of the period covered by this report, March 31, 2010.

Based on its evaluation, and taking into consideration the material weaknesses in internal control over financial reporting referenced below, our management, including the Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were not effective as of March 31, 2010.

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 have an ineffective control environment. 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. Efforts to remediate deficiencies were impeded by an evolving control environment brought on by the rapid expansion in our business. We did not maintain an effective financial reporting process, ensure timely and accurate completion of financial statements and we did not maintain effective monitoring controls including reconciliations and analysis of key accounts. We did not maintain a sufficient complement of personnel with an appropriate level of tax and accounting knowledge, experience, and training in the application of Generally Accepted Accounting Principles ("GAAP") commensurate with our financial reporting requirements and business environment. The financial reporting organization structure was not adequate to support the size, complexity or activities of our Company. Many of the processes are manual or some combination of automated-manual processes, tasks are repeated multiple times as there is not sufficient interface between some the applications of the Company and all of these combine with the insufficient complement of staff to ensure the timely preparation of financial statements in accordance with GAAP.

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

As a result of the foregoing, management concluded that our internal control over financial reporting was not effective as of December 31, 2009.

Management is actively addressing operational and internal control remediation efforts. New policies and procedures have been created and existing policies and procedures have been 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.

Management has partially addressed the need for additional experienced staff with the addition of a Corporate Controller during April of 2009, who was promoted to Chief Accounting Officer in October of 2009 and most recently promoted to Chief Financial Officer and Treasurer in April 2010, adding accounting knowledge, experience and an understanding of the application of US GAAP. In March 2010, we hired a Corporate Controller to fill the position previously held by the Chief Financial Officer. The Corporate Controller will prepare annual and quarterly consolidated financial statements, account reconciliations, journal entries and improve the overall segregation of duties within the finance group.

#### Changes in Internal Control Over Financial Reporting

Except as described above, there have been no changes during our fiscal quarter ended March 31, 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.

#### Item 3. Defaults Upon Senior Securities

None.

#### Item 5. Other Information

None.

#### Item 6. Exhibits

10(at)Amendment of Solicitation/Modification of Contract MOD04 to Solicitation/Contract/Order for Commercial Items, dated January 8, 2010, by and between Spire Corporation and Federal Prison Industries, UNICOR. \*

10(au)Second Amended and Restated Loan and Security Agreement, dated November 16, 2009, among Spire Corporation, Spire Solar, Inc., Spire Biomedical, Inc., Spire Semiconductor, LLC and Silicon Valley Bank.

10(av) Amended and Restated Export-Import Bank Loan and Security Agreement, dated November 16, 2009, 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.

\* Portions of this Exhibit have been omitted pursuant to a request for confidential treatment.

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: May 14, 2010

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

Dated: May 14, 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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