

SPIRE CORP  
Form 10-Q  
November 10, 2010

---

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

One Patriots Park, Bedford, Massachusetts	01730-2396
(Address of principal executive offices)	(Zip Code)

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

Indicate by 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 ☐

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):

Edgar Filing: SPIRE CORP - Form 10-Q

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 November 03, 2010 was 8,357,633.

---

---

TABLE OF CONTENTS

	Page
PART I. Financial Information	
Item 1. Unaudited Condensed Consolidated Financial Statements:	
Unaudited Condensed Consolidated Balance Sheets as of September 30, 2010 and December 31, 2009	1
Unaudited Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2010 and 2009	2
Unaudited Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2010 and 2009	3
Notes to Unaudited Condensed Consolidated Financial Statements	4
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	15
Item 3. Quantitative and Qualitative Disclosures About Market Risk	24
Item 4. Controls and Procedures	24
 PART II. Other Information	
Item 1. Legal Proceedings	25
Item 1A. Risk Factors	25
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	25
Item 3. Defaults Upon Senior Securities	26
Item 5. Other Information	26
Item 6. Exhibits	26
Signatures	27

---

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)

	September 30, 2010	December 31, 2009
<b>Assets</b>		
Current assets		
Cash and cash equivalents	\$ 6,402	\$ 8,999
Restricted cash – current portion	181	1,501
	6,583	10,500
Accounts receivable – trade, net	4,761	5,890
Inventories, net	10,284	20,489
Deferred cost of goods sold	1,616	6,588
Deposits on equipment for inventory	490	583
Prepaid expenses and other current assets	911	777
Current assets of discontinued operations and assets held for sale	—	154
Total current assets	24,645	44,981
Property and equipment, net	4,926	5,364
Intangible and other assets, net	832	742
Available-for-sale investments, at quoted market value (cost of \$1,735 and \$1,714 at September 30, 2010 and December 31, 2009, respectively)	2,043	1,948
Deposit – related party	300	300
Non-current assets of discontinued operations and assets held for sale	—	58
Total other assets	3,175	3,048
Total assets	\$ 32,746	\$ 53,393
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities		
Current portion of capital lease obligation	\$ 43	\$ 39
Current portion of equipment and revolving line of credit	—	1,925
Accounts payable	3,400	8,676
Accrued liabilities	4,582	7,233
Current portion of advances on contracts in progress	10,401	21,708
Liabilities of discontinued operations	462	1,682
Total current liabilities	18,888	41,263
Long-term portion of capital lease obligation	69	102
Long-term portion of revolving line of credit	1,157	—
Long-term portion of advances on contracts in progress	—	4
Deferred compensation	2,043	1,948
Other long-term liabilities	836	572
Total long-term liabilities	4,105	2,626
Total liabilities	22,993	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 September 30, 2010 and December 31, 2009, respectively

	83		83
Additional paid-in capital	21,766		21,383
Accumulated deficit	(12,404)	)	(12,196)
Accumulated other comprehensive income	308		234
Total stockholders' equity	9,753		9,504
Total liabilities and stockholders' equity	\$ 32,746		\$ 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 September 30,		Nine Months Ended September 30,	
	2010	2009	2010	2009
Net sales and revenues				
Sales of goods	\$ 17,235	\$ 13,551	\$ 51,520	\$ 41,101
Contract research, service and license revenues	3,410	3,013	10,335	9,023
Total net sales and revenues	20,645	16,564	61,855	50,124
Costs of sales and revenues				
Cost of goods sold	14,439	11,692	42,978	37,677
Cost of contract research, services and licenses	2,356	2,331	7,607	6,764
Total cost of sales and revenues	16,795	14,023	50,585	44,441
Gross margin	3,850	2,541	11,270	5,683
Operating expenses				
Selling, general and administrative expenses	4,620	4,320	13,827	13,269
Internal research and development expenses	280	220	939	782
Total operating expenses	4,900	4,540	14,766	14,051
Gain on termination of contracts	—	—	837	1,735
Loss from continuing operations	(1,050)	(1,999)	(2,659)	(6,633)
Interest expense, net	(24)	(83)	(163)	(217)
Loss on equity investment in joint venture	—	—	—	(1,023)
Foreign exchange loss	(8)	(174)	(21)	(35)
Total other expense, net	(32)	(257)	(184)	(1,275)
Loss from continuing operations before income tax benefit (provision)	(1,082)	(2,256)	(2,843)	(7,908)
Income tax benefit (provision) – continuing operations	167	(23)	1,146	(64)
Net loss from continuing operations	(915)	(2,279)	(1,697)	(7,972)
Loss from discontinued operations before sale of business unit	—	(1,248)	(123)	(1,639)
Gain on sale of business unit	—	—	2,604	—
Income tax provision - discontinued operations	—	—	(992)	—
Net income (loss) from discontinued operations, net of tax	—	(1,248)	1,489	(1,639)
	\$ (915)	\$ (3,527)	\$ (208)	\$ (9,611)

Net loss

Basic and diluted loss per share:

From continuing operations after income taxes	\$ (0.11	)	\$ (0.27	)	\$ (0.21	)	\$ (0.95	)
From discontinued operations, net of taxes	—		(0.15	)	0.18		(0.20	)
Loss per share – basic and diluted	\$ (0.11	)	\$ (0.42	)	\$ (0.03	)	\$ (1.15	)
Weighted average number of common and common equivalent shares outstanding – basic and diluted	8,338,188		8,334,688		8,336,406		8,334,175	

See accompanying notes to unaudited condensed consolidated financial statements.

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

	Nine months ended September 30,	
	2010	2009
Cash flows from operating activities:		
Net loss	\$ (208 )	\$ (9,611 )
Less: Net income (loss) from discontinued operations, net of tax	1,489	(1,639 )
Net loss from continuing operations	(1,697 )	(7,972 )
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	1,201	1,092
Loss on equity investment in joint venture	—	1,023
Deferred tax benefit	(992 )	—
Deferred compensation	74	581
Stock-based compensation	374	412
Provision (benefit) for accounts receivable reserves	(111 )	(23 )
Provision for inventory reserve	122	150
Changes in assets and liabilities:		
Restricted cash	1,320	2,785
Accounts receivable	1,240	(11,329 )
Inventories	10,083	470
Deferred cost of goods sold	4,972	634
Deposits, prepaid expenses and other current assets	(41 )	1,380
Accounts payable, accrued liabilities and other liabilities	(7,663 )	97
Advances on contracts in progress	(11,311 )	11,129
Net cash (used in) provided by operating activities of continuing operations	(2,429 )	429
Net cash (used in) provided by operating activities of discontinued operations	(1,182 )	87
Net cash (used in) provided by operating activities	(3,611 )	516
Cash flows from investing activities:		
Proceeds from dissolution of joint venture	—	450
Purchase of property and equipment	(690 )	(869 )
Increase in intangible and other assets	(154 )	(284 )
Net cash used in investing activities of continuing operations	(844 )	(703 )
Net cash provided by (used in) investing activities of discontinued operations	2,646	(29 )
Net cash provided by (used in) investing activities	1,802	(732 )
Cash flows from financing activities:		
Principal payments on capital lease obligations	(29 )	(3 )
Principal payments on equipment line of credit	(768 )	(875 )
Proceeds from exercise of stock options	9	24
Net cash used in financing activities	(788 )	(854 )
Net decrease in cash and cash equivalents	(2,597 )	(1,070 )
Cash and cash equivalents, beginning of period	8,999	5,971
Cash and cash equivalents, end of period	\$ 6,402	\$ 4,901



Supplemental disclosures of cash flow information:

Interest paid	\$ 178	\$ 232
Interest received	\$ 15	\$ 15
Income taxes paid, net	\$ 10	\$ 64

Supplemental disclosure of non-cash flow information:

Property and equipment purchased under capital lease	\$ —	\$ 154
--	------	--------

See accompanying notes to unaudited condensed consolidated financial statements.

SPIRE CORPORATION AND SUBSIDIARIES  
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

September 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 30% and 37% of net sales and revenues for the three and nine months ended September 30, 2010, respectively. Export sales amounted to 48% and 53% of net sales and revenues for the three and nine months ended September 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 \$1.1 million and \$3.5 million for the three and nine months ended September 30, 2010, respectively. Loss from continuing operations, before gains on termination of contracts, was \$2.0 million and \$8.4 million for the three and nine months ended September 30, 2009, respectively. As of September 30, 2010, the Company had unrestricted cash and cash equivalents of \$6.4 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 September 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.

- 4 -

---

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 September 30, 2010 and December 31, 2009 and the results of its operations and cash flows for the three and nine months ended September 30, 2010 and 2009. The results of operations for the three and nine months ended September 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 Accounting Standards Update ("ASU") 2009-14 Revenue Recognition (Topic 605)-Applicability of AICPA Statement of Position 97-2 to Certain Arrangements That Include Software Elements (ASU 2009-14). ASU 2009-14 excludes tangible products containing software components and non-software components that function together to deliver the product's essential functionality from the scope of ASC 605-985, Software-Revenue Recognition. ASU 2009-14 shall be applied on a prospective basis to revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. Early adoption is permitted. Upon adoption, the Company must apply ASU 2009-14 retrospectively to the beginning of the fiscal year of adoption or to all periods presented. The Company is currently evaluating the impact of the pending adoption of ASU 2009-14 on its consolidated financial statements.

In October 2009, the 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)

Edgar Filing: SPIRE CORP - Form 10-Q

	September 30, 2010	December 31, 2009
Amounts billed	\$ 4,697	\$ 5,625
Accrued revenue	172	746
	4,869	6,371
Less: Allowance for sales returns and doubtful accounts	(108 )	(481 )
Net accounts receivable - trade	\$ 4,761	\$ 5,890
Advances on contracts in progress	\$ 10,401	\$ 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.

- 5 -

---

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 \$386 thousand and \$420 thousand of reserves at September 30, 2010 and December 31, 2009, respectively, consist of the following at:

(in thousands)	September 30, 2010	December 31, 2009
Raw materials	\$ 2,915	\$ 2,390
Work in process	4,469	8,170
Finished goods	2,900	9,929
Net inventory	\$ 10,284	\$ 20,489
Deferred cost of goods sold	\$ 1,616	\$ 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 September 30,		Nine Months Ended September 30,	
	2010	2009	2010	2009
Weighted average number of common and common equivalent shares outstanding – basic	8,338,188	8,334,688	8,336,406	8,334,175
Add: Net additional common shares upon assumed exercise of common stock options	—	—	—	—
Adjusted weighted average number of common and common equivalents shares outstanding – diluted	8,338,188	8,334,688	8,336,406	8,334,175

Edgar Filing: SPIRE CORP - Form 10-Q

For the three and nine months ended September 30, 2010, 3,567 and 6,939 shares, respectively, and for the three and nine months ended September 30, 2009, 37,492 and 50,773 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 nine months ended September 30, 2010, 732,266 and 712,821 shares, respectively, and for the three and nine months ended September 30, 2009, 568,447 and 548,447 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 ASC 280, "Segments Reporting."

(in thousands)		Solar		Biomedical		Optoelectronics		Total Company
For the three months ended September 30, 2010								
Net sales and revenues	\$	17,289		\$	2,104	\$	1,252	\$ 20,645
Income (loss) from continuing operations	\$	(1,132)	)	\$	324	\$	(242)	) \$ (1,050)
For the three months ended September 30, 2009								
Net sales and revenues	\$	13,551		\$	2,341	\$	672	\$ 16,564
Income (loss) from continuing operations	\$	(1,627)	)	\$	331	\$	(703)	) \$ (1,999)
For the nine months ended September 30, 2010								
Net sales and revenues	\$	51,574		\$	6,490	\$	3,791	\$ 61,855
Income (loss) from continuing operations	\$	(2,414)	)	\$	1,116	\$	(1,361)	) \$ (2,659)
For the nine months ended September 30, 2009								
Net sales and revenues	\$	41,162		\$	6,750	\$	2,212	\$ 50,124
Income (loss) from continuing operations	\$	(6,939)	)	\$	926	\$	(620)	) \$ (6,633)

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

(in thousands)	Three Months Ended September 30,				Nine Months Ended September 30,				
	2010	%	2009	%	2010	%	2009	%	
United States	\$14,370	70	\$8,573	52	\$38,822	63	\$23,314	47	%
Europe/Africa	3,353	16	447	3	13,685	22	14,713	29	
Asia	2,922	14	7,518	45	9,322	15	11,779	23	
Rest of the world	—	—	26	—	26	—	318	1	
	\$20,645	100	\$16,564	100	\$61,855	100	\$50,124	100	%

Revenues from contracts with United States government agencies for the three months ended September 30, 2010 and 2009 were approximately \$3.4 million and \$5.2 million or 16% and 31% of total net sales and revenues, respectively.

Revenues from contracts with United States government agencies for the nine months ended September 30, 2010 and 2009 were approximately \$19.0 million and \$12.5 million or 31% and 25% of total net sales and revenues, respectively.

Recurring revenues from the sale of solar cell materials to one customer account for 12% of total net sales and revenues for the three month period ended September 30, 2010. Revenues from the delivery of a solar equipment module line to one customer account for 15% of total net sales and revenues for the three month period ended September 30, 2010. Revenues from the delivery of four solar systems to one customer account for 35% of total net sales and revenues for the three month period ended September 30, 2010.



Revenues from the delivery of a solar equipment module line and recurring revenues from the sale of solar cell materials to the same customer account for 9% and 17%, respectively, of total net sales and revenues for the nine month period ended September 30, 2010. Revenues from the delivery of a solar equipment cell line and solar equipment module line to the same customer account for 12% and 6%, respectively, of total net sales and revenues for the nine month period ended September 30, 2010. Revenues from the delivery of four solar systems to one customer account for 12% of total net sales and revenues for the nine month period ended September 30, 2010.

Recurring revenues from the sale of solar cell materials to one customer account for 28% of total net sales and revenues for the three month period ended September 30, 2009. Revenues from the delivery of two solar equipment module lines to two different customers accounted for 17% and 10%, respectively, of total net sales and revenues for the three month period ended September 30, 2009.

- 7 -

---

Revenues from the delivery of solar module equipment and recurring revenues from the sale of solar cell materials to the same customer account for 1% and 21%, respectively, of total net sales and revenues for the nine month period ended September 30, 2009. Revenues from the delivery of an automated solar equipment module line to one customer account for 21% of total net sales and revenues for the nine month period ended September 30, 2009.

One customer represented approximately 10% of net accounts receivable, trade at September 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 \$218 thousand and \$98 thousand, net of accumulated amortization of \$773 thousand and \$712 thousand, at September 30, 2010 and December 31, 2009, respectively. Licenses amounted to \$72 thousand, net of accumulated amortization of \$3 thousand, at September 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 \$45 thousand and \$11 thousand for the three months ended September 30, 2010 and 2009, respectively, and approximately \$64 thousand and \$23 thousand for the nine months ended September 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 September 30, 2010 of \$292 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 3 months	\$ 34
2011	129
2012	117
2013	112
2014 and beyond	190
	\$ 582

Also included in other assets is a refundable deposit of approximately \$250 thousand made by the Company at September 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)	September 30, 2010	December 31, 2009
Cash and short term investments	\$ 18	\$ 44
Fixed income	475	377

Equities	1,550	1,527
	\$ 2,043	\$ 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 \$308 thousand and \$234 thousand as of September 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

- 8 -

---

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 nine months ended September 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 September 30, 2010 by ASC 820-10 valuation hierarchy (as defined above).

Edgar Filing: SPIRE CORP - Form 10-Q

(in thousands)	Balance as of September 30, 2010	Level 1	Level 2	Level 3
Cash and short term investments	\$ 18	\$ 18	\$ —	\$ —
Common stock	319	319	—	—
Mutual funds – closed-end fund	182	182	—	—
Mutual funds – open-end fund	1,049	—	1,049	—
Fixed income	475	—	475	—
Total available-for-sale investments (1)	\$ 2,043	\$ 519	\$ 1,524	\$ —
Percent of total	100	% 25	% 75	% —

(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 September 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 \$1.2 million and \$1.0 million at September 30, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were zero and \$340 thousand at September 30, 2010 and December 31, 2009, respectively. The Equipment Term Loan's principal balance outstanding was zero and \$583 thousand at September 30, 2010 and December 31, 2009, respectively. As of September 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. Combined availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$2.9 million as of September 30, 2010. At September 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 \$119 thousand and \$86 thousand for the three months ended September 30, 2010 and 2009, respectively, and \$374 thousand and \$412 thousand for the nine months ended September 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 September 30,		Nine Months Ended September 30,	
	2010	2009	2010	2009
	\$ 5	\$ 2	\$ 22	\$ 20

Edgar Filing: SPIRE CORP - Form 10-Q

Cost of contract research, services and licenses				
Cost of goods sold	18	30	56	94
Administrative and selling	96	54	296	298
Total stock-based compensation	\$ 119	\$ 86	\$ 374	\$ 412

- 10 -

---

At September 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.

A summary of options outstanding under the Plan as of September 30, 2010 and changes during the nine-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	130,500	\$ 4.21		
Exercised	(3,500)	) \$ 2.50		
Cancelled/expired	(76,000)	) \$ 7.62		
Options Outstanding at September 30, 2010	832,677	\$ 6.62	6.76	\$ 102,505
Options Exercisable at September 30, 2010	552,127	\$ 6.82	5.79	\$ 75,295

Compensation expense related to stock options to be charged in future periods amounts to approximately \$824 thousand at September 30, 2010 and will be recognized over a weighted-average period of 2.57 years.

The per-share weighted-average fair value of stock options granted during the three and nine months ended September 30, 2010 was \$2.50 and \$2.56, respectively, and \$3.12 and \$3.45 for the three and nine months ended September 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	—	1.47%	4.2 years	81.3%
2009	—	1.64%	4.1 years	79.4%

The risk free interest rate reflects treasury yields rates over a term that approximates the expected option life. The expected option life is calculated based on historical lives of all options issued under the 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 loss and consists of the following:



Edgar Filing: SPIRE CORP - Form 10-Q

(in thousands)	For the Three Months Ended		For the Nine Months Ended	
	September 30,		September 30,	
	2010	2009	2010	2009
Net loss	\$ (915	) \$ (3,527	) \$ (208	) \$ (9,611
Other comprehensive income:				
Unrealized gain on available for sale				
marketable securities, net of tax	186	178	74	581
Total comprehensive loss	\$ (729	) \$ (3,349	) \$ (134	) \$ (9,030

- 11 -

---

### 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 had 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 \$162 thousand for the nine months ended September 30, 2010 and \$126 thousand and \$360 thousand for the three and nine months ended September 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 September 30, 2010 and December 31, 2009 are as follows:

(in thousands)	September 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
Total current assets of discontinued operations and assets held for sale	—	154
Property and equipment, net	—	9
Intangible and other assets, net	—	49
Total non-current assets of discontinued operations and assets held for sale	—	58
Total assets of discontinued operations and assets held for sale	\$ —	\$ 212
Liabilities of Discontinued Operations		
Current liabilities of discontinued operations		
Accounts payable	\$ 317	\$ 593
Accrued liabilities	145	1,089
Total current liabilities of discontinued operations	462	1,682
Total liabilities of discontinued operations	\$ 462	\$ 1,682

Included in accrued liabilities are reserves of zero and \$782 thousand related to the recall, as discussed above, at September 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 September 30,		Nine Months Ended September 30,	
	2010	2009	2010	2009
Net sales and revenues	\$ —	\$ 632	\$ 1,656	\$ 2,226
Gross margin	\$ —	\$ (45	) \$ (136	) \$ 358
Loss from discontinued operations before sale of business unit	\$ —	\$ (1,248	) \$ (123	) \$ (1,639
Gain on sale of business unit	—	—	2,604	—
Income tax provision	—	—	(992	) —
Net income (loss) from discontinued operations, net of tax	\$ —	\$ (1,248	) \$ 1,489	\$ (1,639

15. Subsequent Events

As previously disclosed, on November 28, 2008 the Company entered into a Solicitation/Contract/Order for Commercial Items ("Cell Materials Contract") to provide Federal Prison Industries, Inc., otherwise known as UNICOR ("UNICOR") a twenty-two (22) month supply of multicrystalline solar cells for \$53.94 million in the aggregate. Delivery commenced in the first quarter of 2009. As previously disclosed, subsequent amendments modified the quantity and pricing terms with respect to the solar cells to be delivered under the Cell Materials Contract, as well as the monthly delivery schedule.

On October 13, 2010, UNICOR delivered to the Company an executed amendment of Solicitation/Modification of Contract MOD6 to the Cell Materials Contract, with an effective date of October 1, 2010. Pursuant to this amendment, the aggregate supply of multicrystalline solar cells over the term of the contract was adjusted to \$36.19 million. Of this revised contract value, approximately 34% was delivered in 2009, approximately 29% was delivered during the first nine months of 2010, approximately 17% is expected to be delivered during the final three months of 2010 and approximately 20% is expected to be delivered during the first quarter of 2011. Additionally, the Cell Materials Contract term was extended through December 31, 2011, with the provision that commencing April 1, 2011 it will become an Indefinite Delivery/Indefinite Quantity contract with no guaranteed minimums.

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 provide 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 30% and 37% of net sales and revenues for the three and nine months ended September 30, 2010, respectively, and 48% and 53% of net sales and revenues for the three and nine months ended September 30, 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 September 30,		Nine Months Ended September 30,	
	2010	2009	2010	2009
Net sales and revenues	100%	100%	100%	100%
Cost of sales and revenues	81	85	82	89
Gross margin	19	15	18	11
Selling, general and administrative expenses	(23)	(26)	(22)	(26)
Internal research and development expenses	(1)	(1)	(2)	(1)
Gains on termination of contracts	—	—	2	3
Loss from continuing operations	(5)	(12)	(4)	(13)
Other expense, net	—	(1)	—	(3)
Loss from continuing operations before income tax benefit (provision)	(5)	(13)	(4)	(16)
Income tax benefit (provision) - continuing operations	1	—	2	—
Loss from continuing operations	(4)	(13)	(2)	(16)
Income (loss) from discontinued operations, net of tax	—	(8)	2	(3)
Net loss	(4%)	(21%)	—%	(19%)

## Overall

Our total net sales and revenues for the nine months ended September 30, 2010 were \$61.9 million as compared to \$50.1 million for the nine months ended September 30, 2009, which represents an increase of \$11.8 million or 24%. The increase was primarily attributable to a \$10.4 million increase in solar sales and \$1.6 million increase in optoelectronics revenue, partially offset by a slight decrease in biomedical revenue.

## Solar Business Unit

Sales in our solar business unit increased 25% during the nine months ended September 30, 2010 to \$51.6 million as compared to \$41.2 million in the nine months ended September 30, 2009. The increase is the result of sales related to a cell manufacturing line completed in the second quarter of 2010 and four solar systems completed in the third quarter of 2010, partially offset by a decrease in solar equipment sales.

## Biomedical Business Unit

Revenues of our biomedical business unit decreased 4% during the nine months ended September 30, 2010 to \$6.5 million as compared to \$6.8 million in the nine months ended September 30, 2009. Decrease in revenues from our biomedical research and development contracts was partially offset by an increase in revenue from orthopedics coatings services.

## Optoelectronics Business Unit

Revenues in our optoelectronics business unit increased 71% to \$3.8 million during the nine months ended September 30, 2010 as compared to \$2.2 million in the nine months ended September 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 Nine Months Ended September 30, 2010 Compared to Three and Nine Months Ended September 30, 2009

#### Net Sales and Revenues

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

- 16 -

---

Edgar Filing: SPIRE CORP - Form 10-Q

(in thousands)	Three Months Ended September 30,			Increase	
	2010	2009	\$	%	
Sales of goods	\$ 17,235	\$ 13,551	\$ 3,684	27	%
Contract research, services and license revenues	3,410	3,013	397	13	%
Net sales and revenues	\$ 20,645	\$ 16,564	\$ 4,081	25	%

The 27% increase in sales of goods for the three months ended September 30, 2010 as compared to the three months ended September 30, 2009 was primarily due to an increase of \$7.3 million in solar system revenues, partially offset by a decline of \$2.1 million in solar cell materials and a decline of \$1.6 million in solar module manufacturing equipment. The increase of solar system sales in 2010 as compared to 2009 was primarily due to the completion of four photovoltaic system projects in 2010 worth \$7.3 million. Sales of solar cell materials, all to one customer, decreased 46% in 2010 as compared to 2009 primarily due to a contractual decrease in delivered cells in the third quarter of 2010. Solar module equipment sales decreased 18% in 2010 as compared to 2009 primarily due to the delivery of equipment on three large module equipment contracts in 2009.

The 13% increase in contract research, services and license revenues for the three months ended September 30, 2010 as compared to the three months ended September 30, 2009 is primarily attributable to an increase of \$580 thousand in optoelectronics service revenue, partially offset by a decrease of \$256 thousand in biomedical research and development contracts. Revenue from our optoelectronics processing services (Spire Semiconductor) increased 86% 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 biomedical research and development activities decreased 44% 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)	Nine Months Ended September 30,			Increase	
	2010	2009	\$	%	
Sales of goods	\$ 51,520	\$ 41,101	\$ 10,149	25	%
Contract research, services and license revenues	10,335	9,023	1,312	15	%
Net sales and revenues	\$ 61,855	\$ 50,124	\$ 11,731	23	%

The 25% increase in sales of goods for the nine months ended September 30, 2010 as compared to the nine months ended September 30, 2009 was primarily due to an increase of \$8.1 million in solar system revenues and an increase in sales of solar cell manufacturing equipment of \$7.9 million, partially offset by a decline of \$5.4 million in solar module equipment revenues. The increase of solar system sales in 2010 as compared to 2009 was primarily due to the completion of four photovoltaic system projects in the third quarter of 2010 worth \$7.3 million. Sales of solar cell equipment included the completion of a solar cell manufacturing line to one customer worth \$7.7 million 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. Sales of solar cell materials, all to one customer, decreased slightly in 2010 as compared to 2009 primarily due to a contractual decrease in delivered cells in the second and third quarter of 2010.

The 15% increase in contract research, services and license revenues for the nine months ended September 30, 2010 as compared to the nine months ended September 30, 2009 is primarily attributable to an increase of \$1.6 million in optoelectronics and an increase of \$255 thousand in orthopedics service revenue, partially offset by a decrease of \$515

thousand in biomedical research and development contracts. Revenue from our optoelectronics processing services (Spire Semiconductor) increased 71% 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 5% in 2010 as compared to 2009. Revenues from our biomedical research and development activities decreased 34% 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:

- 17 -

---

## Edgar Filing: SPIRE CORP - Form 10-Q

(in thousands)	Three Months Ended September 30,						Increase		
	2010	%		2009	%	\$	%		
Cost of goods sold	\$ 14,439	84	%	\$ 11,692	86	%	\$ 2,747	23	%
Cost of contract research, services and licenses and									
licenses	2,356	69	%	2,331	77	%	25	1	%
Net cost of sales and									
revenues	\$ 16,795	81	%	\$ 14,023	85	%	\$ 2,772	20	%

Cost of goods sold increased 23% for the three months ended September 30, 2010 as compared to the three months ended September 30, 2009, primarily as a result of increased costs related to solar cell equipment and solar systems, partially offset by decreased costs related to solar module equipment. As a percentage of sales, cost of goods sold was 84% of sales of goods in 2010 as compared to 86% 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 slightly for the three months ended September 30, 2010 as compared to the three months ended September 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 biomedical contract research activities due to lower volumes. Cost of contract research, services and licenses as a percentage of revenue decreased to 69% of revenues in 2010 from 77% in 2009, primarily due to a decline in negative margin in our optoelectronics facility in 2010.

Cost of sales and revenues also includes approximately \$23 thousand and \$32 thousand of stock-based compensation for the three months ended September 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)	Nine Months Ended September 30,						Increase		
	2010	%		2009	%	\$	%		
Cost of goods sold	\$ 42,978	83	%	\$ 37,677	92	%	\$ 5,301	14	%
Cost of contract research, services and licenses and									
licenses	7,607	74	%	6,764	75	%	843	12	%
Net cost of sales and									
revenues	\$ 50,585	82	%	\$ 44,441	89	%	\$ 6,144	14	%

Cost of goods sold increased 14% for the nine months ended September 30, 2010 as compared to the nine months ended September 30, 2009, primarily as a result of increased costs related to solar cell equipment and solar systems, partially offset by a decrease in costs related to solar module equipment. Cost of goods sold as a percentage of sales decreased to 83% of sales of goods in 2010 from 92% 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 12% for the nine months ended September 30, 2010 as compared to the nine months ended September 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 decreased slightly in 2010 when compared to 2009.

Cost of sales and revenues also includes approximately \$78 thousand and \$114 thousand of stock-based compensation for the nine months ended September 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)	Three Months Ended September 30,						Increase		
	2010	%		2009	%	\$		%	
Selling, general and administrative	\$ 4,620	23	%	\$ 4,320	24	%	\$ 300	7	%
Internal research and development	280	1	%	220	1	%	60	27	%
Operating expenses	\$ 4,900	24	%	\$ 4,540	25	%	\$ 360	8	%

- 18 -

---

### Selling, General and Administrative Expenses

Selling, general and administrative expense increased 7% in the three months ended September 30, 2010 as compared to the three months ended September 30, 2009, primarily as a result of an increase in marketing, legal, depreciation, employee related expenses and commissions paid to our agents. Selling, general and administrative expense decreased slightly to 23% of sales and revenues in 2010 as compared to 24% in 2009. The decrease was primarily due to the absorption of selling, general and administrative overhead costs by the increase in sales and revenues.

Operating expenses includes approximately \$96 thousand and \$54 thousand of stock-based compensation for the three months ended September 30, 2010 and 2009, respectively.

### Internal Research and Development

Internal research and development expense increased 27% in the three months ended September 30, 2010 as compared to the three months ended September 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 1% of sales and revenues in 2010 and 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)	Nine Months Ended September 30,						Increase		
	2010	%		2009	%	\$	%		
Selling, general and administrative	\$ 13,827	22 %		\$ 13,269	26 %	\$ 558	4 %		
Internal research and development	939	2 %		782	2 %	157	20 %		
Operating expenses	\$ 14,766	24 %		\$ 14,051	28 %	\$ 715	5 %		

### Selling, General and Administrative Expenses

Selling, general and administrative expense increased 4% in the nine months ended September 30, 2010 as compared to the nine months ended September 30, 2009, primarily as a result of an increase in employee related costs, partially offset a decrease in deferred compensation 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 selling, general and administrative overhead costs by the increase in sales and revenues.

Operating expenses includes approximately \$296 thousand and \$298 thousand of stock-based compensation for the nine months ended September 30, 2010 and 2009, respectively.

### Internal Research and Development

Internal research and development expense increased 20% in the nine months ended September 30, 2010 as compared to the nine months ended September 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 had 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 Expense, Net

We earned \$4 thousand and \$1 thousand of interest income for the three months ended September 30, 2010 and 2009, respectively. We incurred interest expense of \$28 thousand and \$84 thousand for the three months ended September 30, 2010 and 2009, respectively. We had currency exchange losses of approximately \$8 thousand and \$174 thousand during the three months ended September 30, 2010 and 2009, respectively.

We earned \$15 thousand of interest income for the nine months ended September 30, 2010 and 2009, respectively. We incurred interest expense of \$178 thousand and \$232 thousand for the nine months ended September 30, 2010 and 2009, respectively. We recorded a loss of \$1.0 million on equity investment in joint venture with Gloria Solar for the nine months ended September 30, 2009. We had currency exchange losses of approximately \$21 thousand and \$35 thousand during the nine months ended September 30, 2010 and 2009, respectively.

#### Income Taxes

We recorded a tax benefit on our loss from continuing operations of \$167 thousand and \$1.1 million for the three and nine months ended September 30, 2010, respectively, which was offset by a provision on our income from discontinued operation of zero and \$992 thousand for the three and nine months ended September 30, 2010, respectively. 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 \$23 thousand and \$64 thousand for the three and nine months ended September 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 zero and \$1.5 million for the three and nine months ended September 30, 2010. Included in discontinued operations for the nine months ended September 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 \$162 thousand for the nine months ended September 30, 2010. See Note 14 to the condensed 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.

- 20 -

---

We recorded a loss from discontinued operations of \$1.2 million and \$1.6 million for the three and nine months ended September 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 \$125 thousand and \$359 thousand for the three and nine months ended September 30, 2009, respectively. See Note 14 to the unaudited condensed consolidated financial statements.

#### Net Income (Loss)

We reported a net loss of \$915 thousand and \$3.5 million for the three months ended September 30, 2010 and 2009, respectively. The improvement of approximately \$2.6 million is primarily due to improved margins in solar equipment sales and a net loss from discontinued operations, net of tax in 2009.

We reported a net loss of \$208 thousand and \$9.6 million for the nine months ended September 30, 2010 and 2009, respectively. The improvement of approximately \$9.4 million is primarily due to improved margins in solar equipment sales and net income from discontinued operations, net of tax, compared to a net loss from discontinued operations, net of tax in 2009.

#### Liquidity and Capital Resources

(in thousands)	September 30,		December 31,		Increase (Decrease)	
	2010		2009	\$	%	
Cash and cash equivalents	\$ 6,402		\$ 8,999	\$ (2,597 )	(29	%)
Working capital	\$ 5,757		\$ 3,718	\$ 2,039	55	%

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 September 30, 2010, our accumulated deficit was approximately \$12.4 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 September 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 have 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 \$1.2 million and \$1.0 million at September 30, 2010 and December 31, 2009, respectively. Advances outstanding under the Restated Ex-Im Facility were zero and \$340 thousand at September 30, 2010 and December 31, 2009, respectively. The Equipment Term Loan's principal balance outstanding was zero and \$583 thousand at September 30, 2010 and December 31, 2009, respectively. As of September 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. Combined availability under the Second Restated Revolving Credit Facility and the Restated Ex-Im Facility was \$2.9 million as of September 30, 2010. At September 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 three quarters of 2010 and 2009. Foreign exchange loss included in other expense was \$8 thousand and \$174 thousand for the three months

ended September 30, 2010 and 2009, respectively, and \$21 thousand and \$35 thousand for the nine months ended September 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 was originally set to expire on November 30, 2012. The annual rental rate for the first year of the Bedford Lease was \$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 increased on each anniversary by \$0.75 per square foot.

On September 17, 2010, we entered into the First Amendment to Lease Agreement with SPI-Trust to amend the Bedford Lease. The term of the Bedford Lease was extended for an additional five (5) years to expire on November 30, 2017. The annual rental rate for the first year of the extended term (December 1, 2012 through November 30, 2013) is \$16.00 per square foot on a triple net basis, whereby the tenant is responsible for operating expenses, taxes and maintenance of the building. After the first year of the extended term of the Bedford Lease, the annual rental rate increases on each anniversary by \$0.50 per square foot. We have the right to further extend the term of the Bedford Lease for an additional five (5) year period. If we exercise this right to further extend the term of the Bedford Lease, the annual rental rate for the first year of the further 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 \$0.50 per square foot. Additionally, SPI-Trust agreed to reimburse us up to \$50 thousand for all costs incurred by us in connection with any alterations or improvements to the premises or repairs or replacements to the heating and air conditioning systems. We believe that the terms of the Bedford Lease, as amended, are commercially reasonable. Rent expense under the Bedford Lease was \$529 thousand and \$505 thousand for the three months ended September 30, 2010 and 2009, respectively, and was \$1.5 million for each of the nine months ended September 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 September 30, 2010 and 2009 and was \$996 thousand for each of the nine months ended September 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 September 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)	\$ 1,157	—	\$ 1,157	—	—
Purchase obligations	\$ 4,364	\$ 4,111	\$ 225	\$ 28	—
Unrelated party capital leases	\$ 132	\$ 54	\$ 66	\$ 12	—
Operating leases:					
Unrelated party operating leases	\$ 225	\$ 99	\$ 125	\$ 1	—
Related party operating leases	\$ 23,829	\$ 3,375	\$ 7,247	\$ 7,678	\$ 5,529

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 September 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 \$181 thousand at September 30, 2010 and \$1.5 million at 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, September 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 September 30, 2010, our disclosure controls and procedures were not effective.

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 December 31, 2009.

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 hired a Corporate Controller to fill the position previously held by the Chief Accounting Officer and also hired an Accounting Supervisor to 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 additions 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 September 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.

- 25 -

---

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(az)Amendment of Solicitation/Modification of Contract MOD05 to Solicitation/Contract/Order for Commercial Items, with an effective date of June 15, 2010, by and between Spire Corporation and Federal Prison Industries, UNICOR. \*

10(aaa)Amendment of Solicitation/Modification of Contract MOD06 to Solicitation/Contract/Order for Commercial Items, with an effective date of October 01, 2010, by and between Spire Corporation and Federal Prison Industries, UNICOR. \*

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

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

32.1Certification 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.

32.2Certification 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: November 10, 2010

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

Dated: November 10, 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
10(az)	Amendment of Solicitation/Modification of Contract MOD05 to Solicitation/Contract/Order for Commercial Items, with an effective date of June 15, 2010, by and between Spire Corporation and Federal Prison Industries, UNICOR. *
10(aaa)	Amendment of Solicitation/Modification of Contract MOD06 to Solicitation/Contract/Order for Commercial Items, with an effective date of October 01, 2010, by and between Spire Corporation and Federal Prison Industries, UNICOR. *
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.

