SPIRE CORP
Form 10QSB
August 13, 2004

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

FORM 10-QSB

|X| Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the quarterly period ended June 30, 2004; 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

(Name of small business issuer as specified in its charter)

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

ONE PATRIOTS PARK
BEDFORD, MASSACHUSETTS 01730-2396

(Address of principal executive offices)

781-275-6000

(Issuer's telephone number)

Securities registered under Section 12(g) of the Act:

COMMON STOCK, $0.01 PAR VALUE; REGISTERED ON THE NASDAQ STOCK MARKET

(Title of class)

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

State the number of shares outstanding of each of the issuer's classes of common equity, as of the latest practicable date. There were 6,836,409 outstanding shares of the issuer's only class of common equity, Common Stock, $0.01 par value, on July 30, 2004.

Transitional Small Business Disclosure Format (check one): Yes |_| No |X|

TABLE OF CONTENTS

		Page
PART I.	FINANCIAL INFORMATION	
Item 1.	Financial Statements	
	Unaudited Condensed Consolidated Balance Sheet as of June 30, 2004	1
	Unaudited Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2004 and 2003	2
	Unaudited Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2004 and 2003	3
	Notes to Unaudited Condensed Consolidated Financial Statements	4
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	10
Item 3.	Controls and Procedures	19
PART II.	OTHER INFORMATION	
Item 1.	Legal Proceedings	20
Item 2.	Changes in Securities	20
Item 3.	Defaults Upon Senior Securities	20
Item 4.	Submission of Matters to a Vote of Security Holders	20
Item 5.	Other Information	21
Item 6.	Exhibits and Reports on Form 8-K	21

PART I
FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

SPIRE CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEET
(UNAUDITED)

	JUNE 30, 2004
ASSETS	
Current assets	
Cash and cash equivalents	$ 5,348,654
Restricted cash	670,544
	6,019,198
Net accounts receivable, trade	4,144,368
Inventories	1,988,562
Refundable income taxes	329,400
Deferred income taxes	231,864
Prepaid expenses and other current assets	251,978
Total current assets	12,965,370
Property and equipment	23,805,778
Less: accumulated depreciation and amortization	(15,931,786)
Net property and equipment	7,873,992
Deposit - related party	168,750
Intangible and other assets, net	693,081
Total assets	$ 21,701,193
LIABILITIES AND STOCKHOLDERS' EQUITY	
Current liabilities	
Current portion of capital lease obligation	$ 387,905
Current portion of capital lease obligation - related party	485,461
Accounts payable	1,297,410
Accrued liabilities	1,476,963
Current portion of accrued lease obligation - related party	504,596
Advances on contracts in progress	801,355
Total current liabilities	4,953,690
Long-term portion of capital lease obligation	651,029
Long-term portion of capital lease obligation - related party	2,545,695
Accrued lease obligation - related party	217,471
Deferred income taxes	147,864
Unearned purchase discount	1,355,981
Total long-term liabilities	4,918,040

Total liabilities	9,871,730
Commitments and Contingencies:	
Stockholders' equity	
Common stock, $0.01 par value; shares authorized 20,000,000; issued 6,827,909 shares in 2004	68,279
Additional paid-in capital	9,390,357
Retained earnings	2,370,827
Total stockholders' equity	11,829,463
Total liabilities and stockholders' equity	$ 21,701,193

See accompanying notes to condensed consolidated financial statements.

1

SPIRE CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	THREE MONTHS ENDED JUNE 30,		SI
	2004	2003	2
Net sales and revenues			
Contract research and service revenues	$ 2,748,874	$ 1,926,619	$ 5,
Sales of goods	1,508,991	1,828,302	3,
Total sales and revenues	4,257,865	3,754,921	9,
Costs and expenses			
Cost of contract research and services	2,113,125	1,255,908	4,
Cost of goods sold	1,388,027	1,722,059	3,
Selling, general and administrative expenses	2,030,134	1,525,064	4,
Internal research and development	377,340	283,248	
Total costs and expenses	5,908,626	4,786,279	12,
Gain on sale of license	3,000,000	4,989,150	3,
Earnings from operations	1,349,239	3,957,792	
Interest expense, net	(70,529)	(21,512)	(
Earnings (loss) before income taxes	1,278,710	3,936,280	
Income tax expense	--	675,000	

Net earnings (loss)	$ 1,278,710	$ 3,261,280	$
Earnings (loss) per share of common stock - basic	$ 0.19	$ 0.48	$
Earnings (loss) per share of common stock - diluted	$ 0.18	$ 0.48	$
Weighted average number of common and common equivalent shares outstanding - basic	6,789,206	6,761,660	6,
Weighted average number of common and common equivalent shares outstanding - diluted	7,062,623	6,804,403	6,

See accompanying notes to condensed consolidated financial statements.

2

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

	SIX MONTHS ENDED JUNE 3	
	2004	2003
Cash flows from operating activities:		
Net income (loss)	$ (99,345)	$ 2,487
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	1,244,451	483
Gain on sale of license	(3,000,000)	(4,989
Changes in assets and liabilities (excluding business acquisition):		
Restricted cash	(7,655)	(102
Accounts receivable, net	95,969	1,152
Inventories	(557,573)	442
Prepaid expenses and other current assets	142,355	213
Refundable income taxes	193,600	
Accounts payable, accrued liabilities and other liabilities	(316,021)	51
Unearned purchase discount	(73,901)	(3
Deposit related party	(168,750)	
Other assets	--	(2
Advances on contracts in progress	(378,438)	(58
Net cash used in operating activities	(2,925,308)	(324
Cash flows provided by investing activities:		
Proceeds from sale of license	3,000,000	4,989
Additions to property and equipment	(197,014)	(411
Acquisition, net of cash acquired	--	(954
Increase in intangible and other assets	(305,045)	(93

Net cash provided by investing activities	2,497,941	3,529
Cash flows from financing activities:		
Principal payments on capital lease obligation	(184,033)	(29
Principal payments on capital lease obligation - related party	(171,480)	(33
Exercise of stock options	132,443	12
Net cash used in financing activities	(223,070)	(49
Net increase (decrease) in cash and cash equivalents	(650,437)	3,155
Cash and cash equivalents, beginning of period	5,999,091	7,798
Cash and cash equivalents, end of period	$ 5,348,654	$ 10,954
Supplemental disclosures of cash flow information:		
Acquisition of Bandwidth Semiconductor:		
Assets acquired	$ --	$ 3,998
Liabilities assumed (including related party obligation of $1,247,241)	--	(3,044
Cash paid	$ --	$ 954
Non cash financing activities:		
Capital lease obligation for building - related party	$ --	$ 3,390
Cash paid during the period for:		
Interest	$ 31,077	$ 18
Interest - related party	$ 109,771	$ 22
Income taxes	$ --	$ 435

See accompanying notes to condensed consolidated financial statements.

3

SPIRE CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

JUNE 30, 2004

1. DESCRIPTION OF THE BUSINESS

The Company develops, manufactures and markets highly-engineered products and services in four principal business areas: biomedical, solar equipment, solar systems and optoelectronics, generally bringing to bear expertise in materials technologies, surface science and thin films across all four business areas.

In the biomedical area, the Company provides value-added surface treatments to manufacturers of orthopedic and other medical devices that enhance

the durability, antimicrobial characteristics or other material characteristics of their products; develops and markets hemodialysis catheters and related devices for the treatment of chronic kidney disease; and performs sponsored research programs into practical applications of advanced biomedical and biophotonic technologies.

In the solar equipment area, the Company develops, custom manufactures and markets specialized equipment for the production of terrestrial photovoltaic modules from solar cells. The Company's equipment has been installed in more than 150 factories in 42 countries.

In the solar systems area, the Company provides both stand alone emergency power backup and electric power grid-connected distributed power generation systems employing photovoltaic technology.

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

2. INTERIM FINANCIAL STATEMENTS

In the opinion of management, the accompanying unaudited condensed consolidated financial statements contain all adjustments necessary to fairly present the Company's financial position as of June 30, 2004 and the results of operations and cash flows for the three and six months ended June 30, 2004 and 2003. The results of operations for the three and six months ended June 30, 2004 are not necessarily indicative of the results to be expected for the fiscal year ending December 31, 2004. The unaudited condensed consolidated statements of cash flows for the six months ended June 30, 2003 has been updated to reflect the final allocation of purchase price related to the Bandwidth Semiconductor, LLC ("Bandwidth") acquisition.

The 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-KSB for the year ended December 31, 2003.

3. NEW ACCOUNTING STANDARD

In January 2003, the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities" ("FIN 46") which requires the consolidation of variable interest entities by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. In December 2003, the FASB issued FASB Interpretation No. 46R, "Consolidation of Variable Interest Entities" ("FIN 46R"). FIN 46R superseded FIN 46 and defers the effective date for small business filers until the first reporting period that ends after December 15, 2004 (fourth quarter of 2004). The Company adopted of FIN 46R on January 1, 2004 and adoption did not have a material impact on the Company's financial position or results of operations.

SPIRE CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - (CONTINUED)
(UNAUDITED)

JUNE 30, 2004

4. ACCOUNTS RECEIVABLE/ADVANCES ON CONTRACTS IN PROGRESS

Net accounts receivable, trade consists of the following:

	JUNE 30, 2004
Amounts billed	$3,627,492
Retainage	37,505
Unbilled costs	682,880
	4,347,877
Less: Allowance for sales returns and doubtful accounts	(203,509)
Net accounts receivable	$4,144,368

Unbilled costs on contracts in progress represent 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.

Retainage represents revenues on certain United States government sponsored research and development contracts. These amounts, which usually represent 15% of the Company's research fee on each applicable contract, are not collectible until a final cost review has been performed by government auditors. Included in retainage are amounts expected to be collected after one year, which totaled $38,000 at June 30, 2004. All other accounts receivable are expected to be collected within one year.

All contracts with United States government agencies have been audited by the government through December 2000. The Company has not incurred significant losses as a result of government audits.

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to pay amounts due. Bad debts are written off against the allowance when identified. In addition, the Company maintains an allowance for potential future product returns and rebates related to current period revenues. The Company analyzes the rate of historical returns when evaluating the adequacy of the allowance for sales returns and allowances. Returns and rebates are charged against the allowance when incurred.

Advances on contracts in progress represent contracts for which billings have been presented to the customer but revenue has not been recognized. Advances on contracts in progress totaled $801,000 at June 30, 2004.

5. INVENTORIES

Inventories consist of the following:

	JUNE 30, 2004
Raw materials	$1,130,518
Work in process	734,015
Finished goods	124,029
	$1,988,562

SPIRE CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - (CONTINUED)
(UNAUDITED)

JUNE 30, 2004

6. EARNINGS (LOSS) PER SHARE

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

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS EN
	2004	2003	2004
Weighted average number of common and common equivalent shares outstanding - basic	6,789,206	6,761,660	6,777,368
Add: net additional common shares upon assumed exercise of common stock options	273,417	42,743	--
Adjusted weighted average common and common equivalents shares outstanding - diluted	7,062,623	6,804,403	6,777,368

For the six months ended June 30, 2004, 263,234 shares of common stock issuable relative to stock options were excluded from the calculation of dilutive shares since the inclusion of such shares would be anti-dilutive due to the Company's net loss position in the period. In addition, for the three and six months ended June 30, 2004, 80,069 and 67,815 shares, respectively, and for the three and six months ended June 30, 2003, 452,978 and 580,190 shares, respectively, of common stock issuable relative to stock options had exercise prices per share that exceeded the average market price of the Company's common stock and were excluded from the calculation of diluted shares since their inclusion would be anti-dilutive.

7. OPERATING SEGMENTS AND RELATED INFORMATION

The following table presents certain operating division information in accordance with the provisions of SFAS No. 131, "Disclosure about Segments of an Enterprise and Related Information", which was adopted in 1998.

The results for Bandwidth Semiconductor have been combined with the Company's Biophotonics Lifesciences segment which has been renamed the Optoelectronics segment. The acquisition of Bandwidth took place on May 23, 2003.

	SOLAR EQUIPMENT	SOLAR SYSTEMS	BIOMEDICAL
For the three months ended June 30, 2004			
Net sales and revenues	$ 813,024	$ 510,550	$ 2,323,307
Earnings (loss) from operations	(506,278)	(152,209)	2,592,041
For the three months ended June 30, 2003			
Net sales and revenues	$ 951,224	$ 810,197	$ 1,670,737

Earnings (loss) from operations	(488,333)	(145,620)	4,724,377
For the six months ended June 30, 2004			
Net sales and revenues	$ 1,974,691	$ 1,787,871	$ 4,180,699
Earnings (loss) from operations	(669,203)	(62,059)	1,768,006
For the six months ended June 30, 2003			
Net sales and revenues	$ 2,194,585	$ 810,197	$ 3,306,322
Earnings (loss) from operations	(555,646)	(546,062)	4,420,876

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

	THREE MONTHS ENDED JUNE 30,				SIX MONTHS ENDED JUNE 30,		
	2004	%	2003	%	2004	%	2003
Foreign	$ 910,000	21%	$ 859,000	23%	$1,151,000	12%	$2,111,000
United States	3,348,000	79%	2,896,000	77%	8,137,000	88%	4,603,000
	$4,258,000	100%	$3,755,000	100%	$9,288,000	100%	$6,714,000

Revenues from contracts with United States government agencies for the three months ended June 30, 2004 and 2003 were $819,000 and $615,000, or 19% and 16% of consolidated net sales and revenues, respectively.

Revenues from contracts with United States government agencies for the six months ended June 30, 2004 and 2003 were $1,465,000 and $1,313,000, or 16% and 20% of consolidated net sales and revenues, respectively.

One customer accounted for approximately 16% and three customers accounted for approximately 36% of the Company's gross sales during the three months ended June 30, 2004 and 2003, respectively. Two customers accounted for approximately 27% and two customers accounted for approximately 36% of the Company's gross sales during the six months ended June 30, 2004 and 2003, respectively. One customer represented approximately 18% of trade account receivables at June 30, 2004.

8. OTHER INTANGIBLE ASSETS

Patents amounted to $491,423 net of accumulated amortization of $543,042 at June 30, 2004. Licenses amounted to $193,333 net of accumulated amortization of $31,667 at June 30, 2004. 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. 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. For disclosure purposes, the table below includes future amortization expense for patents owned

by the Company as well as $382,217 of estimated amortization expense related to patents that remain pending. Estimated amortization expense for the periods ending December 31, is as follows:

YEAR	AMORTIZATION EXPENSE
2004	$ 78,420
2005	156,160
2006	151,328
2007	148,153
2008	112,474
2009	38,221
	$684,756

9. NOTES PAYABLE AND CREDIT ARRANGEMENTS

On June 23, 2003, the Company entered into a $2,000,000 Loan Agreement (the "Agreement") with Citizens Bank of Massachusetts. The Agreement provides Standby Letter of Credit Guarantees for foreign customers and is 100% secured with cash. The Agreement had an original expiration date of June 30, 2004 and was amended in June 2004 to extend the expiration date to June 28, 2005. The amendment also suspended the Agreement's revolving line of credit conversion feature for one year. At June 30, 2004, the Company had $671,000 of restricted cash associated with outstanding letters of credit. Standby Letters of Credit under this Agreement bear interest at 1%. A commitment fee of .25% is charged on the unused portion of the borrowing base. The Agreement contains covenants including certain financial reporting requirements. At June 30, 2004, the Company was in compliance with its financial reporting requirements and cash balance covenants. Letters of Credit issued with an expiration beyond June 28, 2005 are required to be 100% secured by cash.

10. STOCK-BASED COMPENSATION

The Company has adopted the disclosure provisions of Statement of Financial Accounting Standards No. 148, "Accounting for Stock-Based Compensation - Transition and Disclosure" ("SFAS 148") which is an amendment of SFAS No. 123 "Accounting for Stock-Based Compensation" ("SFAS 123"), and continues to apply Accounting Principles Board Opinion No. 25 and related interpretations in accounting for its stock plans. If the Company had elected to recognize compensation cost for all of the plans based upon the fair value at the grant dates for awards under those plans, consistent with the method prescribed by SFAS 123, net earnings (loss) and earnings (loss) per share would have been changed to the pro forma amounts indicated below.

	THREE MONTHS ENDED JUNE 30,		SIX
	2004	2003	200
Net earnings (loss), as reported	$ 1,278,710	$ 3,261,280	$ (9
Deduct: Total stock-based employee compensation expense determined under fair value based method			

for all awards, net of related tax effects	(80,424)	(84,629)	(15
Pro forma net earnings (loss)	$ 1,198,286	$ 3,176,651	$ (25
Earnings (loss) per share:			
Basic - as reported	$ 0.19	$ 0.48	$
Basic - pro forma	$ 0.18	$ 0.47	$
Diluted - as reported	$ 0.18	$ 0.48	$
Diluted - pro forma	$ 0.17	$ 0.47	$

The per-share weighted-average fair value of stock options granted during the quarters ended June 30, 2004 and 2003 was $4.73 and $2.39, 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
2004	--	3.83%	5 years	78.2%
2003	--	3.33%	5 years	81.7%

For the quarter ended June 30, 2004, 8,250 stock options were granted.

11. SALE OF A LICENSE

In October 2002, the Company sold an exclusive patent license for a hemodialysis split-tip catheter to Bard Access Systems, Inc. ("Bard"), a wholly owned subsidiary of C. R. Bard, Inc., in exchange for $5,000,000 upon the execution of the agreement, with another $5,000,000 due upon the earlier to occur of: (a) the date of the first commercial sale of a licensed product by Bard; or (b) no more than 18 months after signing. The agreement further provided for two additional contingent cash payments of $3,000,000 each upon the completion of certain milestones by Bard in 2004 and 2005. Bard has the right to cancel the agreement at any time subsequent to the second payment. There can be no assurances that these milestones will be attained and attainment is beyond the control of the Company. During the year ended December 31, 2002, the Company recorded the initial payment under the agreement, resulting in a gain of $4,464,929, net of direct costs. Due to the potential length of time between the first and second payments and the cancellation provisions within the agreement, the Company did not record the potential remaining payments at that time. During June 2003, in accordance with the agreement, the Company received notification from Bard of the first commercial sale, collected the $5,000,000

payment due and recorded a gain of $4,989,150, net of direct costs. During June 2004, the Company received the first contingent milestone payment and recorded a gain of $3,000,000. There were no direct costs associated with this payment. These gains have been recorded in the accompanying unaudited condensed

consolidated statements of operations for the three and six months ended June 30, 2004 and 2003, respectively. The Company believes that the sale of the license does not reflect the day-to-day operations of the Company. Therefore, the net proceeds received has been classified under investing activities in the unaudited condensed consolidated statements of cash flows for the six months ended June 30, 2004 and June 30, 2003, respectively.

In conjunction with the sale, the Company received a sublicense, which permits the Company to continue to manufacture and market hemodialysis catheters for the treatment of chronic kidney disease. In addition, the Company granted Bard a right of first refusal should the Company seek to sell the catheter business.

12. COMMITMENTS

Letters of Credit

During the second quarter of 2004, the Company entered into a Purchase and Sale Agreement (the "Agreement") to supply certain solar systems units and equipment to a third party. Performance under the Agreement is subject to several precedent conditions including the issuance of a Standby Letter of Credit by the Company in favor of the third party and the advance funding of the total purchase price by the third party to Spire. On July 1, 2004, Spire issued a $5,860,249 Standby Letter of Credit, as amended, in accordance with the terms of this Agreement. The Standby Letter of Credit is subject to the terms of the Company's Loan Agreement as discussed in Note 9 and is only available for drawing to the extent that payments are received by the Company from the third party. As of August 12, 2004, no advance payments have been received. The Standby Letter of Credit automatically terminates if payment is not received by August 31, 2004.

Related Party Capital Lease

In conjunction with the acquisition of Bandwidth by the Company, SPI-Trust, a Trust of which Roger G. Little, Chairman of the Board, Chief Executive Officer and President of the Company, is sole trustee and principal beneficiary, purchased from Stratos (Bandwidth's owner) the building that Bandwidth occupies in Hudson, New Hampshire for $3.7 million. Subsequently, the Company entered into a lease for the building (90,000 square feet) with SPI-Trust whereby the Company will pay $4.1 million to SPI-Trust over an initial five year term expiring in 2008 with a Company option to extend for five years. In addition to the rent payments, the lease obligates the Company to keep on deposit with SPI-Trust the equivalent of three months rent ($168,750 as of June 30, 2004). The lease agreement does not provide for a transfer of ownership at any point. Interest costs were assumed at 7%. For the six months ended June 30, 2004, interest expense was approximately $110,000. This lease has been classified as a related party capital lease and a summary of payments (including interest) follows:

YEAR	RATE PER SQUARE FOOT	ANNUAL RENT	MONTHLY RENT	SECURITY DEPOSIT
June 1, 2003 - May 31, 2004	$ 6.00	$ 540,000	$45,000	$135,000
June 1, 2004 - May 31, 2005	7.50	675,000	56,250	168,750
June 1, 2005 - May 31, 2006	8.50	765,000	63,750	191,250
June 1, 2006 - May 31, 2007	10.50	945,000	78,750	236,250
June 1, 2007 - May 31, 2008	13.50	1,215,000	101,250	303,750
		$ 4,140,000		

At June 30, 2004, $485,461 and $2,545,695 are reflected as the current and long-term portions of capital lease obligation - related party, respectively, in the June 30, 2004 unaudited condensed consolidated balance sheet.

9

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 THAT INVOLVE RISKS AND UNCERTAINTIES. THE COMPANY'S ACTUAL RESULTS AND THE TIMING OF CERTAIN EVENTS MAY DIFFER SIGNIFICANTLY FROM THE RESULTS AND TIMING DISCUSSED IN THE FORWARD-LOOKING STATEMENTS. FACTORS THAT COULD CAUSE OR CONTRIBUTE TO SUCH DIFFERENCES INCLUDE, BUT ARE NOT LIMITED TO, THOSE DISCUSSED OR REFERRED TO IN THIS REPORT AND IN ITEM 6 OF THE ANNUAL REPORT ON FORM 10-KSB FOR THE YEAR ENDED DECEMBER 31, 2003. MANAGEMENT'S DISCUSSION AND ANALYSIS INCLUDES THE FOLLOWING SECTIONS:

- OVERVIEW;
- RESULTS OF OPERATIONS;
- THREE AND SIX MONTHS ENDED JUNE 30, 2004 COMPARED TO THREE AND SIX MONTHS ENDED JUNE 30, 2003;
- LIQUIDITY AND CAPITAL RESOURCES;
- RECENT ACCOUNTING PRONOUNCEMENTS;
- IMPACT OF INFLATION AND CHANGING PRICES;
- FOREIGN CURRENCY FLUCTUATION;
- RELATED PARTY TRANSACTIONS;
- CRITICAL ACCOUNTING POLICIES; AND
- CONTRACTUAL OBLIGATIONS, COMMERCIAL COMMITMENTS AND OFF-BALANCE SHEET ARRANGEMENTS.

Overview

The Company develops, manufactures and markets highly-engineered products and services in four principal business areas: biomedical, solar equipment, solar systems and optoelectronics, generally bringing to bear expertise in materials technologies, surface science and thin films across all four business areas.

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

In the solar equipment area, the Company develops, custom manufactures and markets specialized equipment for the production of terrestrial photovoltaic modules from solar cells. The Company's equipment has been installed in more than 150 factories in 42 countries.

In the solar systems area, the Company provides both stand alone emergency power backup and electric power grid-connected distributed power generation systems employing photovoltaic technology.

In the optoelectronics area, the Company provides compound semiconductor foundry and fabrication services on a merchant basis to customers involved in biomedical/biophotonic instruments, telecommunications and defense applications.

Services include compound semiconductor wafer growth, other thin film processes and related device processing and fabrication services. The Company also provides materials testing services and performs services in support of sponsored research into practical applications of optoelectronic technologies.

Results of Operations

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

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDE
	2004	2003	2004
Net sales and revenues	100%	100%	100%
Cost of sales and revenues	82	79	80
Gross profit	18	21	20
Selling, general and administrative expenses	(48)	(40)	(44)
Internal research and development	(9)	(8)	(8)
Gain on sale of license	71	133	32
Earnings from operations	32	106	--
Interest expense, net	(2)	(1)	(1)
Earnings (loss) before income taxes	30	105	(1)
Income tax expense	--	18	--
Net earnings (loss)	30%	87%	(1%)

10

The Company's total net sales and revenues for the six months ended June 30, 2004 ("2004") increased 38% compared to the six months ended June 30, 2003 ("2003"). The increase was attributable to an increase in solar systems in 2004 (15%), the acquisition of Bandwidth Semiconductor, LLC ("Bandwidth") in May 2003 (16%), and to a lesser extent, increases in biomedical processing services and devices (11%) and government funded research and development activities (4%). These increases were partially offset by a decrease in solar equipment sales (8%).

Sales in the Company's solar business unit increased 25% during 2004 as compared to 2003 primarily due to a 121% increase in solar systems sales resulting from the temporary permitting challenges in the metro Chicago area we experienced in 2003 that we did not encounter in 2004. The increase can also be attributed to a 220% increase in revenue from government-funded research and development activities associated with our cost sharing agreement with the Department of Energy National Renewable Energy Laboratory ("NREL"). These increases were partially offset by a 27% decrease in equipment sales in 2004 of the Company's solar energy manufacturing equipment as compared to 2003. Sales in 2004 consisted primarily of two assemblers and two simulators as compared to the shipment of a 5 megawatt SPI-LINETM turnkey photovoltaic module production line to Huangshan Ho Tin Solar Technology Development Ltd. located in China in 2003.

Revenues of the Company's biomedical business unit increased 22% during 2004 as compared to 2003 as a result of a 23% increase in revenue from our IONGUARD(R) implant process services and a 65% increase in revenue from our line of hemodialysis catheters and, to a lesser extent, a 3% increase in revenue from our government-funded research and development activities.

Sales in the Company's optoelectronics business unit increased 380% during 2004 as compared to 2003, due to the May 23, 2003 acquisition of Bandwidth Semiconductor, LLC ("Bandwidth").

Operating results will depend upon product mix, as well as the timing of shipments of higher priced products from the Company's solar equipment line and delivery of solar systems. Export sales were 12% of net sales and revenues in 2004 and are expected to continue to constitute a significant portion of the Company's net sales and revenues.

Three and Six Months Ended June 30, 2004 Compared to Three and Six Months Ended June 30, 2003

NET SALES AND REVENUES

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

	THREE MONTHS ENDED JUNE 30,		INCREASE/(DECRE
	2004	2003	$
Contract research and service revenues	$ 2,749,000	$ 1,927,000	$ 822,000
Sales of goods	1,509,000	1,828,000	(319,000)
Net sales and revenues	$ 4,258,000	$ 3,755,000	$ 503,000

The 43% increase in contract research and service revenues for the three months ended June 30, 2004 as compared to the three months ended June 30, 2003 is primarily attributable to the acquisition of Bandwidth (17%) on May 23, 2003, an increase in research and development activities (17%), and to a lesser extent, increases in biomedical processing services (7%) and royalty fees (2%). Revenues from our research and development activities increased 54% in 2004 as compared to 2003 primarily due to an increase in the value and number of contracts associated with funded research and development and an increase in revenue from activities associated with our cost sharing agreement with NREL. Revenue from our biomedical processing services increased 13% in 2004 compared to 2003 as a result of continued strong demand for our IONGUARD implant services.

The 17% decrease in sales of goods for the three months ended June 30, 2004 as compared to the three months ended June 30, 2003 was primarily due to a decrease in solar systems revenues (16%) and a decrease in solar equipment sales (16%) both offset by an increase in biomedical product sales (15%). Solar systems revenues decreased 37% in 2004 as compared to 2003 due to the timing of project installations in 2004 as compared to 2003. Solar equipment sales decreased 36% in 2004 as compared to 2003 primarily due to the timing and delivery of customer orders. Biomedical product sales increased 134% in 2004 as compared to 2003 as a result of increased demand for our line of hemodialysis catheters and initial sales of our Decathlon product line which was introduced in December 2003.

11

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

	SIX MONTHS ENDED JUNE 30,		INCREASE/(DECREA	
	2004	2003	$	
Contract research and service revenues	$ 5,331,000	$ 3,519,000	$ 1,812,000	
Sales of goods	3,957,000	3,195,000	762,000	
Net sales and revenues	$ 9,288,000	$ 6,714,000	$ 2,574,000	

The 51% increase in contract research and service revenues for the six months ended June 30, 2004 is primarily attributable to the acquisition of Bandwidth (30%) on May 23, 2003, and to a lesser extent, an increase in biomedical processing services (12%) and an increase in government-funded research and development activities associated with our cost sharing agreement with NREL (9%). Revenue from our biomedical processing services increased 23% in 2004 compared to 2003 as a result of continued strong demand for our IONGUARD implant services.

The 24% increase in sales of goods for the six months ended June 30, 2004 was primarily due to an increase in solar systems revenues (31%) and, to a lesser extent, an increase in biomedical product sales (9%), both offset by a decrease in solar equipment sales (16%). The increase in solar system revenues was primarily due to a 122% increase in solar systems revenue in 2004 as compared to 2003 resulting from the temporary permitting challenges in the metro Chicago area we experienced in 2003 that were not encountered in 2004. Biomedical product sales increased 65% in 2004 as compared to 2003 as a result of increased demand for our line of hemodialysis catheters and initial sales of our Decathlon product line which was introduced in December 2003. Solar equipment sales decreased 27% in 2004 as compared to 2003 primarily attributable to the sale of two assemblers and two simulators in 2004 as compared to the shipment of a 5 megawatt SPI-LINE turnkey production line in 2003.

COST OF SALES AND REVENUES

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

	THREE MONTHS ENDED JUNE 30,				INCREASE/(
	2004	%	2003	%	$
Cost of contract research and services	$2,113,000	77%	$1,256,000	65%	$ 857,000
Cost of goods sold	1,388,000	92%	1,722,000	94%	(334,000
Net cost of sales and revenues	$3,501,000	82%	$2,978,000	79%	$ 523,000

The $857,000 (68%) increase in cost of contract research and service revenues in 2004 is primarily due to increased factory overhead and direct costs of $599,000 (48%) associated with the Company's semiconductor foundry and a $254,000 (20%) increase in biomedical processing services costs associated with its 13% increase in revenues. The decline in profit margins associated with the biomedical processing services is primarily attributable to product mix. The increase in cost of contract research and services as a percentage of revenues is the direct result of the Bandwidth acquisition, which recorded a -44% gross

margin in 2004.

The decrease in cost of goods sold as a percentage of revenue is the result of improved contribution margins at our Chicago facility and increased contribution from our hemodialysis catheter product line. The decrease was offset in part by reduced absorption of fixed costs with our equipment product line as a result of reduced revenue (-36%) for the same period last year.

COST OF SALES AND REVENUES

	SIX MONTHS ENDED JUNE 30,				INCREASE/(DE
	2004	%	2003	%	$
Cost of contract research and services	$4,119,000	77%	$2,255,000	64%	$1,864,000
Cost of goods sold	3,309,000	84%	3,010,000	94%	299,000
Net cost of sales and revenues	$7,428,000	80%	$5,265,000	78%	$2,163,000

The $1,864,000 (83%) increase in cost of contract research and service revenues in 2004 is primarily due to increased factory overhead and direct costs of $1,451,000 (64%) associated with the Company's semiconductor foundry and a $471,000 (21%) increase in biomedical processing services costs associated with its 23% increase in revenues. The increase was offset in part by a decrease in cost of sales associated with our research and development activities (2%). The increase in cost of contract research and services as a percentage of revenues is the direct result of the Bandwidth acquisition, which recorded a -28% gross margin in 2004.

The decrease in cost of goods sold as a percentage of revenue is the result of improved contribution margins at the Chicago facility and increased contribution from our hemodialysis catheter product line. The decrease was offset in part by reduced absorption of fixed costs with our equipment product line as a result of reduced revenue (-27%) for the same period last year.

INTERNAL RESEARCH AND DEVELOPMENT

Internal research and development for the three months ended June 30, 2004 increased $94,000 or 33% to $377,000, compared to $283,000 for the three months ended June 30, 2003. The increase was primarily a result of the Company's continued investment in its semiconductor foundry and the "next generation" solar energy module manufacturing equipment under a cost-sharing contract with NREL. As a percentage of sales and revenues, internal research and development increased 1% primarily due to the continued investments discussed above partially offset by the increase in sales and revenue.

Internal research and development for the six months ended June 30, 2004 increased $352,000 or 93% to $731,000, compared to $379,000 for the six months ended June 30, 2003. The increase was primarily a result of the Company's continued investment in its semiconductor foundry and the "next generation" solar energy module manufacturing equipment under a cost-sharing contract with NREL. As a percentage of sales and revenues, internal research and development increased 2% primarily due to the continued investments discussed above partially offset by the increase in sales and revenue.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

Selling, general and administrative expenses for the three months ended June 30, 2004 increased $505,000 to $2,030,000, or 48% of sales and revenues, compared to $1,525,000 or 40% of sales and revenues for the three months ended June 30, 2003. The increase was due primarily to increased cost associated with sales and marketing efforts of the Company's biomedical products and solar business unit and the addition of Bandwidth. The increase in selling, general and administrative expenses as a percentage of sales and revenues was primarily due to the dollar increases described above partially offset by the increase in sales and revenue.

Selling, general and administrative expenses for the six months ended June 30, 2004 increased $1,207,000 to $4,089,000, or 44% of sales and revenues, compared to $2,882,000 or 43% of sales and revenues for the six months ended June 30, 2003. The increase was due primarily to increased costs associated with sales and marketing efforts of the Company's biomedical products and solar business units, the addition of Bandwidth and increased costs associated with legal and auditing expenses in connection with increased compliance requirements. The increase in selling, general and administrative expenses as a percentage of sales and revenues was primarily due to the dollar increases described above partially offset by the increase in sales and revenue.

INTEREST

The Company earned $14,000 and $17,000 of interest income for the quarters ended June 30, 2004 and 2003, respectively. The Company incurred interest expense of $84,000 and $39,000 for the quarters ended June 30, 2004 and 2003, respectively. The interest expense is primarily associated with interest incurred on capital leases associated with the semiconductor foundry.

The Company earned $34,000 and $40,000 of interest income for the six months ended June 30, 2004 and 2003, respectively. The Company incurred interest expense of $174,000 and $54,000 for the six months ended June 30, 2004 and 2003, respectively. The interest expense is primarily associated with interest incurred on capital leases associated with the semiconductor foundry.

13

INCOME TAXES

The Company incurred zero income tax expense for the quarter and the six months ended June 30, 2004, compared to income tax expense of $675,000 for the quarter and the six months ended June 30, 2003. The effective tax rate was 17% for the quarter ended June 30, 2003 and 21% for the six months ended June 30, 2003.

NET EARNING (LOSS)

The Company reported net earnings for the three months ended June 30, 2004 of $1,279,000, compared to net earnings of $3,261,000 in 2003. The earnings for the quarter ended June 30, 2004 are attributable to the Company's income associated with the $3,000,000 contingent milestone payment received relating to the sale of a license for the Company's hemodialysis spilt-tip catheter. The earnings for the quarter ended June 30, 2003 were attributable to the payment of $5,000,000 relating to the hemodialysis license sale that resulted in a $4,989,000 gain. While revenue increased in the quarter, the breakeven point of the Company rose primarily due to the increased fixed costs associated with the Company's semiconductor foundry.

The Company reported a net loss for the six months ended June 30, 2004 of $99,000, compared to net earnings of $2,488,000 in 2003. The loss for the six months ended June 30, 2004 is attributable to the Company's operations as outlined above offset by to the Company's income associated with the $3,000,000

gain on the sale of license. The earnings for the six months ended June 30, 2003 were attributed to the payment of $5,000,000 relating to the hemodialysis license sale resulting in a $4,989,000 gain. While revenue increased in the quarter, the breakeven point of the Company rose primarily due to the increased fixed costs associated with the Company's semiconductor foundry.

Liquidity and Capital Resources

Cash and cash equivalents decreased $650,000 to $5,349,000 as of June 30, 2004 primarily due to $2,925,000 of cash used in operations and, to a lesser extent, investments in patents and licenses and payments on capital leases. These decreases were substantially offset by the $3,000,000 license payment.

The Company has historically funded its operating cash requirements using operating cash flow and proceeds from the sale and licensing of technology. The Company's liquidity position benefited as a result of cash receipts of $5,000,000 in each of the years ended December 31, 2003 and 2002, and $3,000,000 in the quarter ended June 30, 2004 arising from the sale of a hemodialysis patent license to Bard Access Systems. The license sale agreement provides for the Company to receive one additional contingent cash payment of $3,000,000 upon the completion of certain milestones by Bard Access Systems during 2005. There can be no assurance that these milestones will be attained and attainment is beyond the control of the Company.

On June 23, 2003, the Company entered into a $2,000,000 Loan Agreement (the "Agreement") with Citizens Bank of Massachusetts. The Agreement provides Standby Letter of Credit Guarantees for foreign customers and is 100% secured with cash. The Agreement had an original expiration date of June 30, 2004 and was amended in June 2004 to extend the expiration date to June 28, 2005. The amendment also suspended the Agreement's revolving line of credit conversion feature for one year. At June 30, 2004, the Company had $671,000 of restricted cash associated with outstanding letters of credit. Standby Letters of Credit under this Agreement bear interest at 1%. A commitment fee of .25% is charged on the unused portion of the borrowing base. The Agreement contains covenants including certain financial reporting requirements. At June 30, 2004, the Company was in compliance with its financial reporting requirements and cash balance covenants. Letters of Credit issued with an expiration beyond June 28, 2005 are required to be 100% secured by cash.

To date, there are no material commitments by the Company for capital expenditures. At June 30, 2004, the Company's retained earnings were $2,371,000, compared to retained earnings of $2,470,000 as of December 31, 2003. Working capital as of June 30, 2004 decreased to $8,012,000, compared to $8,182,000 as of December 31, 2003.

During the second quarter of 2004, the Company entered into a Purchase and Sale Agreement (the "Agreement") to supply certain solar systems units and equipment to a third party. Performance under the Agreement is subject to several precedent conditions including the issuance of a Standby Letter of Credit by the Company in favor of the third party and the advance funding of the total purchase price by the third party to Spire. On July 1, 2004, Spire issued a $5,860,249 Standby Letter of Credit, as amended, in accordance with the terms of this Agreement. The Standby Letter of Credit is subject to the terms of the Company's Loan Agreement as discussed in Note 9 and is only available for drawing to the extent that payments are received by the Company from the third party. As of August 12, 2004, no advance payments have been received. The Standby Letter of Credit automatically terminates if payment is not received by August 31, 2004.

The Company believes it has sufficient resources to finance its current operations for the foreseeable future through working capital.

Recent Accounting Pronouncements

In January 2003, the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities" ("FIN 46") which requires the consolidation of variable interest entities by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. In December 2003, the FASB issued FASB Interpretation No. 46R, "Consolidation of Variable Interest Entities" ("FIN 46R"). FIN 46R superseded FIN 46 and defers the effective date for small business filers until the first reporting period that ends after December 15, 2004 (fourth quarter of 2004). The Company adopted of FIN 46R on January 1, 2004 and adoption did not have a material impact on the Company's financial position or results of operations.

Impact of Inflation and Changing Prices

Historically, the Company's business has not been materially impacted by inflation. Manufacturing equipment and solar systems are generally quoted, manufactured and shipped within a cycle of approximately nine months, allowing for orderly pricing adjustments to the cost of labor and purchased parts. The Company has not experienced any negative effects from the impact of inflation on long-term contracts. The Company's service business is not expected to be seriously affected by inflation because its procurement-production cycle typically ranges from two weeks to several months, and prices generally are not fixed for more than one year. Research and development contracts usually include cost escalation provisions.

Foreign Currency Fluctuation

The Company sells only in U.S. dollars, generally against an irrevocable confirmed letter of credit through a major United States bank. Therefore the Company is not directly affected by foreign exchange fluctuations on its current orders. However, fluctuations in foreign exchange rates do have an effect on the Company's customers' access to U.S. dollars and on the pricing competition on certain pieces of equipment that the Company sells in selected markets.

Related Party Transactions

The Company subleases 74,000 square feet in a building leased by Mykrolis Corporation, who in turn leases the building from a Trust of which Roger G. Little, Chairman of the Board, Chief Executive Officer and President of the Company, is sole trustee and principal beneficiary. The Company believes that the terms of the third-party sublease are commercially reasonable. The 1985 sublease originally was for a period of ten years, was extended for a five-year period expiring on November 30, 2000 and was further extended for a five-year period expiring on November 30, 2005. The agreement provides for minimum rental payments plus annual increases linked to the consumer price index. Rent expense under this sublease for the six months ended June 30, 2004 was $533,000. In connection with this sublease, the Company is invoiced and pays certain Trust related expenses, including building maintenance and insurance. The Company invoices the Trust on a monthly basis and the Trust reimburses the Company for all such costs.

In conjunction with the acquisition of Bandwidth by the Company, the Company released Bandwidth from the lease agreement that had existed between Bandwidth and the Company. In November 2001, Bandwidth, under its previous owner, abandoned the space being subleased from the Company in Bedford, Massachusetts, to move to a new building and wafer fabrication lab in Hudson, New Hampshire. At that time, there were 48 months left on the lease. Subsequent to the move to Hudson, New Hampshire, Bandwidth was unable to sublease the Bedford, Massachusetts space, and was paying the Company for the unused space. In conjunction with the acquisition of Bandwidth in May 2003, the Company released Bandwidth from the remaining lease payments. However, the Company continues to be obligated to Mykrolis Corporation for the entire amount of the remaining lease agreement. As a result, the present value of the remaining lease obligation associated with the unused space was recorded as an assumed liability of $1,247,241 in the purchase accounting. As of June 30, 2004, the remaining lease obligation is $722,067, which is reflected as "accrued lease obligation - related party" in the June 30, 2004 unaudited condensed consolidated balance sheet. The amount due beyond one year has been reflected in long-term liabilities. The difference between the actual rent payment and the discounted rent payment will be accreted to the consolidated statements of operations as interest expense. Interest of 4.75% has been assumed on this obligation. For the six months ended June 30, 2004, interest expense was $20,532.

15

Also in conjunction with the acquisition of Bandwidth by the Company, SPI-Trust, a Trust of which Roger G. Little, Chairman of the Board, Chief Executive Officer and President of the Company, is sole trustee and principal beneficiary, purchased from Stratos (Bandwidth's owner) the building that Bandwidth occupies in Hudson, New Hampshire for $3.7 million. Subsequently, the Company entered into a lease for the building (90,000 square feet) with SPI-Trust whereby the Company will pay $4.1 million to SPI-Trust over an initial five year term expiring in 2008 with a Company option to extend for five years. In addition to the rent payments, the lease obligates the Company to keep on deposit with SPI-Trust the equivalent of three months rent ($168,750 as of June 30, 2004). The lease agreement does not provide for a transfer of ownership at any point. Interest costs were assumed at 7%. For the six months ended June 30, 2004, interest expense was approximately $110,000. This lease has been classified as a related party capital lease and a summary of payments (including interest) follows:

YEAR	RATE PER SQUARE FOOT	ANNUAL RENT	MONTHLY RENT	SECURITY DEPOSIT
June 1, 2003 - May 31, 2004	$ 6.00	$ 540,000	$ 45,000	$135,000
June 1, 2004 - May 31, 2005	7.50	675,000	56,250	168,750
June 1, 2005 - May 31, 2006	8.50	765,000	63,750	191,250
June 1, 2006 - May 31, 2007	10.50	945,000	78,750	236,250
June 1, 2007 - May 31, 2008	13.50	1,215,000	101,250	303,750
		$ 4,140,000		

At June 30, 2004, $485,461 and $2,545,695 are reflected as the current and long-term portions of capital lease obligation - related party, respectively, in the accompanying unaudited condensed consolidated balance sheet

Critical Accounting Policies

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial

statements and the reported amounts of revenues and expenses during the reporting period. Among the significant estimates affecting our unaudited condensed consolidated financial statements are those relating to revenue recognition, impairment of long-lived assets, acquisition accounting, income taxes, and warranties. We regularly evaluate our estimates and assumptions based upon historical experience and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. To the extent actual results differ from those estimates, our future results of operations may be affected. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our unaudited condensed consolidated financial statements. Refer to Footnote 2 of our notes to consolidated financial statements in our annual report on Form 10-KSB for the year ended December 31, 2003 for a description of our accounting policies for income taxes and warranties.

REVENUE RECOGNITION

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

We generally recognize product revenue upon shipment of products provided there are no uncertainties regarding customer acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable, and collectibility is reasonably assured. These criteria are generally met at the time of shipment when the risk of loss and title passes to the customer or distributor, unless a consignment arrangement exists. Revenue from consignment arrangements is recognized based on product usage indicating sales are complete. Gross sales reflect reductions attributable to customer returns and various customer incentive programs including pricing discounts and rebates. Product returns are permitted in certain sales contracts and an allowance is recorded for returns based on the Company's history of actual returns. Certain customer incentive programs require management to estimate the cost of those programs. The allowance for these programs is determined through an analysis of programs offered, historical trends, expectations regarding customer and consumer participation, sales and payment trends, and experience with payment patterns associated with similar programs that had been previously offered. If sufficient history to make reasonable and reliable estimates of returns or rebates does not exist, revenue associated with such practices is deferred until the return period lapses or a reasonable estimate can be made. This deferred revenue will be recognized as revenue when the distributor reports to us that it has either shipped or disposed of the units (indicating that the possibility of return is remote.)

16

The Company's OEM capital equipment solar energy business builds complex customized machines to order for specific customers. Substantially all of these orders are sold on a FOB Bedford, Massachusetts (or EXW Factory) basis. It is the Company's policy to recognize revenues for this equipment as the product is shipped to the customer, as customer acceptance is obtained prior to shipment and the equipment is expected to operate the same in the customer's environment as it does in the Company's environment. When an arrangement with the customer includes future obligations or customer acceptance, revenue is recognized when those obligations are met or customer acceptance has been achieved. The Company's solar energy systems business installs solar energy systems on customer-owned properties on a contractual basis. Generally, revenue is recognized once the systems have been installed and the title is passed to the customer. For arrangements with multiple elements, the Company allocates fair

value to each element in the contract and revenue is recognized upon delivery of the element.

The Company's biomedical subsidiary and semiconductor foundry and fabrication unit perform specialty material processing services for various manufacturers on a contractual basis. The Company recognizes revenue as the processed products are shipped to the customer.

The Company recognizes revenues and estimated profits on long-term government contracts on a percentage-of-completion method of accounting using a cost-to-cost methodology. Profit estimates are revised periodically based upon changes and facts, and any losses on contracts are recognized immediately. Some of the contracts include provisions to withhold a portion of the contract value as retainage until such time as the United States government performs an audit of the cost incurred under the contract. The Company's policy is to take into revenue the full value of the contract, including any retainage, as it performs against the contract since the Company has not experienced any substantial losses as a result of audits performed by the United States government.

IMPAIRMENT OF LONG-LIVED ASSETS

Long-lived assets, including fixed assets and intangible assets, are continually monitored and are evaluated at least annually for impairment. The determination of recoverability is based on an estimate of undiscounted cash flows expected to result from the use of an asset and its eventual disposition. The estimate of cash flows is based upon, among other things, certain assumptions about expected future operating performance. Our estimates of undiscounted cash flows may differ from actual cash flows due to, among other things, technological changes, economic conditions, changes to our business model or changes in our operating performance. If the sum of the undiscounted cash flows (excluding interest) is less than the carrying value, we recognize an impairment loss, measured as the amount by which the carrying value exceeds the fair value of the asset.

ACQUISITION ACCOUNTING

Through its acquisition, the Company has accumulated assets, the valuation of which involves estimates based on fair value assumptions. Estimated lives assigned to the assets acquired in a business purchase also involve the use of estimates. These matters that are subject to judgments and estimates are inherently uncertain, and different amounts could be reported using different methodologies. Management uses its best estimate in determining the appropriate values and estimated lives to reflect in the consolidated financial statements, using historical experience, market data, and all other available information.

Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements

The following table summarizes the Company's gross contractual obligations at June 30, 2004 and the maturity periods and the effect that such obligations are expected to have on its liquidity and cash flows in future periods:

	PAYMENTS DUE BY PERIOD				
CONTRACTUAL OBLIGATIONS	TOTAL	LESS THAN 1 YEAR	2 - 3 YEARS	4 - 5 YEARS	MORE THAN 5 YEARS
PURCHASE OBLIGATIONS	$2,746,000	$2,609,000	$ 137,000	$ --	$ --

CAPITAL LEASES:					
Unrelated party capital lease	$1,151,000	$ 437,000	$ 714,000	$ --	$ --
Related party capital lease	3,533,000	683,000	1,748,000	1,102,000	--
OPERATING LEASES:					
Unrelated party operating leases	$ 260,000	$ 123,000	$ 83,000	$ 45,000	$ 9,000
Related party operating lease	1,510,000	1,021,000	489,000	--	--

17

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

Capital lease obligations outlined above include both the principal and interest components of these contractual obligations. Included in the related party operating lease is the accrued lease obligation in the amount of $722,067.

On October 8, 1999, the Company entered into an Agreement with BP Solarex ("BPS") in which BPS agreed to purchase certain production equipment built by the Company, for use in the Company's Chicago factory ("Spire Solar Chicago") and in return the Company agreed to purchase solar cells of a minimum of two megawatts per year over a five-year term for a fixed fee from BPS (the "Purchase Commitment"). BPS has the right to reclaim the equipment should the Company not meet its obligations in the Purchase Commitment. The proceeds from the sale of the production equipment purchased by BPS have been classified as an unearned purchase discount in the accompanying unaudited condensed consolidated balance sheet. The Company will amortize this discount as a reduction to cost of sales as it purchases solar cells from BPS. During the quarter ended September 30, 2003, the Company and BPS retroactively amended the agreement to include all purchases of solar modules, solar systems, inverter systems and other system equipment purchased by the Company from BPS in the purchase commitment calculation. Amortization of the purchase discount amounted to $73,901 for the six months ended June 30, 2004.

In addition, the agreement contains a put option for BPS to have the Company create a separate legal entity for Spire Solar Chicago and for BPS to convert the value of the equipment and additional costs, as defined, into equity of the new legal entity. The percentage ownership in the joint venture would be determined based on the cumulative investments by BPS and the Company.

The amended agreement also allows the Company to terminate the agreement on 30 days notice in consideration for a termination payment based on the aggregate amount of Spire purchases of BPS products and the fair market value of the production equipment purchased by BPS at the time of the termination election. As of June 30, 2004, the Company has no intention of terminating the agreement.

In October 2002, the Company sold an exclusive patent license for a hemodialysis split-tip catheter to Bard Access Systems, Inc. ("Bard"), a wholly owned subsidiary of C. R. Bard, Inc., in exchange for $5,000,000 upon the execution of the agreement, with another $5,000,000 due upon the earlier to occur of: (a) the date of the first commercial sale of a licensed product by Bard; or (b) no more than 18 months after signing. The agreement further provided for two additional contingent cash payments of $3,000,000 each upon the completion of certain milestones by Bard in 2004 and 2005. Bard has the right to cancel the agreement at any time subsequent to the second payment. There can be no assurances that these milestones will be attained and attainment is beyond the control of the Company. During the year ended December 31, 2002, the Company recorded the initial payment under the agreement, resulting in a gain of $4,464,929, net of direct costs. Due to the potential length of time between the

first and second payments and the cancellation provisions within the agreement, the Company did not record the potential remaining payments at that time. During June 2003, in accordance with the agreement, the Company received notification from Bard of the first commercial sale, collected the $5,000,000 payment due and recorded a gain of $4,989,150, net of direct costs. During June 2004, the Company received the first contingent milestone payment and recorded a gain of $3,000,000. There were no direct costs associated with this payment.

Outstanding letters of credit totaled $671,000 at June 30, 2004. The letters of credit principally secure performance obligations, and allow holders to draw funds up to the face amount of the letter of credit if the Company does not perform as contractually required. These letters of credit expire in December 2004 and are 100% secured by cash.

During the second quarter of 2004, the Company entered into a Purchase and Sale Agreement (the "Agreement") to supply certain solar systems units and equipment to a third party. Performance under the Agreement is subject to several precedent conditions including the issuance of a Standby Letter of Credit by the Company in favor of the third party and the advance funding of the total purchase price by the third party to Spire. On July 1, 2004, Spire issued a $5,860,249 Standby Letter of Credit, as amended, in accordance with the terms of this Agreement. The Standby Letter of Credit is subject to the terms of the Company's Loan Agreement as discussed in Note 9 and is only available for drawing to the extent that payments are received by the Company from the third party. As of August 12, 2004, no advance payments have been received. The Standby Letter of Credit automatically terminates if payment is not received by August 31, 2004.

ITEM 3. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Company carried out an evaluation under the supervision and with the participation of the Company's management, including the Chief Executive Officer and President and the Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures as of June 30, 2004. In designing and evaluating the Company's disclosure controls and procedures, the Company and its management recognize that there are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their desired control objectives. Additionally, in evaluating and implementing possible controls and procedures, the Company's management was required to apply its reasonable judgment. Furthermore, in the course of this evaluation, management considered certain internal control areas, including those discussed below, in which we have made and are continuing to make changes to improve and enhance controls. Based upon the required evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that as of June 30, 2004 the Company's disclosure controls and procedures were effective (at the "reasonable assurance" level mentioned above) to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

From time to time, the Company and its management have conducted and will continue to conduct further reviews and, from time to time put in place additional documentation, of the Company's disclosure controls and procedures,

as well as its internal control over financial reporting. The Company may from time to time make changes aimed at enhancing their effectiveness, as well as changes aimed at ensuring that the Company's systems evolve with, and meet the needs of, the Company's business. These changes may include changes necessary or desirable to address recommendations of the Company's management, its counsel and/or its independent auditors, including any recommendations of its independent auditors arising out of their audits and reviews of the Company's financial statements. These changes may include changes to the Company's own systems, as well as to the systems of businesses that the Company has acquired or that the Company may acquire in the future and will, if made, be intended to enhance the effectiveness of the Company's controls and procedures. The Company is also continually striving to improve its management and operational efficiency and the Company expects that its efforts in that regard will from time to time directly or indirectly affect the Company's disclosure controls and procedures, as well as the Company's internal control over financial reporting.

As disclosed in our annual report on Form 10-KSB for the year ended December 31, 2003, the Company's independent auditor, Vitale, Caturano and Company, Ltd. ("VCC") advised management and the Audit Committee by a letter dated March 18, 2004 that, in connection with its audit of the Company's consolidated financial statements for the year ended December 31, 2003, it noted certain matters involving internal control and its operation that it considered to be a material weakness under standards established by the American Institute of Certified Public Accountants. Reportable conditions are matters coming to an independent auditors' attention that, in their judgment, relate to significant deficiencies in the design or operation of internal control and could adversely affect the organization's ability to record, process, summarize, and report financial data consistent with the assertions of management in the financial statements. Further, a material weakness is a reportable condition in which the design or operation of one or more internal control components does not reduce to a relatively low level the risk that errors or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. VCC advised management and the Audit Committee that it considered the following to constitute material weaknesses in internal control and operations: (i) the Company's failure to adequately staff its finance group with the appropriate level of experience to effectively control the increased level of transaction activity, address the complex accounting matters and manage the increased financial reporting complexities resulting from, among other things, the acquisition of Bandwidth, the implementation of a new financial reporting system and the investigation surrounding the filing and eventual restatement of the Company's Form 10-QSB, as amended, for the quarter ended June 30, 2003 and (ii) the Company's current monthly close process does not mitigate the risk that material errors could occur in the books, records and financial statements, and does not ensure that those errors would be detected in a timely manner by the Company's employees in the normal course of performing their assigned functions. The matter noted in clause (i) above was similar to the material weakness noted by our former independent auditor (as disclosed in prior SEC filings). VCC noted that these matters were considered by it during its audit and did not modify the opinion expressed in its independent auditor's report dated March 18, 2004.

19

The Company is still in the process of assessing the findings of its independent auditors. As noted above, however, the Company has made and is continuing to make changes in its controls and procedures, including its internal control over financial reporting, aimed at enhancing their effectiveness and ensuring that the Company's systems evolve with, and meet the needs of, the Company's business. As further noted above, the Company is also continually striving to improve its management and operational efficiency and the Company expects that its efforts in that regard will from time to time

directly or indirectly affect the Company's controls and procedures, including its internal control over financial reporting. For example, the Company has recently added to its accounting staff and expects to hire additional professionals and the Company has recently completed compliance training and will continue to arrange for additional training for its staff. On April 1, 2004, the Company hired a permanent chief financial officer with the appropriate experience and background to manage the diverse and complex financial issues which may arise in the Company's business. The Company is also continuing its efforts to upgrade its information technology capabilities and has completed the implementation of a common accounting system at all of its business units.

Changes in Internal Control Over Financial Reporting

There was no change in the Company's internal control over financial reporting that occurred during the second fiscal quarter of 2004 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II
OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

None.

ITEM 2. CHANGES IN SECURITIES

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

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

On May 19, 2004, the Company held a Special Meeting in Lieu of Annual Meeting of Stockholders.

The number of directors was fixed at eight, leaving one vacancy, Udo Henseler, David R. Lipinski, Mark C. Little, Roger G. Little, Michael J. Magliochetti, Guy L. Mayer and Roger W. Redmond were elected to the Board of Directors to hold office until the 2005 annual meeting of the stockholders. Mr. John A. Tarello had decided not to stand for re-election. The results for Proposal Number 1 were as follows:

NOMINEE	SHARES VOTING FOR	SHARES VOTING AGAINST OR AUTHORITY WITHHELD	SHARES ABSTAINING	BROKER NON-VOTES
Udo Henseler	5,856,094	23,694	--	--
David R. Lipinski	5,856,094	23,694	--	--
Mark C. Little	5,856,094	23,694	--	--
Roger G. Little	5,856,094	23,694	--	--
Michael J. Magliochetti	5,855,594	24,194	--	--
Guy L. Mayer	5,855,594	24,194	--	--
Roger W. Redmond	5,855,594	24,194	--	--

Proposal Number 2 was to approve an amendment to the Company's 1996 Equity Incentive Plan to provide for automatic granting of quarterly non-employee director options and to eliminate all references to promissory notes and loans. The results for Proposal Number 2 were as follows:

	SHARES VOTING FOR	SHARES VOTING AGAINST OR AUTHORITY WITHHELD	SHARES ABSTAINING	BROKER NON-VOTES
Proposal Two	3,509,678	145,786	38,349	2,185,775

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

a. Exhibits

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

31.2 Certification of the Chief Financial Officer pursuant toss.302 of the Sarbanes-Oxley Act of 2002.

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

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

b. Reports on Form 8-K

There were two reports on Form 8-K filed by the Registrant in the quarter ended June 30, 2004.

May 7, 2004, Form 8-K/A, Amendment 1, Item 2 Acquisition or Disposition of Assets and Item 7 Financial Statements, Pro Forma Financial Information and Exhibits: Exhibit 23.1 Consent of KPMG LLP; Exhibit 99.1 Balance Sheets of Bandwidth as of March 31, 2003 (Unaudited) and December 31, 2002 and 2001 and the related Statements of Operations and Member's Deficit, and Cash Flows for the three months ended March 31, 2003 and 2002 (Unaudited) and years ended December 31, 2002 and 2001, with independent auditors' report thereon; Exhibit 99.2 Unaudited Pro Forma Combined Statements of Operations of the Company for the three months ended March 31, 2003 and the year ended December 31, 2002, all giving pro forma effect to the Company's acquisition of Bandwidth.

May 14, 2004, Form 8-K/A, Amendment 2, Item 4 Changes in Registrant's Certifying Accountant and Item 7 Financial Statements, Pro Forma Financial Information and Exhibits: Exhibit 16.1 Letter from KPMG LLP to the Securities and Exchange Commission dated May 14, 2004.

SIGNATURES

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

Spire Corporation

Dated: August 13, 2004

By: /s/ Roger G. Little

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

Dated: August 13 2004

By: /s/ James F. Parslow

James F. Parslow
Chief Financial Officer