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As filed with the Securities and Exchange Commission on April 27, 2006

Registration No. 333-131764

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 3
to
FORM S-1
REGISTRATION STATEMENT

Under
The Securities Act of 1933

LUNA INNOVATIONS INCORPORATED

(Exact name of Registrant as specified in its charter)

Delaware	8731	54-1560050
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

10 South Jefferson Street, Suite 130
Roanoke, Virginia 24011
(540) 552-5128
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Kent A. Murphy, Ph.D.
President, Chief Executive Officer and Chairman
Luna Innovations Incorporated
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(540) 552-5128
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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee (2)
Common Stock, $0.001 par value	$59,800,000	$6,398.60

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933.
(2) The registrant has previously paid $6,152.50 of the registration fee and is paying the additional $246.10 herewith.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information contained in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION, DATED APRIL 27, 2006**

4,000,000 Shares
Common Stock
$ per Share

This is the initial public offering of shares of common stock by Luna Innovations Incorporated.

We are offering 4,000,000 shares of our common stock. We expect the initial public offering price to be between $11.00 and $13.00 per share. Prior to this offering, there has been no public market for our common stock.

We have applied to have the common stock included for quotation on the Nasdaq National Market under the symbol “LUNA.”

Investing in our common stock involves risks. See “ Risk factors” beginning on page 8 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to Luna Innovations Incorporated	$	$

We have granted the underwriters the right to purchase up to an additional 600,000 shares of common stock from us at the initial public offering price less the underwriting discount to cover any over-allotments. The underwriters can exercise this right at any time within 30 days after the offering. We expect that delivery of the shares will be made to investors on or about , 2006.

ThinkEquity Partners LLC

WR Hambrecht + Co

Merriman Curhan Ford & Co.

, 2006

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You should rely only on the information contained in this prospectus. We have not, and the underwriters have not, authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer or sale is not permitted. You should not assume that the information contained in this prospectus is complete and accurate as of any date other than the date on the front cover, regardless of the time of delivery, of this prospectus.

We obtained statistical data and certain other industry forecasts used throughout this prospectus from publicly available information, including market research and industry publications. We have not independently verified such data or sought the consent of the sources to refer to their reports in this prospectus.

Until , all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Prospectus summary

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before buying shares in this offering. Therefore, you should read this entire prospectus carefully, including the “Risk factors” section beginning on page 8 and the financial statements and the related notes. Unless the context requires otherwise, the words “we,” “us” and “our” refer to Luna Innovations Incorporated and its consolidated subsidiaries.

Overview

We research, develop and commercialize innovative technologies in two primary areas: molecular technology solutions and sensing solutions. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative products to market. We identify technologies that can fulfill identified market needs and then take these technologies from the applied research stage through commercialization in our two areas of focus:

- **Molecular Technology Solutions.** We develop molecular technology solutions, which are substances and materials with enhanced performance characteristics obtained by harnessing chemical, physical and biological properties of novel combinations of matter. We focus on substances and materials at the molecular level, including nanomaterials, which are materials whose size can be measured in nanometers, or one billionth of a meter. Examples of our solutions in this area include flame retardants, protective coatings, and materials that can help physicians identify diseased tissues using magnetic resonance imaging, or MRI.
- **Sensing Solutions.** We develop integrated sensing solutions, which are products that combine sensors, software and hardware to measure, monitor and control chemical, physical and biological properties. We have particular expertise in optical, acoustic and wireless technologies. Examples of our solutions in this area include medical monitoring products and industrial instrumentation for aerospace, energy generation and distribution, and defense applications.

We have a successful track record in executing our market-driven business model. Since our inception, we have developed more than a dozen products serving various industries including energy, telecommunications, life sciences and defense. We have created five companies in our areas of focus, sold two of them to industry leaders in their fields, raised private capital for two of our companies, formed one joint venture and entered into four licensing agreements.

Our aggregate revenues from January 1, 2003 through March 31, 2006 were $61.1 million, and our aggregate cost of revenues during that same period were $40.5 million. For the year ended December 31, 2005 and the three months ended March 31, 2006, we had net losses of $2.0 million and $1.9 million, respectively, and we expect to incur significant additional expenses as we expand our business. We also expect significantly greater losses for the foreseeable future primarily due to increased expenditures related to our nanomaterial and medical device product development efforts.

Our company is organized into three main groups: our Contract Research Group, our Commercialization Strategy Group and our Products Group. These groups work closely together to turn ideas into products.

Contract Research Group. Our Contract Research Group provides applied research to customers in our areas of focus. Our engineers and scientists collaborate with our network of government, academic and industry experts to identify technologies and ideas with promising market potential. After these promising technologies are identified, our Contract Research Group competes to win fee-for-service contracts from government agencies and industrial clients who seek innovative solutions to practical problems that require new technology. We focus primarily on contract research opportunities where we can retain partial or full rights to the intellectual property developed, and generally obtain full funding of the costs of contracts we undertake from our customers. This approach allows us to cover the costs of early-stage technology development with

contract research revenues. Our contract research revenues grew from $10.4 million in 2003 to $13.8 million in 2004 and to $15.4 million in 2005. During this same period, our contract research costs increased from $8.9 million in 2003 to $11.0 million in 2004 and to $12.6 million in 2005. In the first quarter of 2006, we generated contract research revenues of $3.9 million while incurring contract research costs of $2.9 million. Our Contract Research Group seeks to continually supply our product pipeline with new opportunities.

Commercialization Strategy Group. Our Commercialization Strategy Group works closely with our network of federal and industrial customers to identify new market opportunities for our technologies. After ideas are driven to proof of concept in the Contract Research Group, our Commercialization Strategy Group develops detailed business plans for commercially viable products. It is at this stage that we first consider investing our own funds to finance the continued development of a product, which is then managed in our Products Group.

Products Group. Our Products Group currently consists of the following three divisions:

- **Luna Advanced Systems Division.** Most new product opportunities that are approved for further development by our management team are initially allocated to our Luna Advanced Systems Division. Products currently managed in this division include medical diagnostic instruments using our innovative ultrasound technologies, non-destructive industrial testing and homeland security devices, remote and secure wireless asset monitoring systems, flame retardants, multi-functional protective coating systems and blast and ballistic resistant materials. We transfer products to existing or new divisions within our Products Group with the resources needed for the successful commercialization of the technology if we determine that a product line is broad enough or that the market opportunity is sufficiently large.
- **Luna nanoWorks Division.** Our Luna nanoWorks Division develops and commercializes innovative products based on nanomaterials made from carbon, or carbon nanomaterials, that have broad potential applications. This division is developing MRI contrast agents, which are materials that can help physicians identify diseased tissues using MRI and that are designed to be potentially safer than, and technically superior to, contrast agents currently on the market. We currently supply nanomaterials to research laboratories and plan to supply proprietary high value-added carbon nanomaterials to customers who manufacture products such as solar cells, strong and light-weight composites and coatings to shield devices from electromagnetic interference.
- **Luna Technologies Division.** Our Luna Technologies Division manufactures and markets test and measurement equipment and integrated sensing solutions. This division's products are used for process and control monitoring in telecommunications, manufacturing, power generation and distribution, down-hole oil and gas production, aerospace and defense applications. Our products have won numerous awards and are sold and distributed throughout North America, Europe, the Middle East and Asia.

We expect that the capital raised in this offering will provide us greater flexibility in funding the commercialization of new technologies and will provide us the opportunity to increase the speed, quality and volume of products that we can develop.

Our Growth Strategy

We have the following key strategies to achieve our goal of accelerating the development and commercialization of innovative technologies and to create successful products in our areas of focus:

- **Focus on developing and commercializing a growing portfolio of innovative products.** We intend to build and commercialize a growing portfolio of high value-added products using innovative technologies and utilize our existing relationships to identify, prioritize and allocate resources to respond rapidly to market needs, and shorten the time to market for new products.
- **Transition our mix of revenues to a higher percentage of product sales and license revenues.** We plan to commercialize a growing number of products in order to increase the amount of revenues that we generate

from product sales and license payments. To this end, we will seek to expand our distribution network and our ability to service our customers. We will also seek to allocate resources to improve our ability to manufacture and shorten the cycle time from idea to market and to monetize our intellectual property portfolio by licensing our technologies. As a result, we believe that product sales and license revenues will comprise a greater portion of our total revenues in the future.

- Ø **Continue to strengthen our Contract Research Group.** We will seek to strengthen our Contract Research Group through increased resource allocation and hiring and by expanding our network of relationships with federal laboratories, major research universities and industry leaders. These steps will provide us the opportunity to grow our applied research business, remain informed of the latest technological advances and increase the quality and volume of high potential technologies that will support our product pipeline.
- Ø **Expand our intellectual property portfolio in our areas of focus.** We will seek to expand our intellectual property portfolio by applying our disciplined processes to generate know-how and intellectual property through our network of relationships and our own research and development efforts. By continuing to expand our intellectual property, we will seek to enhance our competitive position and develop additional products in these areas.

Challenges in Executing our Growth Strategy

We face several challenges to the successful implementation of our growth strategy. In addition, our business is subject to numerous risks, which we highlight in the section entitled “Risk factors” immediately following this prospectus summary. For example, our ability to grow by developing and commercializing multiple products simultaneously requires that we manage a diverse range of projects, expand our personnel resources and broaden our geographic presence. Our inability to do any of these could prevent us from successfully implementing our growth strategy. In addition, the success of our business model depends on our ability to identify correctly market needs for new technologies. If we are not successful in identifying market needs or in developing new products to meet those needs, we may not be successful in growing our product revenues or transitioning our revenues mix from contract research revenues to product sales and license revenues.

We believe that sustained growth at a higher rate will place a strain on our management, as well as on our other human resources. If we are unable to attract and retain qualified personnel as we grow our operations, we may be unable to staff and manage projects adequately, which may slow the development process, result in the commercialization of fewer products or compromise the quality of our work. Moreover, the products that we have developed or are currently developing will compete with other technologically innovative products as well as products incorporating conventional materials and technologies. Our competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. If we are unable to compete successfully against current or new competitors, our product revenues may not increase or may decline.

In addition, our commercial success will depend in part on our obtaining and maintaining intellectual property protection for our technologies as well as successfully enforcing and defending our intellectual property rights against third-party challenges. Moreover, if the commercial versions of our products that are currently under development do not incorporate our proprietary technologies, our intellectual property portfolio may not afford us a competitive advantage.

Company Information

We were incorporated as a Virginia corporation in July 1990. In December 1998 we changed our name from FEORC, Inc. to F&S Technologies, Inc., and in July 1999, we changed our name to Luna Innovations Incorporated. In April 2003, we reincorporated through a merger as a Delaware corporation and retained the name Luna Innovations Incorporated. Our principal offices are located at 10 South Jefferson Street, Suite 130, Roanoke, Virginia 24011. Our telephone number is (540) 552-5128. You can access our web site at www.lunainnovations.com. Information contained on our website does not constitute part of this prospectus.

LUNA INNOVATIONS is a registered trademark in the United States. Our unregistered trademarks include: our logo (a black and white image of a moth design); TRIMETASPHERES; EDAC; APHROTROPHIN, AMANUET, SECURING SILICON and SOFTWARE and THE AMANUET ARCHITECTURE.

The Offering

Proposed Nasdaq National Market symbol	“LUNA”
Common stock offered by us	4,000,000 shares
Common stock outstanding after this offering	10,505,267 shares
Use of proceeds	We intend to use the net proceeds from this offering principally to fund further development and expansion of our products and product candidates, in particular our nanomaterial and ultrasound-related product candidates, and for general working capital purposes. We may also use such proceeds for potential acquisitions of complementary products, technologies or businesses. See “Use of proceeds.”

The number of shares of common stock that will be outstanding after this offering is based on 6,505,267 shares outstanding as of March 31, 2006, which includes 6,137,557 shares outstanding as of March 31, 2006 and up to 367,710 shares of common stock that will be issued to Carilion Health System in connection with certain anti-dilution provisions afforded to that stockholder upon the effectiveness of this offering, and excludes:

- 4,826,311 shares of common stock issuable upon exercise of options outstanding at a weighted-average exercise price of $0.90 per share, which includes 2,834,016 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.35 per share, 113,046 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.39 per share and 1,879,249 shares of common stock issuable upon exercise of options outstanding at an exercise price of $1.77 per share;
- 221,646 shares of common stock reserved for future issuance upon the exercise of options available for grant under our 2003 Stock Plan;
- 61,196 shares of common stock issuable upon exercise of warrants (not subject to escrow) outstanding at a weighted-average exercise price of $3.03 per share, which includes 2,181 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $37.26 per share and 59,015 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $1.77 per share;
- 1,065,736 shares of common stock issuable upon the conversion of the principal amount outstanding under senior convertible promissory notes issued to Carilion Health System on December 30, 2005 and, assuming we elect to convert all of the accrued interest on these notes into shares of common stock after these notes remain outstanding for a maximum period of up to eight years, up to an additional 511,553 shares of common stock; and
- 69,379 shares of common stock issued or reserved for issuance in connection with the acquisition of Luna Technologies, Inc. that were held in escrow on that date, and 242 shares of common stock issuable upon the exercise of warrants at an exercise price of $37.26 per share held in escrow as of that date.

We adopted our 2006 Equity Incentive Plan in February 2006, subject to stockholder approval, which will be effective upon the completion of this offering.

Unless otherwise indicated, all information in this prospectus assumes:

- a 1-for-1.7691911 reverse split of our common stock, to be effected immediately prior to the effectiveness of this offering;
- the conversion, in accordance with our certificate of incorporation, of all our shares of outstanding Class A Common Stock, Class B Common Stock and Class C Common Stock into shares of our common stock;
- that the underwriters do not exercise their over-allotment option; and
- the adoption of our amended and restated certificate of incorporation and bylaws.

Summary historical and pro forma financial data

The following table presents summary historical and unaudited pro forma consolidated financial data. We derived the summary consolidated statements of operations data for the years ended December 31, 2003, 2004 and 2005 from our audited consolidated financial statements. The summary consolidated balance sheet data as of March 31, 2006 and the summary consolidated statements of operations data for the three months ended March 31, 2005 and 2006 were derived from our unaudited consolidated financial statements included elsewhere in this prospectus. We have prepared this unaudited information on the same basis as the audited consolidated financial statements and have included all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of our financial position at such date and operating results for such periods. Historical results are not necessarily indicative of the results of operations to be expected for the future periods, and interim results may not be indicative of results for the remainder of the year.

The unaudited pro forma consolidated statement of operations data give effect to our September 30, 2005 purchase of Luna Technologies, Inc. and the issuance of shares of our common stock to former Luna Technologies stockholders in connection with that transaction as if it had occurred on January 1, 2005.

You should read the following information together with the more detailed information contained in “Selected consolidated financial data,” “Management’s discussion and analysis of financial condition and results of operations,” and the financial statements and the accompanying notes included elsewhere in this prospectus.

(in thousands, except share and per share data)	Years Ended December 31,			Three Months Ended March 31,	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
Consolidated Statements of Operations Data:					
Revenues:					
Contract research revenues	$10,358	$13,835	$15,380	$3,256	$3,921
Product sales and license revenues	7,234	8,752	1,074	—	595
Total revenues	17,592	22,587	16,454	3,256	4,516
Cost of revenues:					
Contract research costs	8,949	10,985	12,552	2,671	2,908
Product sales and license costs	1,543	2,881	410	—	266
Total cost of revenues	10,492	13,866	12,962	2,671	3,174
Gross profit	7,100	8,721	3,492	585	1,342
Operating expense	4,856	4,190	6,004	882	3,229
Operating income (loss)	2,244	4,531	(2,512)	(296)	(1,886)
Other income (expense)(1)	(138)	(257)	2	1	6
Interest income (expense), net	(87)	(90)	(41)	(40)	4
Income (loss) before income taxes	2,019	4,184	(2,551)	(336)	(1,876)
Income tax expense (benefit)	886	128	(557)	(73)	—
Net income (loss)	$1,133	$4,056	$(1,994)	$(262)	$(1,876)
Net income (loss) per common share:					
Basic	$0.40	$1.40	$(0.53)	$(0.09)	$(0.31)
Diluted	$0.39	$1.14	$(0.53)	$(0.09)	$(0.31)
Weighted-average shares:					
Basic	2,843,349	2,903,022	3,735,811	2,911,255	6,069,780
Diluted	2,905,849	3,561,788	3,735,811	2,911,255	6,069,780

(1) Includes minority interests and excludes interest expense.

Summary historical and pro forma financial data

(in thousands, except share and per share data)	Pro Forma Year Ended December 31, 2005
	(unaudited)
Pro Forma Consolidated Statement of Operations Data:	
Revenues	$18,560
Cost of revenues	13,997
Gross profit	4,563
Operating expense	7,490
Operating (loss)	(3,927)
Interest (expense), net	(53)
Miscellaneous income	2
(Loss) before income taxes	(2,978)
Income tax expense (benefit)	(557)
Net (loss)	$(2,421)
Net (loss) per common share:	
Basic	$(0.65)
Diluted	$(0.65)
Weighted-average number of shares used in per share calculations:	
Basic	3,735,811
Diluted	3,735,811

The following table presents selected balance sheet data as of March 31, 2006 on an actual basis and on an as adjusted basis to give effect to the sale by us of 4,000,000 shares of our common stock in this initial public offering at an assumed price of $12.00 per share, the mid-point of the range on the front cover of this prospectus, after deducting the underwriting discount and estimated offering expenses.

(in thousands)	As of March 31, 2006	
	Actual	As Adjusted
	(unaudited)	
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$10,099	$53,239
Working capital	9,627	52,767
Total assets	21,021	64,161
Total current liabilities	5,684	5,684
Total debt(1)	5,406	5,406
Stockholders' equity	9,289	52,429

(1) Includes capital lease obligations.

Risk factors

An investment in our common stock offered by this prospectus involves a substantial risk of loss. You should carefully consider these risk factors, together with all of the other information included in this prospectus, before you decide to purchase shares of our common stock. The occurrence of any of the following risks could harm our business. In that case, the trading price of our common stock could decline, and you may lose part or all of your investment.

Risks Related to Our Business and Technologies

If we are unable to manage our growth effectively, our revenues and profits could be adversely affected.

While historically we have developed and commercialized only a few products at a time, we plan to grow by developing and commercializing multiple products concurrently across many industries, technologies and markets. Our ability to grow by developing and commercializing multiple products simultaneously requires that we manage a diverse range of projects, expand our personnel resources and broaden our geographic presence. Our inability to do any of these could prevent us from successfully implementing our growth strategy, and our revenues and profits could be adversely affected.

As of March 31, 2006, we had 68 research contracts covering a broad range of technologies, industries and markets. To advance the development of multiple promising potential products concurrently, we need to manage effectively the logistics of maintaining the requisite corporate, operational, administrative and financing functions for each of these products. Expanding our operations into new geographic areas and relying on multiple facilities to develop and manufacture different products concurrently pose additional challenges. We have little experience in managing these functions simultaneously for multiple projects in development or in building new infrastructure and integrating the operations of various facilities. If we cannot manage this process successfully, we may be subject to operating difficulties, additional expenditures and reduced revenues.

We need to expand our personnel resources to grow our business effectively. We believe that sustained growth at a higher rate will place a strain on our management, as well as on our other human resources. To manage this growth, we must continue to attract and retain qualified management, professional, scientific and technical and operating personnel. If we are unable to do so, we may be unable to staff and manage projects adequately, which may slow the development process, result in the commercialization of fewer products or compromise the quality of our work.

We have incurred recent losses, and because our strategy for expansion may be costly to implement, we may experience continuing losses which may be significant.

We incurred consolidated net losses of approximately $2.0 million and $1.9 million for the year ended December 31, 2005 and the three months ended March 31, 2006, respectively. We expect to continue to incur significant additional expenses as we expand our business, including increased expenses for research and development, sales and marketing, manufacturing, finance and accounting personnel and expenses associated with being a public company. We may also grow our business in part through acquisitions of additional companies and complementary technologies which could cause us to incur greater than anticipated transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we expect that we may likely continue to incur losses for the foreseeable future, and these losses could be substantial.

Because of the numerous risks and uncertainties associated with our business and our expansion strategy, we are unable to predict when or if we will be able to achieve profitability again. If our revenues do not increase, or if our expenses increase at a greater rate than our revenues, we will continue to experience losses. Even if we do achieve profitability, we may not be able to sustain or increase our profitability on a quarterly or annual basis.

We may not be successful in identifying market needs for new technologies and developing new products to meet those needs.

The success of our business model depends on our ability to identify correctly market needs for new technologies. We intend to identify new market needs, but we may not always have success in doing so, in part, because our contract research largely

centers on technologies characterized by constant change and unpredictable markets. Furthermore, we must identify the most promising technologies from a sizable pool of projects. For example, we had 68 contract research projects as of March 31, 2006. If our Commercialization Strategy Group fails to identify the projects with the highest commercial potential or if management does not ensure that only the highest potential projects advance to the commercialization stage, we may not successfully commercialize new products and grow our revenues.

Our growth strategy requires that we not only identify new technologies that meet market needs, but that we also develop successful commercial products that address those needs. We face several challenges in developing successful new products. Many of our existing products and those currently under development—including our Trimetasphere™ carbon nanomaterials, which are nanomaterials in the form of a carbon sphere with three metal atoms enclosed inside—are technologically innovative and require significant and lengthy product development efforts. These efforts include planning, designing, developing and testing at the technological, product and manufacturing-process levels. These activities require us to make significant investments. Although there are many potential applications for our technologies, our resource constraints require us to focus on specific products and to forgo other opportunities. We expect that one or more of the potential products we choose to develop will not be technologically feasible or will not achieve commercial acceptance, and we cannot predict which, if any, of our products we will successfully develop or commercialize. The technologies we research and develop are new and steadily changing and advancing. The products that are derived from these technologies may not be applicable or compatible with the state of technology or demands in existing markets. Our existing products and technologies may become uncompetitive or obsolete if our competitors adapt more quickly than we do to new technologies and changes in customers' requirements. Furthermore, we may not be able to identify if and when new markets will open for our products given that future applications of any given product may not be readily determinable, and we cannot reasonably estimate the size of any markets that may develop. If we are not able to successfully develop new products, we may be unable to increase our product revenues.

We rely and will continue to rely on contract research for a significant portion of our revenues. Any decrease in these revenues, including Small Business Innovation Research, or SBIR, revenues, could adversely affect our business.

We derive a significant portion of our revenues from contract research which we perform for third parties. Contract research accounted for approximately 61.3%, 93.5% and 86.8% of our consolidated total revenues for the years ended December 31, 2004 and 2005 and the three months ended March 31, 2006, respectively. SBIR revenues accounted for approximately 43.3%, 59.8% and 67.3% of our consolidated total revenues for the years ended December 31, 2004 and 2005 and the three months ended March 31, 2006, respectively, and 40.2% and 52.8% of our pro forma consolidated total revenues, which include the operations of Luna Technologies for the years ended December 31, 2004 and 2005, respectively. Contract research will remain a significant portion of our consolidated total revenues for the foreseeable future. Our strategy for developing innovative technologies and products depends in large part on our ability to continue to enter into and generate revenues from contract research, including SBIR contracts, for which we must comply with certain eligibility criteria. Our contract research customer base includes government agencies, academic institutions and corporations. Our customers are not obligated to extend their agreements with us. In addition, our contracts with government agencies, which accounted for approximately 86.1%, 93.3% and 87.9% of our contract research revenues for the years ended December 31, 2004 and 2005 and the three months ended March 31, 2006, respectively, provide that the U.S. government may terminate funding prior to the expiration of these contracts, regardless of whether we have demonstrated technological feasibility or have met specified milestones. In addition, we may not be successful in securing future contracts. Our customers' priorities regarding funding for certain projects may change and funding resources may no longer be available at previous levels.

We rely and will continue to rely on contracts and grants awarded under the SBIR program for a significant portion of our revenues. A finding by the Small Business Administration, or SBA, that we no longer qualify to receive SBIR funding could adversely affect our business.

We may not qualify to participate in the Small Business Administration's, or SBA's, SBIR program or receive an SBIR award from any federal agency in the future. In order to qualify for SBIR contracts and grants, at least 51% of our equity must be

owned and controlled by U.S. citizens or permanent resident aliens, or by another entity that is at least 51% owned or controlled by U.S. citizens or permanent resident aliens, and we must have 500 or fewer employees. These eligibility criteria are applied as of the time of the award of a contract or grant. In determining whether we satisfy the 51% equity ownership requirement, agreements to merge, stock options, convertible debt and other similar instruments are given "present effect" by the SBA, as though the underlying security were actually issued unless the exercisability or conversion of such securities is speculative, remote or beyond the control of the security holder. We therefore believe our outstanding options and warrants held by eligible individuals may be counted as, and our convertible debt may be excluded from, outstanding equity for purposes of meeting the 51% equity ownership requirement. As of March 31, 2006, giving present effect to our outstanding options, approximately 74% of our equity was owned by U.S. citizens or permanent resident aliens. Upon the completion of this offering, at least approximately 56% of our equity will be owned by U.S. citizens or permanent resident aliens (and at least approximately 54% assuming exercise of the underwriters' over-allotment option).

We believe that we are currently in compliance with the SBIR eligibility criteria but we cannot provide assurance that the SBA will interpret its regulations in our favor. We must be able to certify that we meet the SBIR ownership and size requirements as of the time we enter into each SBIR contract or grant, and SBA may review our size status in connection with each SBIR contract or grant. As we grow our business, it is foreseeable that we will eventually exceed the SBIR eligibility limitations and we may need to find other sources to fund our research and development efforts. If we are unsuccessful in obtaining additional contracts or funding grants because we cannot meet the eligibility requirements or if our customers decide to reduce or discontinue support of our products, we may be required to seek alternative sources of revenues or capital.

The SBA could determine that, as a result of Carilion Health System's equity ownership, the number of our employees exceeds the size limitation placed on SBA contract and SBIR grant recipients, and therefore we will not be eligible to receive future SBA contracts and SBIR grants.

In addition to the U.S. ownership eligibility criteria discussed above, to be eligible for SBA contracts and SBIR grants, the number of our employees including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of March 31, 2006, we, including all of our divisions, had 148 full-time and 13 part-time employees. However, in determining whether we are affiliated with any other entity, the SBA analyzes whether another entity controls or has the power to control us. If the SBA determines that another entity controls or has the power to control us, it will aggregate that entity's employees (and the employees of its subsidiaries and affiliates) with our own for purposes of applying the 500 employee test.

The SBA may make an affiliation determination based on stock ownership. For example, the SBA may presume that two or more entities have the power to control a company if the entities each own, control or has the power to control, less than 50 percent of the company's stock, such minority holdings are equal or approximately equal in size, and the aggregate of the minority holdings is large as compared to any other stock holding. However, this presumption may be rebutted by showing that such control or power to control does not in fact exist. Prior to this offering, giving effect to the conversion of our Class A common stock, Class B common stock and Class C common stock into shares of our common stock such that an additional 367,710 is issued to Carilion Health System, Carilion Health System held 38.4% of our common stock, and Dr. Kent Murphy owned 40.5% of the voting power of our common stock, and after the offering, these ownership percentages will be approximately equal to 23.8% and 25.1%, respectively. Thus, applying the criteria stated above, the SBA could find that both Carilion Health System and Dr. Murphy own less than 50% of the stock, their percentages are roughly equal, and their respective percentages are large compared to any other stock holding. We believe that the relative beneficial ownership of our individual stockholders rebuts the presumption of control by Carilion Health System because the shares held by our executive officers and directors constitute the controlling interest in us. However, if the SBA were to make a determination that we are affiliated with Carilion Health System, we would exceed the size limitations as Carilion Health System has over 500 employees, and we therefore would lose eligibility for SBA contracts, public contracts, grants and other awards that are set aside for small businesses, including SBIR grants.

Risk factors

We depend on government-funded research contracts for most of our contract research revenues, and a decline in government funding of existing or future government research contracts could adversely affect our revenues and cash flows and our ability to fund our growth.

Government-funded research accounted for approximately 86.1%, 93.3% and 87.9% of our contract research revenues and 52.8%, 87.2% and 76.3% of our consolidated total revenues for the years ended December 31, 2004 and 2005 and the three months ended March 31, 2006, respectively. On a pro forma consolidated basis, which includes the results of operations of Luna Technologies as if acquired on January 1, 2004, government-funded research accounted for 49.0% and 76.9% of our pro forma consolidated total revenues for the years ended December 31, 2004 and 2005, respectively. As a result, we are vulnerable to adverse changes in our revenues and cash flows if a significant number of our government research contracts and subcontracts are simultaneously delayed or canceled for budgetary, performance or other reasons. The U.S. government may cancel these contracts at any time without cause and without penalty or may change its requirements, programs or contract budget, any of which could reduce our revenues and cash flows from U.S. government research contracts. Our revenues and cash flows from U.S. government research contracts could also be reduced by declines or other changes in U.S. defense, homeland security and other federal agency budgets. In addition, we compete as a small business for some of these contracts, and in order to maintain our eligibility to compete as a small business, we (together with any affiliates) must continue to meet size and revenue limitations established by the U.S. government.

In addition to contract cancellations and changes in agency budgets, our future financial results may be adversely affected by curtailment of the U.S. government's use of contract research providers, including curtailment due to government budget reductions and related fiscal matters. These or other factors could cause U.S. defense and other federal agencies to conduct research internally rather than through commercial research organizations, to reduce their overall contract research requirements or to exercise their rights to terminate contracts. Any of these actions could limit our ability to obtain new contract awards and adversely affect our revenues and cash flows and our ability to fund our growth.

If we cannot successfully transition our revenues mix from contract research revenues to product sales and license revenues, we may not be able to fully execute our business model or grow our business.

Our business model and future growth depend on our ability to transition to a revenues mix that contains significantly larger product sales and license revenues components. Product sales and license revenues potentially offer greater scalability than services-based contract research revenues. Our current plan is to increase our portfolio of commercial products and, accordingly, we expect that our future product sales and license revenues will represent a larger percentage of total revenues. However, if we are unable to develop and grow our product sales and license revenues to augment our contract research revenues, our ability to execute our business model or grow our business could suffer.

We face and will face substantial competition in several different markets that may adversely affect our results of operations.

We face or will face substantial competition from a variety of companies in several different markets. Our competitors in contract research include, but are not limited to, companies such as General Dynamics Corporation, Lockheed Martin Corporation, SAIC, Inc. and SRA International, Inc. In the molecular technology solutions products market, our competitors include, but are not limited to, large public manufacturers such as The Dow Chemical Company, E.I. du Pont de Nemours and Company, Rohm and Haas Company and 3M Company, as well as emerging companies. In addition, in the MRI contrast agent market our competitors include Amersham Plc, Berlex Laboratories, Inc., Bracco Diagnostics, Inc., and Mallinckrodt Inc. In the sensor solutions products market, our competitors include, but are not limited to, large companies such as Agilent Technologies, Inc., Analog Devices, Inc., Freescale Semiconductor, Inc., JDS Uniphase Corp., Robert Bosch GmbH and Silicon Sensing, as well as emerging companies.

The products that we have developed or are currently developing will compete with other technologically innovative products as well as products incorporating conventional materials and technologies. We expect that our products will compete with

companies in a wide range of industries, including semiconductors, electronics, biotechnology, textiles, alternative energy, military, defense, healthcare, telecommunications, industrial measurement, security applications and consumer electronics.

Many of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than we do. These competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share. We cannot assure you that we will be able to compete successfully against current or new competitors, in which case our net revenues may fail to increase or may decline.

A substantial portion of our technology is subject to retained rights of our licensors, and we may not be able to prevent the loss of those rights or the grant of similar rights to third parties.

A substantial portion of our technology is licensed from academic institutions, corporations and government agencies. Under these licensing arrangements, a licensor may obtain rights over the technology, including the right to require us to grant a license to one or more third parties selected by the licensor or that we provide licensed technology or material to third parties for non-commercial research. For example, under the Trimetasphere™ nanomaterials license, we have been required to supply Trimetasphere™ nanomaterials to three foreign and five domestic university research institutions and one corporate industrial research laboratory and may be required to supply such materials to other organizations for non-commercial research. The grant of a license for any of our core technologies to a third party could have a material and adverse effect on our business. In addition, our licensors retained certain rights under the licenses including the right to grant additional licenses to a substantial portion of our core technology to third parties for noncommercial academic and research use. It is difficult to monitor and enforce such noncommercial academic and research uses, and we cannot predict whether the third party licensees would comply with the use restrictions of such licenses. We could incur substantial expenses to enforce our rights against them. We also may not fully control the ability to assert or defend those patents or other intellectual property which we have licensed from other entities, or which we have licensed to other entities.

In addition, some of our licenses with academic institutions give us the right to use certain technology previously developed by researchers at these institutions. In certain cases we also have the right to practice improvements on the licensed technology to the extent they are encompassed by the licensed patents and within our field of use. Our licensors may currently own and may in the future obtain additional patents and patent applications that are necessary for the development, manufacture and commercial sale of our anticipated products. We may be unable to agree with one or more academic institutions from which we have obtained licenses that certain intellectual property developed by researchers at these academic institutions is covered by our existing licenses. In the event that the new intellectual property is not covered by our existing licenses, we would be required to negotiate a new license agreement. We may not be able to reach agreement with current or future licensors on commercially reasonable terms, if at all, or the terms may not permit us to sell our products at a profit after payment of royalties, which could harm our business.

Some of our patents may cover inventions that were conceived or first reduced to practice under, or in connection with, U.S. government contracts or other federal funding agreements. With respect to inventions conceived or first reduced to practice under a federal funding agreement, the U.S. government may retain a nonexclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention throughout the world. We may not have succeeded in our efforts to retain title in patents, maintain ownership of intellectual property or in limiting the U.S. government’s rights in our proprietary technologies and intellectual property whether such intellectual property was developed in the performance of a federal funding agreement or developed at private expense.

Risk factors

Our proprietary rights may not adequately protect our technologies.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing this intellectual property and defending this intellectual property against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protections, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. Moreover, the degree of future protection of our proprietary rights is uncertain for products that are currently in the early stages of development—such as the Trimetasphere™ carbon nanomaterials products—because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- Ø we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- Ø we or our licensors might not have been the first to file patent applications for these inventions;
- Ø others may independently develop similar or alternative technologies or duplicate any of our technologies;
- Ø it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- Ø our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and
- Ø we may not develop additional proprietary technologies that are patentable.

Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to protect our technologies. Moreover, protection of certain of our intellectual property may be unavailable or limited in the United States or in foreign countries, and certain of our products—including our Trimetasphere™ carbon nanomaterials products—do not have foreign patent protection. Any issued patents owned by or licensed to us now or in the future may be challenged, invalidated, or circumvented, and the rights under such patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, and in the case of certain products no foreign patents were filed or can be filed. This could make it easier for competitors to capture or increase their market share with respect to related technologies. Although we are not currently involved in any legal proceedings related to intellectual property, we could incur substantial costs to bring suits in which we may assert our patent rights against others or defend ourselves in suits brought against us. An unfavorable outcome of any such litigation could have a material adverse effect on our business and results of operations.

We also rely on trade secrets to protect our technology, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. We vigorously pursue confidentiality agreements and contractual provisions with our collaborators, employees, and consultants to protect our trade secrets and proprietary know-how. These agreements may be breached and or may not have adequate remedies for such breach. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors, or those of our strategic partners, may unintentionally or willfully disclose our information to competitors. If we were to enforce a claim that a third party

had illegally obtained and was using our trade secrets, our enforcement efforts would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States are sometimes unwilling to protect trade secrets. Moreover, if our competitors independently develop equivalent knowledge, methods and know-how, it will be more difficult for us to enforce our rights and our business could be harmed.

If we are not able to defend the patent or trade secret protection position of our technologies, then we will not be able to exclude competitors from developing or marketing competing technologies, and we may not generate enough revenues from product sales to justify the cost of development of our technologies and to achieve or maintain profitability.

We also rely on trademarks to establish a market identity for Luna and Luna products. We currently have one registered trademark in the United States and three pending trademark applications filed with the U.S. Patent and Trademark Office. To maintain the value of our trademarks, we might have to file lawsuits against third parties to prevent them from using trademarks confusingly similar to or dilutive of our registered or unregistered trademarks. Also, we might not obtain registrations for our pending trademark applications, and might have to defend our registered trademark and pending trademark applications from challenge by third parties. Enforcing or defending our registered and unregistered trademarks might result in significant litigation costs and damages, including the inability to continue using certain trademarks.

Third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result.

Various U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in our technology areas. Such third parties may claim that we infringe their patents. Because patent applications can take several years to result in a patent issuance, there may be currently pending applications, unknown to us, which may later result in issued patents that our technologies may infringe. For example, we are aware of competitors with patents in technology areas applicable to our optical test equipment products. Such competitors may allege that we infringe these patents. There could also be existing patents of which we are not aware that our technologies may inadvertently infringe. If third parties assert claims against us alleging that we infringe their patents or other intellectual property rights—including third parties that have asserted claims against businesses that we have acquired prior to our acquisition of these businesses—we could incur substantial costs and diversion of management resources in defending these claims, and the defense of these claims could have a material adverse effect on our business, financial condition, and results of operations. In addition, if third parties assert claims against us and we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages, as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute, or market our products and services in the United States or abroad. For example, we acquired a business that had received a letter in 2002 from a competitor alleging infringement of certain patents. The competitor sent an additional letter on January 14, 2004 to the business that we acquired, again alleging infringement of the competitor’s patents. Neither we nor the business that we acquired have received any further communications from this third party. We cannot currently predict whether this third party, or any other third party, will assert a claim against us, or whether any third parties that have asserted such claims against businesses that we have acquired will assert claims or pursue infringement litigation against us; nor can we predict the ultimate outcome of any such potential claims or litigation.

Commercial application of nanotechnologies, or technologies involving nanomaterials, is new and the scope and breadth of patent protection is uncertain. Consequently, the patent positions of companies involved in nanotechnologies have not been tested and complex legal and factual questions for which important legal principles will be developed or may remain unresolved. In addition, it is not clear whether such patents will be subject to interpretations or legal doctrines that differ from conventional patent law principles. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our nanotechnology-related intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our nanotechnology-related patents or in third party patents.

In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or

challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture, or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition, and results of operations.

For example, we are a party to an exclusive license agreement with NASA for certain patented ultrasound technology. The field of this license is limited to measurement of intracranial pressure and compartment syndrome. We currently engage in ultrasound product development activities in bone strength measurement, embolus detection and detection of concealed weapons. To the extent that these activities are covered by the licensed NASA patents, we may be required to acquire an additional license from NASA. We cannot currently predict whether NASA would grant an additional license to us for these fields of use, if such a license were required.

As a provider of contract research to the U.S. government, we are subject to federal rules, regulations, audits and investigations, the violation or failure of which could adversely affect our business.

We must comply with and are affected by laws and regulations relating to the award, administration and performance of U.S. government contracts. Government contract laws and regulations affect how we do business with our government customers and, in some instances, impose added costs on our business. A violation of specific laws and regulations could result in the imposition of fines and penalties or the termination of our contracts or debarment from bidding on contracts. In some instances, these laws and regulations impose terms or rights that are more favorable to the government than those typically available to commercial parties in negotiated transactions. For example, the U.S. government may terminate any of our government contracts and, in general, subcontracts, at their convenience, as well as for default based on performance.

In addition, U.S. government agencies, including the Defense Contract Audit Agency and the Department of Labor, routinely audit and investigate government contractors. These agencies review a contractor’s performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The U.S. government also may review the adequacy of, and a contractor’s compliance with, its internal control systems and policies, including the contractor’s purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. In addition, we could suffer serious reputational harm if allegations of impropriety were made against us.

In March 2003, the Office of Inspector General of the Department of Commerce advised us that the government was investigating anonymous allegations of contract improprieties. We have cooperated fully and extensively with that investigation through interviews and document production. In April 2003, the government advised our regulatory counsel that to date no wrongdoing had been identified, although the government indicated that we may not have fully complied with contractual reporting requirements in one or two instances, which the government did not specify. We believe that the investigation has been resolved favorably, based on statements by the government investigator to our employees in June 2003, and that this matter effectively is at an end absent any advice or communication from the government to the contrary. However, there can be no assurance as to how or whether our relationships, business, financial condition or results of operations will ultimately be affected, if at all, by the investigation.

On November 9, 2004, we received a subpoena from the Department of Defense Office of the Inspector General covering certain government research contracts awarded to us between January 1, 1998 and November 9, 2004 to determine if we had duplicated work in our submission of project reports to the government. In connection with the investigation, the government alleged that duplication occurred in three research reports that we prepared under the contracts. We submitted a response to the Inspector General in September 2005 challenging the government’s findings. On November 15, 2005, we entered into a

-settlement agreement with the government and received a general release with respect to the civil and administrative claims in this matter in return for a payment of $165,333.

In March 2006, our senior management became aware that seven foreign national citizens who were working for us had access to International Traffic in Arms Regulations, or ITAR, controlled technical data. Such data may be deemed to have been exported/disclosed to certain of these individuals without the required export licenses. We do not believe that exports of ITAR-controlled technical data occurred to any other unauthorized parties. In addition, we do not believe that any disclosures to foreign nationals involved technology related to classified contracts. Following this discovery, in an effort to ensure full compliance with ITAR we submitted voluntary disclosure of these circumstances to the U.S. Department of State in April 2006. While the Department of State encourages such voluntary disclosure, we nevertheless could be subject to potential investigation and may be exposed to potential regulatory consequences ranging from a no-action letter, government oversight of facilities and export transactions, monetary penalties, and in extreme cases, debarment from government contracting, denial of export privileges and criminal sanctions.

In addition to the risk of government audits and investigations, U.S. government contracts and grants impose requirements on contractors and grantees relating to ethics and business practices, which carry civil and criminal penalties ranging from monetary fines, assessments, loss of the ability to do business with the U.S. government and certain other criminal penalties.

We may also be prohibited from commercially selling certain products that we develop under our Contract Research Group or related products based on the same core technologies if the U.S. government determines that the commercial availability of those products could pose a risk to national security. For example, certain of our wireless technologies have been classified as secret by the U.S. government and as a result we cannot sell them commercially. Any of these determinations would limit our ability to generate product sales and license revenues.

We are subject to significant foreign and domestic government regulations, including environmental and health and safety regulations, and failure to comply with these regulations could harm our business.

Our facilities and current and proposed activities involve the use of a broad range of materials that are considered hazardous under applicable laws and regulations. Accordingly, we are subject to a number of foreign, federal, state, and local laws and regulations relating to health and safety, protection of the environment, and the storage, use, disposal of, and exposure to, hazardous materials and wastes. We could incur costs, fines and civil and criminal penalties, personal injury and third party property damage claims, or could be required to incur substantial investigation or remediation costs if we were to violate or become liable under environmental, health and safety laws. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us from conducting our business. Liability under environmental laws can be joint and several and without regard to fault. There can be no assurance that violations of environmental health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Accordingly, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment, or to incur potentially significant costs to comply with environmental regulations.

The European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment, known as the “WEEE Directive,” requires producers of certain electrical and electronic equipment, including monitoring instruments, to be financially responsible for specified collection, recycling, treatment and disposal of past and present covered products placed on the market in the European Union. As a manufacturer of covered products, we may be required to register as a producer in some European Union countries, and we may incur some financial responsibility for the collection, recycling, treatment and disposal of both new product sold, and product already sold prior to the WEEE Directive’s enforcement date, including the products of other manufacturers where these are replaced by our own products. European Union Directive 2002/95/EC on the Restriction of the use of Hazardous Substances in electrical and electronic equipment, known as the “RoHS Directive,” restricts the use of certain hazardous substances, including mercury, lead and cadmium in specified covered products; however, the RoHS

Directive currently exempts monitoring instruments from its requirements. If the European Commission were to remove this exemption in the future, we would be required to change our manufacturing processes and redesign products regulated under the RoHS Directive in order to be able to continue to offer them for sale within the European Union. For some products, substituting certain components containing regulated hazardous substances may be difficult, costly or result in production delays. We will continue to review the applicability and impact of both directives on the sale of our products within the European Union, and although we cannot currently estimate the extent of such impact, they are likely to result in additional costs and could require us to redesign or change how we manufacture our products, any of which could adversely affect our operating results. Failure to comply with the directives could result in the imposition of fines and penalties, inability to sell covered products in the European Union and loss of revenues.

Compliance with foreign, federal, state and local environmental laws and regulations represents a small part of our present budget. If we fail to comply with any such laws or regulations, however, a government entity may levy a fine on us or require us to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect our development. We are committed to complying with and, to our knowledge, are in compliance with, all governmental regulations. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures, or restrictions and delays in the development of our products and properties.

Our ability to develop and market certain of our current and potential products may be hindered as a result of FDA regulatory requirements and a lengthy and expensive approval process.

Certain of our current and potential products will require regulatory clearances or approvals prior to commercialization. In particular, our Trimetasphere™ nanomaterial-based MRI contrast agent and our ultrasound diagnostic devices for measuring certain medical conditions will be considered a drug and medical devices, respectively, under the Federal Food, Drug & Cosmetic Act, or FDC Act. Drugs and medical devices are subject to rigorous preclinical testing and other approval requirements by the Food and Drug Administration, or FDA, pursuant to the FDC Act, and regulations under the FDC Act, as well as by similar health authorities in foreign countries. Various federal statutes and regulations also govern or influence the testing, manufacturing, safety, labeling, packaging, advertising, storage, registration, listing and recordkeeping related to marketing of these products. The process of obtaining these clearances or approvals and the subsequent compliance with appropriate federal statutes and regulations require the expenditure of substantial resources. We cannot be certain that any required FDA or other regulatory approval will be granted or, if granted, will not be withdrawn. Our failure to obtain the necessary regulatory approvals, or our failure to obtain them in a timely manner, will prevent or delay our commercialization of new products and our business could suffer.

Our failure to attract, train and retain skilled employees would adversely affect our business and operating results.

The availability of highly trained and skilled technical and professional personnel is critical to our future growth and profitability. Competition for scientists, engineers, technicians and professional personnel is intense and competitors aggressively recruit key employees. Although we have not previously experienced material difficulties in hiring or retaining these personnel, our growth strategy and future needs for additional experienced personnel, particularly in highly specialized areas such as nanomaterial manufacturing and innovative ultrasound technologies, may make it more difficult to meet all of our needs for these employees in a timely manner. Although we intend to continue to devote significant resources to recruit, train and retain qualified employees, we may not be able to attract and retain these employees, especially in technical fields where the supply of experienced qualified candidates is limited. Any failure to do so would have an adverse effect on our business.

In addition, our future success depends in a large part upon the continued service of key members of our senior management team. In particular, our Chairman, CEO and founder, Kent A. Murphy, Ph.D., is essential to our overall management as well as the development of our technologies, our culture and our strategic direction. All of our executive officers and key employees are at-will employees, and, except with respect to Kent A. Murphy, Ph.D., we do not maintain any key-person life insurance policies. The loss of any of our management or key personnel could seriously harm our business.

Risk factors

We might require additional capital to support business growth, and this capital might not be available.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new products or enhance our existing products, enhance our operating infrastructure, complete our development activities, build our commercial scale manufacturing facilities and acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds for these investments. If we raise additional funds through issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock, including shares of common stock sold in this offering. Furthermore, such financings may jeopardize our ability to apply for SBIR grants or qualify for SBIR contracts or grants, and our dependence on SBIR grants may restrict our ability to raise additional outside capital. Our ability to obtain additional capital could be restricted by the covenants in our existing senior secured credit facility with First National Bank. Among other things, these covenants restrict us, without the prior approval of First National Bank, from guaranteeing the debt of an affiliate or subsidiary or incurring in excess of $200 thousand non-First National Bank debt annually. Any debt financing obtained by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, we may not be able to obtain continued SBIR funding, or other additional financing on terms favorable to us, if at all. In order to retain SBIR eligibility, we may be restricted in our ability to raise certain forms of equity capital from institutional investors. For example, in connection with the closing of our financing with Carilion Health System on December 30, 2005, we were not able to raise all proceeds through the issuance of equity without potentially jeopardizing our SBIR eligibility. We therefore elected to issue debt in the amount of $5.0 million of the total $8.0 million raised in such financing to maintain SBIR eligibility. Under the terms of these notes, we agreed that we will not draw down any amount under our existing senior secured credit facility with First National Bank or incur additional indebtedness other than under certain limited conditions. If we are unable to obtain adequate financing or financing on terms satisfactory to us, when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

We have limited experience manufacturing our products in commercial quantities in a cost-effective manner, which could adversely impact our business.

We have produced most of our products on a custom order basis rather than pursuant to large contracts that require production on a large volume basis. Accordingly, other than the commercial manufacture of products by our Luna Technologies Division, we have no experience manufacturing products in large volume. Because our experience in large scale manufacturing is limited, we may encounter unforeseen difficulties in our efforts to manufacture other products or materials in commercial quantities. For example, we may need to develop or in-license Trimetasphere™ nanomaterial purification and isolation technology, which would result in manufacturing delays or shortfalls. We may also encounter difficulties and delays in manufacturing our products for the following reasons:

- Ø we plan to expand our manufacturing operations, and our production processes may have to change to accommodate this growth;
- Ø to increase our manufacturing output significantly, we will have to attract and retain qualified employees, who are in short supply, for the assembly and testing operations;
- Ø we might have to sub-contract to outside manufacturers which might limit our control of costs and processes; and
- Ø our manufacturing operations may have to comply with government specifications including FDA regulations.

If we are unable to keep up with demand for our products, our revenues could be impaired, market acceptance for our products could be adversely affected and our customers might instead purchase our competitors' products. Moreover, failure to develop and maintain a U.S. market for goods developed with U.S. government-licensed technology may result in the cancellation of the relevant U.S. government licenses. Our inability to manufacture our products successfully would have a material adverse effect on our revenues.

Even if we are able to manufacture our products on a commercial scale, the cost of manufacturing our products may be higher than we expect. If the costs associated with manufacturing are not significantly less than the prices at which we can sell our products, we may not be able to operate at a profit.

We depend on third-party vendors for specialized components in our manufacturing operations, making us vulnerable to supply shortages and price fluctuations that could harm our business.

We primarily rely on third-party vendors for the manufacture of the specialized components used in our products. Although we do not have any sole source suppliers of materials, the highly specialized nature of our supply requirements poses risks that we may not be able to locate additional sources of the specialized components required in our business. For example, we are aware of only two manufacturers that produce the special lasers used in our optical test equipment. Moreover, none of these third-party vendors is obligated to continue to supply us with components. Our reliance on these vendors subjects us to a number of risks that could impact our ability to manufacture our products and harm our business, including interruption of supply.

Any significant delay or interruption in the supply of components, or our inability to obtain substitute components or materials from alternate sources at acceptable prices in a timely manner, could impair our ability to meet the demand of our customers and harm our business.

Our nanotechnology-enabled products are new and may be, or may be perceived as being, harmful to human health or the environment.

While we believe that none of our current products contain chemicals known by us to be hazardous or subject to environmental regulation, it is possible our current or future products, particularly carbon-based nanomaterials, may become subject to environmental regulation. We intend to develop and sell carbon-based nanomaterials as well as nanotechnology-enabled products, which are products that include nanomaterials as a component to enhance those products' performance. Nanomaterials and nanotechnology-enabled products have a limited historical safety record. Because of their size or shape or because they may contain harmful elements, such as gadolinium and other rare-earth metals, our products could pose a safety risk to human health or the environment. These characteristics may also cause countries to adopt regulations in the future prohibiting or limiting the manufacture, distribution or use of nanomaterials or nanotechnology-enabled products. Such regulations may inhibit our ability to sell some end user products containing those materials and thereby harm our business or impair our ability to develop commercially viable products.

The subject of nanotechnology has received negative publicity and has aroused public debate. Government authorities could, for social or other purposes, prohibit or regulate the use of nanotechnology. Ethical and other concerns about nanotechnology could adversely affect acceptance of our potential products or lead to government regulation of nanotechnology-enabled products.

We face risks associated with our international business.

Our Luna Technologies Division and our Luna nanoWorks Division currently conduct business internationally and we might considerably expand our international activities in the future. Our international business operations are subject to a variety of risks associated with conducting business internationally, including:

- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products, perform services or repatriate profits to the United States;
- the imposition of tariffs;
- hyperinflation or economic or political instability in foreign countries;
- imposition of limitations on or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;

- conducting business in places where business practices and customs are unfamiliar and unknown;
- the imposition of restrictive trade policies;
- the imposition of inconsistent laws or regulations;
- the imposition or increase of investment and other restrictions or requirements by foreign governments;
- uncertainties relating to foreign laws and legal proceedings;
- having to comply with a variety of U.S. laws, including the Foreign Corrupt Practices Act;
- having to comply with U.S. export control regulations and policies that restrict our ability to communicate with non-U.S. employees and supply foreign affiliates and customers; and
- having to comply with licensing requirements.

We do not know the impact that these regulatory, geopolitical and other factors may have on our international business in the future.

Risks Related to This Offering

Our common stock has never been publicly traded, and we expect that the price of our common stock will fluctuate substantially.

Before this initial public offering, there has been no public market for our common stock. An active public trading market may not develop after completion of this offering or, if developed, may not be sustained. The initial public offering price may not be indicative of prices that will prevail in the trading market. The public trading price for our common stock after this offering will be affected by a number of factors, including:

- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earning estimates;
- changes in our status as an entity eligible to receive SBIR contracts and grants;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- announcements by us, or our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- commencement of, or involvement in, litigation;
- any major change in our board of directors or management;
- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors and to litigation;
- a lack of, limited or negative industry or security analyst coverage; and
- developments in our industry.

In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These factors may materially and adversely affect the market price of our common stock.

Risk factors

New investors in our common stock will experience immediate and substantial dilution.

Our initial public offering price is substantially higher than the book value per share of our common stock. If you purchase common stock in this offering, you will incur immediate dilution of $4.02 in net tangible book value per share of common stock. This amount represents the difference between the assumed initial public offering price of $12.00 per share, which is based on the mid-point of the range on the front cover of this prospectus, and the net tangible book value per share of common stock after the offering of $7.98. In addition, the number of shares available for issuance under our stock plans may increase annually without further stockholder approval. Investors will incur additional dilution upon the exercise of stock options and warrants. See “Dilution.”

If there are substantial sales of our common stock, our stock price could decline.

If our existing stockholders sell a large number of shares of our common stock or the public market perceives that these sales may occur, the market price of our common stock could decline. Upon the closing of this offering, assuming no outstanding options are exercised prior to the closing of this offering, we will have approximately 10,505,267 shares of common stock outstanding. The 4,000,000 shares to be sold under this prospectus will be freely tradable without restriction or further registration under the federal securities laws, unless purchased by our affiliates. Taking into consideration the effect of the 180-day lock-up agreements that have been entered into by certain of our stockholders, we estimate that the remaining 6,505,267 shares of our common stock outstanding upon the closing of this offering will be available for sale pursuant to Rule 144, Rule 144(k) and Rule 701, as follows:

- 565 shares will be immediately eligible for sale in the public market without restriction pursuant to Rule 144(k);
- no additional shares will be eligible for sale in the public market under Rule 144 or Rule 701 beginning 90 days after the date of this prospectus, subject to volume, manner of sale, and other limitations under those rules;
- 3,902,015 additional shares will become eligible for sale, subject to the provisions of Rule 144, Rule 144(k) or Rule 701, beginning 180 days after the date of this prospectus, upon the expiration of agreements not to sell such shares entered into between the underwriters and such stockholders; and
- 2,602,687 additional shares will be eligible for sale from time to time thereafter upon expiration of their respective one-year holding periods, but could be sold earlier if the holders exercise any available registration rights. Of such shares subject to the provisions of Rule 144, 1,749,428 and 749,754 shares may be sold by Carilion Health System beginning August 4, 2006 and December 30, 2006, respectively, and 103,505 shares may be sold by three individuals beginning November 22, 2006.

Existing stockholders holding an aggregate of 5,760,858 shares of common stock (including shares of our common stock purchasable pursuant to warrants to purchase our common stock), based on shares outstanding as of March 31, 2006, have rights with respect to the registration of these shares of common stock with the SEC. See “Description of capital stock—Registration Rights.” If we register these shares of common stock, these holders will be able to sell immediately those shares in the public market.

Within three months following the completion of this offering, we intend to file a registration statement to register 12,715,000 shares of common stock reserved for issuance under our 2003 Stock Plan and 2006 Equity Incentive Plan, thus permitting the resale of such shares. As of March 31, 2006, 4,826,311 shares were subject to outstanding options, 2,427,386 of which options were vested.

Once we register these shares, they can be freely sold in the public market upon issuance, subject to the underwriter lock-up agreements, our stock purchase restriction agreements and restrictions on our affiliates.

In addition, holders of warrants exercisable for up to 61,196 shares of common stock may exercise those rights and subsequently sell the underlying shares in the public market.

ThinkEquity Partners LLC, on behalf of the underwriters, may in its sole discretion, at any time without notice, release all or any portion of the shares subject to the lock-up agreements, which would result in more shares being available for sale in the public market at earlier dates. Sales of common stock by existing stockholders in the public market, the availability of these shares for sale, our issuance of securities or the perception that any of these events might occur could materially and adversely affect the market price of our common stock.

In addition, employees holding options exercisable for 3,921,731 shares of our common stock have entered into an agreement not to sell more than 20.0% of such shares in any year during the five years following the effective date of this offering, provided, any share subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. Certain members of our management holding options exercisable for shares of our common stock have entered into an agreement not to sell more than 15.0% of such shares in any year during the five years following the effective date of this offering, provided, any share subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. We have the right to waive any of these resale restrictions for employees and management at our discretion, and in such instance, the shares would become freely tradable.

Our management will have broad discretion over the use of the proceeds to us from this offering and might not apply the proceeds of this offering in ways that increase the value of your investment.

Our management will have broad discretion to use the net proceeds from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. They might not apply the net proceeds of this offering in ways that increase the value of your investment. We expect to use the net proceeds from this offering for general corporate purposes, which may include working capital, capital expenditures, other corporate expenses and potential acquisitions of complementary products, technologies or businesses. We have not allocated these net proceeds for any specific purposes. Our management might not be able to yield a significant return, if any, on any investment of these net proceeds.

Our directors and management will collectively control over 52% of our outstanding common stock.

Immediately after this offering, our directors and executive officers and their affiliates will collectively control approximately 52.7% of our outstanding common stock or approximately 49.9% if the underwriters exercise their over-allotment option in full. As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. You and other stockholders will have minimal influence over these actions. This concentration of ownership may have the effect of delaying or preventing a change in control of our company and might adversely affect the market price of our common stock.

Our financial results may vary significantly from period to period which may reduce our stock price.

Our financial results may fluctuate as a result of a number of factors, many of which are outside of our control, which may cause the market price of our common stock to fall. For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our financial results may be negatively affected by any of the risk factors listed in this “Risk factors” section and, in particular, the following risks:

- Ø a reduction of contract research funding;
- Ø decisions by government agencies, academic institutions or corporations not to exercise contract options or to modify, curtail or terminate our major contracts;

- failure to estimate or control contract costs;
- adverse judgments or settlements in legal disputes;
- expenses related to acquisitions, mergers or joint ventures; and
- other one-time financial charges.

We will incur increased costs as a result of being a public company.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will incur costs associated with our public company reporting requirements. We also anticipate that we will incur costs associated with corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, as well as new rules implemented by the SEC and the National Association of Securities Dealers, Inc., or NASD. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. We also expect these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive officers. We cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal control over financial reporting are found not to be effective by management or by an independent registered public accounting firm or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

Beginning with our Annual Report for the year ending December 31, 2007, Section 404 of the Sarbanes-Oxley Act of 2002 requires us to include an internal control report with our Annual Report on Form 10-K. That report must include management's assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year. Additionally, our independent registered public accounting firm will be required to issue a report on management's assessment of our internal control over financial reporting and a report on their evaluation of the operating effectiveness of our internal control over financial reporting.

We continue to evaluate our existing internal control over financial reporting against the standards adopted by the Public Company Accounting Oversight Board, or PCAOB. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement, and may have to design enhanced processes and controls to address issues identified through this review. Remedying any deficiencies, significant deficiencies or material weaknesses that we or our independent registered public accounting firm may identify, may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or by an independent registered public accounting firm or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

Our independent auditors have identified material weaknesses and significant deficiencies in our internal controls, and if we are unable to develop, implement and maintain appropriate controls we will not be able to comply with applicable regulatory requirements imposed on reporting companies.

In connection with the audit of our financial statements for each of the three years in the period ended December 31, 2005, our independent registered public accounting firm identified certain weaknesses in our internal control over financial reporting,

which they considered to be material weaknesses and significant deficiencies. Specifically, because we lack appropriate resources and personnel with sufficient experience, our independent registered public accounting firm noted weaknesses in our ability to account for certain complex accounting transactions relating to business combinations and consolidation matters, to account for share-based payments to employees and consultants, as well as weaknesses in our ability to prepare timely consolidated financial statements in accordance with U.S. generally accepted accounting principles and Regulation S-X under the Securities Exchange Act of 1934, as amended. We also lack adequate cutoff and accrual procedures which materially affected recognition of expenses and, in certain instances, related revenues. These weaknesses led to significant audit adjustments for each of the three years in the period ended December 31, 2005 which had a material effect on our financial statements.

Our business operations were relatively small for several years and, as a result, we have operated with very limited staffing of key accounting functions. Such limited staffing made it difficult for us to segregate certain accounting functions. Because of these circumstances, we have relied on outside consultants to supplement our internal accounting staff and to meet our financial reporting obligations.

We are actively recruiting key senior accounting and finance employees to include a new Chief Financial Officer and other accounting staff to enhance our internal control and procedures over financial reporting. Upon hiring a new Chief Financial Officer, our current Chief Financial Officer will continue to serve as our Executive Vice President, Corporate Development. We have recently hired a Chief Accounting Officer as well as an additional senior accountant. These individuals have prior experience handling external financial reporting in a public company environment and should improve our ability to prepare timely consolidated financial statements as well to address more complex accounting matters, such as business combinations and share-based payments. We also hired an additional accounts payable and payroll accountant to improve segregation of duties and redistribute the overall workload on our accounting staff.

We also intend to establish new and enhanced systems of internal control that we believe will be necessary to allow management to report on, and our independent auditors to attest to, our internal controls. To improve the timeliness of our financial reporting, we have instituted a new detailed closing schedule to enhance overall completeness and quality of our reporting. The new schedule was first implemented in March 2006 and provides guidance on routine processes, such as procedures for handling key account reconciliations, month end cutoff procedures for accounts payable and accrued expenses as well as cutoff procedures for revenue and related receivables. The documentation will be expanded in later periods to provide detailed guidance of our entire closing process including preparation of interim and year-end consolidated financial statements and related notes. We have also taken measures to improve our cutoff and accrual procedures. Specifically, we have implemented a process to improve our estimation of subcontractor expenses to ensure completeness of our direct costs and related revenue. We will continue to review this process to monitor the sufficiency of such policies and procedures.

Although we do not believe we have material weaknesses or significant deficiencies related to our policies and procedures that pertain to maintenance of records, authorizations of receipts and expenditures, or prevention or timely detection of unauthorized acquisition, use, or disposition of our assets, we have not performed specific tests to determine the effectiveness of key controls within these policies and procedures. We intend to monitor those policies and procedures in connection with the establishment of a formally documented system of internal control. We are beginning a comprehensive documentation of our internal controls processes in order to identify additional areas for improvement as well as in anticipation of our future requirements under the Sarbanes-Oxley Act of 2002. We have assigned personnel to begin the process with the expectation of completing documentation of certain key processes by the end of the second quarter of 2006.

While we anticipate being able to implement fully the requirements relating to internal controls and all other applicable requirements of the Sarbanes-Oxley Act of 2002 in a timely fashion, we cannot be certain as to the timing of the completion of our evaluation and testing and any necessary remediation or the impact of the same on our operations. Our development,

implementation and maintenance of appropriate internal controls will depend materially both on our successful hiring and retention of key senior accounting personnel. If we are not able to complete the assessment required under Section 404 in a timely manner, we and our independent registered public accounting firm would be unable to conclude that our internal control over financial reporting is effective as of December 31, 2007.

If we are unable to attract and retain qualified personnel, to implement and integrate financial reporting and accounting systems or if we are unable to scale these systems to our growth, we may not have adequate, accurate or timely financial information, and we may be unable to meet our reporting obligations or comply with the requirements of the SEC, the Nasdaq National Market or the Sarbanes-Oxley Act of 2002, which could result in the imposition of sanctions, including the suspension or delisting of our common stock from the Nasdaq National Market and the inability of registered broker dealers to make a market in our common stock, or investigation by regulatory authorities. Any such action or other negative results caused by our inability to meet our reporting requirements or comply with legal and regulatory requirements or by disclosure of an accounting, reporting or control issue could adversely affect the price of our class common stock. Further and continued determinations that there are significant deficiencies or material weaknesses in the effectiveness of our internal control over financial reporting could also reduce our ability to obtain financing or could increase the cost of any financing we obtain and require additional expenditures to comply with applicable requirements.

Anti-takeover provisions in our amended and restated certificate of incorporation and bylaws and Delaware law could discourage a takeover.

Our amended and restated certificate of incorporation and bylaws and Delaware law contain provisions that might enable our management to resist a takeover. These provisions include:

- Ø a classified board of directors;
- Ø advance notice requirements to stockholders for matters to be brought at stockholder meetings;
- Ø a supermajority stockholder vote requirement for amending certain provisions of our amended and restated certificate of incorporation and bylaws; and
- Ø the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer.

These provisions might discourage, delay or prevent a change in control of our company or a change in our management. The existence of these provisions could adversely affect the voting power of holders of common stock and limit the price that investors might be willing to pay in the future for shares of our common stock. See “Description of capital stock.”

Changes in, or interpretations of, accounting rules and regulations, such as expensing of stock options, could result in unfavorable accounting charges or require us to change our compensation policies.

Accounting methods and policies, including policies governing revenues recognition, expenses, and accounting for stock options are subject to further review, interpretation and guidance from relevant accounting authorities, including the SEC. Changes to, or interpretations of, accounting methods or policies in the future may require us to reclassify, restate or otherwise change or revise our financial statements, including those contained in this prospectus. Prior to January 1, 2006, we were not required to record stock-based compensation charges if the employee’s stock option exercise price equals or exceeds the fair market value of our common stock at the date of grant.

On December 16, 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*, which is a revision of SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123R). SFAS No. 123R supersedes APB Opinion No. 25, *Accounting for Stock Issued to Employees*, and amends SFAS No. 95, *Statement of Cash Flows*. Generally, the approach in SFAS No. 123R is similar to the approach described in SFAS No. 123. However, SFAS No. 123R requires all share-based

payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. We are required to adopt SFAS No. 123R on January 1, 2006, and have adopted it as of that date.

As permitted by SFAS No. 123, we accounted for share-based payments to employees through December 31, 2005 using APB Opinion No. 25's intrinsic value method and, as such, generally recognized no compensation cost for employee stock options. Accordingly, the adoption of SFAS No. 123R's fair value method will have a significant impact on the presentation of our results of operations, although it will have no impact on our overall financial position. The impact of adoption of SFAS No. 123R cannot be predicted at this time because it will depend on levels of share-based payments granted in the future and the assumptions for the variables which impact the computation.

We rely heavily on stock options to motivate existing employees and to attract new employees. When we are required to expense stock options, we may then choose to reduce our reliance on stock options as a motivation tool. If we reduce our use of stock options, it may be more difficult for us to attract and retain qualified employees. If we do not reduce our reliance on stock options, our reported earnings will decrease.

Information regarding forward-looking statements

This prospectus, including the sections entitled “Summary,” “Risk factors,” “Management’s discussion and analysis of financial condition and results of operations” and “Business” may contain forward-looking statements. These statements may relate to, but are not limited to, expectations of future operating results or financial performance, capital expenditures, introduction of new products, regulatory compliance, plans for growth and future operations, as well as assumptions relating to the foregoing. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. These risks and other factors include, but are not limited to, those listed under “Risk factors.” In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “intend,” “potential,” “continue,” “seek” or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events and/or results may differ materially.

We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements after we distribute this prospectus, whether as a result of any new information, future events or otherwise. Potential investors should not place undue reliance on our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of any of the events described in the “Risk factors” section and elsewhere in this prospectus could harm our business, prospects, operating results and financial condition. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. The forward-looking statements contained in this prospectus are excluded from the safe harbor protection provided by the Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended.

Use of proceeds

We estimate that the net proceeds from the sale of the 4,000,000 shares of our common stock that we are selling in this offering will be approximately $43.1 million, based on an assumed initial public offering price of $12.00 per share, the mid-point of the range on the front cover of this prospectus, after deducting the underwriting discount and estimated offering expenses. A $1.00 increase (decrease) in the assumed initial public offering price of $12.00 per share would increase (decrease) our net proceeds from this offering by approximately $3.7 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. If the underwriters' over-allotment option is exercised in full, we estimate that we will receive additional net proceeds of approximately $6.7 million.

We intend to use the net proceeds from this offering principally to fund further development and expansion of our products and product candidates, in particular our nanomaterial and ultrasound-related product candidates, and for general working capital purposes. Specifically, in 2006 and 2007 we currently estimate spending:

- Ø approximately $4 million to $6 million to develop disease-targeting MRI contrast agents and other nanomaterial applications through the filing of an Investigational New Drug application for a lead contrast agent;
- Ø approximately $2 million to $3 million to fund completion of initial FDA clinical trials for one lead disease-targeting MRI contrast agent;
- Ø approximately $2 million to $3 million to develop our first medical product based on our innovative ultrasound platform technology; and
- Ø approximately $2 million to $3 million to fund our efforts to seek FDA approval of our first medical device product based on our innovative ultrasound platform technology.

Thereafter, we intend to use the net proceeds of this offering to continue to fund FDA clinical trials of additional currently unidentified MRI contrast agent and ultrasound medical device products, with the remainder being available for general working capital purposes. However, due to the uncertainties inherent in the clinical trial process and given that our product candidates have not yet entered clinical development, we are unable to estimate the total costs that will be required to fund the development of our product candidates. As a result, we cannot estimate what amount of the net proceeds will be available for general working capital purposes.

Moreover, our current estimates may change as we begin to develop and expand our product candidates, and we may decide to use our net proceeds for other product candidates or other business purposes. In addition, we may decide to fund our development efforts in part or in whole through outside sources, including licensing revenues or other sources of financing. The foregoing use of proceeds are only our current estimates, and we retain broad discretion to change the application of the proceeds from this offering.

We have not made specific plans with respect to the remaining proceeds of this offering and, therefore, cannot specify all uses for the net proceeds. Accordingly, our management will have broad discretion over the use of the net proceeds in this offering. The amounts and timing of our actual expenditures will depend upon numerous factors, including the status of our development and commercialization efforts and the amount of proceeds actually raised in this offering.

Additional purposes of this offering are to establish a public market for our common stock and to facilitate our future access to public markets, if, for example, additional funds are required to complete FDA clinical trials. We may also use a portion of the net proceeds for the acquisition of, or investment in, companies, technologies, products or assets that complement our business. We have no present understandings, commitments or agreements to enter into any acquisitions or investments. Pending these uses, we intend to invest the net proceeds of this offering in short-term, investment-grade interest-bearing securities or guaranteed obligations of the United States government.

Dividend policy

We have never declared or paid any dividends on our capital stock. We anticipate that we will retain any earnings to support operations and to finance the growth and development of our business. Therefore, we do not expect to pay cash dividends in the foreseeable future. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including earnings, capital requirements, financial condition, prospects and other factors that our board of directors may deem relevant.

Capitalization

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2006:

- Ø on an actual basis;
- Ø on an as adjusted basis to give effect to the sale by us of 4,000,000 shares of common stock at an assumed initial public offering price of $12.00 per share, the mid-point of the range on the front cover of this prospectus, less the underwriting discount and estimated offering expenses.

	As of March 31, 2006	
	Actual	As Adjusted
	(unaudited)	
Cash and cash equivalents	$10,099,059	$53,239,059
Senior convertible promissory notes	5,000,000	5,000,000
Redeemable common stock, 308,216 shares issued and outstanding; no shares issued and outstanding, as adjusted(1)	504,984	—
Stockholders' equity:		
Common stock, $0.001 par value; 54,245,588 shares authorized, 5,829,341 shares issued and outstanding, actual; 100,000,000 shares authorized, 10,505,267 shares issued and outstanding, as adjusted	5,829	10,505
Additional paid-in capital	11,246,227	54,886,535
Accumulated deficit	(1,962,868)	(1,962,868)
Total stockholders' equity and redeemable common stock	9,794,172	52,934,172
Total capitalization	$14,794,172	57,934,172

(1) Certain stockholders that have received shares of our Common Stock in connection with our acquisition of Luna Technologies have the right to redeem a percentage of the outstanding shares issued pursuant to that transaction. This redemption right is extinguished upon the effectiveness of this offering.

A $1.00 increase (decrease) in the assumed initial public offering price of $12.00 per share would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and redeemable common stock, and total capitalization by approximately $3.7 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. The as adjusted information discussed above is illustrative only and following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

Capitalization

The table above is based on 6,137,557 shares outstanding as of March 31, 2006 and an additional 367,710 shares of common stock to be issued to Carilion Health System in connection with certain anti-dilution provisions afforded to such stockholder upon the effectiveness of this offering, and it excludes:

- 4,826,311 shares of common stock issuable upon exercise of options outstanding at a weighted-average exercise price of $0.90 per share, which includes 2,834,016 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.35 per share, 113,046 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.39 per share, and 1,879,249 shares of common stock issuable upon exercise of options outstanding at an exercise price of $1.77 share;
- 221,646 shares of common stock reserved for future issuance upon the exercise of options available for grant under our 2003 Stock Plan;
- 61,196 shares of common stock issuable upon exercise of warrants (not subject to escrow) outstanding at a weighted-average exercise price of $3.03 per share, which includes 2,181 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $37.26 per share and 59,015 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $1.77 per share;
- 1,065,736 shares of common stock issuable upon the conversion of the principal amount outstanding under senior convertible promissory notes issued to Carilion Health System on December 30, 2005 and, assuming we elect to convert all of the accrued interest on these notes into shares of common stock after these notes remain outstanding for a maximum period of up to eight years, up to an additional 511,553 shares of common stock; and
- 69,379 shares of common stock issued or reserved for issuance in connection with the acquisition of Luna Technologies that were held in escrow on that date, and 242 shares of common stock issuable upon the exercise of warrants at an exercise price of $37.26 per share held in escrow as of that date.

We adopted our 2006 Equity Incentive Plan in February 2006, subject to stockholder approval, which will be effective upon the completion of this offering.

The table should be read in conjunction with “Management’s discussion and analysis of financial condition and results of operations” and our consolidated financial statements and related notes included elsewhere in this prospectus.

Dilution

If you invest in our common stock, your interest will be diluted immediately to the extent of the difference between the assumed initial public offering price of $12.00 per share of our common stock, the midpoint of the range on the front cover of this prospectus, and the as adjusted net tangible book value per share of our common stock after this offering. Net tangible book value as of March 31, 2006 was $8.7 million, or $1.34 per share. Our net tangible book value per share set forth below represents our total tangible assets (total assets less intangible assets) less total liabilities, divided by the number of shares of our common stock outstanding on March 31, 2006, which includes shares of common stock that will be issued to Carilion Health Systems in connection with certain antidilution provisions afforded to that stockholder upon the effectiveness of this offering.

Dilution per share to new investors represents the difference between the amount per share paid by new investors who purchase shares of common stock in this offering and the as adjusted net tangible book value per share of common stock immediately after the completion of this offering. Giving effect to the sale of shares of our common stock offered by us at the assumed initial public offering price of $12.00 per share, the mid-point of the range on the front cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses, our as adjusted net tangible book value as of March 31, 2006 would have been approximately $51.8 million. This amount represents an immediate increase in net tangible book value of $3.60 per share to our existing stockholders and an immediate dilution in net tangible book value of $7.06 per share to new investors purchasing shares of our common stock in this offering. The following table illustrates this dilution:

Assumed initial public offering price per share		$12.00
Net tangible book value per share as of March 31, 2006	$1.34	
Increase in net tangible book value per share attributable to this offering per share to existing investors	$3.60	
As adjusted net tangible book value per share after this offering		$4.94
Dilution per share to new investors		$7.06

A $1.00 increase (decrease) in the assumed initial public offering price of $12.00 per share would increase (decrease) our net tangible book value by approximately $3.7 million, our as adjusted net tangible book value per share after this offering by approximately $.35 and dilution per share to new investors by approximately $.65, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions.

The following table sets forth, on an as adjusted basis, as of March 31, 2006, the differences between the number of shares of common stock purchased from us, the total consideration paid, and the average price per share paid by existing stockholders and new investors purchasing shares of our common stock in this offering, before deducting the underwriting discount and estimated offering expenses at an assumed initial public offering price of $12.00 per share, the mid-point of the range on the front cover of this prospectus.

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders	6,505,267	61.9%	$11,463,456	19.3%	$1.76
New investors	4,000,000	38.1	48,000,000	80.7	12.00
Total	10,505,267	100.0%	$59,463,456	100.0%	

Dilution

The table above excludes, as of March 31, 2006:

- 4,826,311 shares of common stock issuable upon exercise of options outstanding at a weighted-average exercise price of $0.90 per share, which includes 2,834,016 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.35 per share, 113,046 shares of common stock issuable upon exercise of options outstanding at an exercise price of $0.39 per share, and 1,879,249 shares of common stock issuable upon exercise of options outstanding at an exercise price of $1.77 per share;
- 221,646 shares of common stock reserved for future issuance upon the exercise of options available for grant under our 2003 Stock Plan;
- 61,196 shares of common stock issuable upon exercise of warrants (not subject to escrow) outstanding at a weighted-average exercise price of $3.03 per share, which includes 2,181 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $37.26 per share and 59,015 shares of common stock issuable upon exercise of outstanding warrants at an exercise price of $1.77 per share;
- 1,065,736 shares of common stock issuable upon the conversion of the principal amount outstanding under senior convertible promissory notes issued to Carilion Health System on December 30, 2005 and, assuming we elect to convert all of the accrued interest on these notes into shares of common stock after these notes remain outstanding for a maximum period of up to eight years, up to an additional 511,553 shares of common stock; and
- 69,379 shares of common stock issued or reserved for issuance in connection with the acquisition of Luna Technologies that were held in escrow on that date, and 242 shares of common stock issuable upon the exercise of warrants at an exercise price of $37.26 per share held in escrow as of that date, which shares and warrants shall be cancelled in connection with the closing of this offering.

Assuming the conversion in full of the senior convertible promissory notes as well as exercise in full of all options and warrants outstanding or reserved for future issuance as of April 27, 2006 (other than shares and warrants held in escrow), the number of shares purchased by existing stockholders would be increased by 6,686,442 shares to 13,191,709 shares, total consideration paid by them would be increased by approximately $4,542,773 to $16,006,229 and the average price per share paid by them would be decreased by $0.55 per share to $1.21 per share.

We adopted our 2006 Equity Incentive Plan in February 2006, subject to stockholder approval which will be effective upon the completion of this offering.

If the underwriters exercise their over-allotment option in full, the percentage of shares of common stock held by existing stockholders will decrease to approximately 58.6% of the total number of shares of our common stock outstanding after this offering, and the number of shares held by new investors will be increased to 4,600,000, or approximately 41.4% of the total number of shares of our common stock outstanding after this offering.

Within three months following the completion of this offering, we intend to file a registration statement under the Securities Act to register the issuance of 12,715,000 shares of common stock reserved for issuance under the 2003 Stock Plan and the 2006 Equity Incentive Plan.

Selected consolidated financial data

The tables below present selected consolidated statements of operations data for each of the five years ended December 31, 2001, 2002, 2003, 2004 and 2005 and the three months ended March 31, 2005 and 2006 and selected consolidated balance sheet data as of December 31, 2001, 2002, 2003, 2004 and 2005 and March 31, 2006. The consolidated statements of operations data for the years ended December 31, 2003, 2004 and 2005 and consolidated balance sheet data as of December 31, 2004 and 2005 were derived from our audited consolidated financial statements and notes thereto, which are included elsewhere in this prospectus. The consolidated statement of operations data for the year ended December 31, 2002 and consolidated balance sheet data as of December 31, 2003 were derived from our audited consolidated financial statements and notes thereto, which do not appear in this prospectus. The consolidated statements of operations data for the year ended December 31, 2001 and the consolidated balance sheet data as of December 31, 2001 and 2002 were derived from our unaudited consolidated financial statements, which do not appear in this prospectus. The consolidated balance sheet data as of March 31, 2006 and the consolidated statements of operations data for the three months ended March 31, 2005 and 2006 were derived from our unaudited consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited information on the same basis as the audited consolidated financial statements and have included all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of our financial position at such date and operating results for such periods. Historical results are not necessarily indicative of the results of operations to be expected for the future periods, and interim results may not be indicative of results for the remainder of the year.

When you read this selected consolidated financial data, it is important that you also read the historical consolidated financial statements and related notes included in this prospectus, as well as the section of this prospectus entitled “Management’s discussion and analysis of financial condition and results of operations.” Historical results are not necessarily indicative of future results.

(In thousands, except share and per share data)	Years Ended December 31,					Three Months Ended March 31,	
	2001	2002	2003	2004	2005	2005	2006
	(unaudited)					(unaudited)	(unaudited)
Consolidated Statements of Operations Data:							
Revenues:							
Contract research revenues	$7,725	$11,084	$10,358	$13,835	$15,380	$3,256	$3,921
Product sales and license revenues	—	4,643	7,234	8,752	1,074	—	595
Total revenues	7,725	15,727	17,592	22,587	16,454	3,256	4,516
Cost of revenues:							
Contract research costs	4,646	9,143	8,949	10,985	12,552	2,671	2,908
Product sales and license costs	—	3,884	1,543	2,881	410	—	266
Total cost of revenues	4,646	13,027	10,492	13,866	12,962	2,671	3,174
Gross profit	3,079	2,700	7,100	8,721	3,492	585	1,342
Operating expense	4,531	4,491	4,856	4,190	6,004	882	3,229
Operating income (loss)	(1,452)	(1,791)	2,244	4,531	(2,512)	(297)	(1,887)
Other income (expense)(1)	(101)	41	(138)	(257)	2	1	6
Interest income (expense), net	(263)	(469)	(87)	(90)	(41)	(40)	4
Income (loss) before income taxes	(1,816)	(2,219)	2,019	4,184	(2,551)	(336)	(1,877)
Income tax expense (benefit)	(582)	(652)	886	128	(557)	(73)	—
Net income (loss)	$(1,234)	$(1,567)	$1,133	$4,056	$(1,994)	$(263)	$(1,877)
Net income (loss) per common share:							
Basic	$(0.41)	$(0.54)	$0.40	$1.40	$(0.53)	$(0.09)	$(0.31)
Diluted	$(0.41)	$(0.54)	$0.39	$1.14	$(0.53)	$(0.09)	$(0.31)
Weighted-average number of shares used in per share calculations:							
Basic	3,031,509	2,878,460	2,843,349	2,903,022	3,735,811	2,911,255	6,069,780
Diluted	3,031,509	2,878,460	2,905,849	3,561,788	3,735,811	2,911,255	6,069,780

(1) Includes minority interests and excludes interest expense.

Selected consolidated financial data

(in thousands)	As of December 31,					As of March 31,
	2001	2002	2003	2004	2005	2006
	(unaudited)					(unaudited)
Consolidated Balance Sheet Data:						
Cash and cash equivalents	$122	$1,293	$642	$610	$12,515	$10,099
Working capital (deficit)	(1,762)	(5,325)	(3,008)	257	11,843	9,627
Total assets	1,967	6,807	5,497	7,747	24,134	21,021
Total current liabilities	3,610	9,802	7,211	4,474	6,993	5,684
Total debt(1)	0	24	286	303	5,431	5,406
Stockholders' equity (deficit)	(1,221)	(3,088)	(1,932)	2,167	10,854	9,289

(1) Includes capital lease obligations and excludes amounts outstanding under our senior secured revolving credit facility, which is reflected in total current liabilities.

Management's discussion and analysis of financial condition and results of operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes to those statements included elsewhere in this prospectus. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Risk factors" and elsewhere in this prospectus.

Overview

We research, develop and commercialize innovative technologies in two primary areas: molecular technology solutions and sensing solutions. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative products to market. We identify technologies that can fulfill large and unmet market needs and then take these technologies from the applied research stage through commercialization in our two areas of focus:

- **Molecular Technology Solutions.** We develop molecular technology solutions, which are substances and materials with enhanced performance characteristics obtained by harnessing chemical, physical and biological properties of novel combinations of matter. We focus on substances and materials at the molecular level, including nanomaterials, which are materials whose size can be measured in nanometers, or one billionth of a meter. Examples of our solutions in this area include flame retardants, protective coatings, and materials that can help physicians identify diseased tissues using magnetic resonance imaging, or MRI.
- **Sensing Solutions.** We develop integrated sensing solutions, which are products that combine sensors, software and hardware to measure, monitor and control chemical, physical and biological properties. We have particular expertise in optical, acoustic and wireless technologies. Examples of our solutions in this area include medical monitoring products and industrial instrumentation for aerospace, energy generation and distribution, and defense applications.

We have a successful track record in executing our market-driven business model. Since our inception, we have developed more than a dozen products serving various industries including energy, telecommunications, life sciences and defense. We have created five companies in our areas of focus, sold two of them to industry leaders in their fields, raised private capital for two of our companies, formed one joint venture and entered into four licensing agreements.

Our aggregate revenues from January 1, 2003 through March 31, 2006 were $61.1 million, and our aggregate cost of revenues during that same period were $40.5 million. However, we had net losses of $2.0 million and $1.9 million for the year ended December 31, 2005 and the three months ended March 31, 2006, respectively, and we expect to incur significant additional expenses as we expand our business. We also expect significantly greater losses for the foreseeable future primarily due to increased expenditures related to our nanomaterial and medical device product development efforts.

Our company is organized into three main groups: our Contract Research Group, our Commercialization Strategy Group and our Products Group. These groups work closely together to turn ideas into products.

Our annual revenues were $17.6 million in 2003, $22.6 million in 2004, and $16.5 million in 2005, and $4.5 million during the three months ended March 31, 2006. We generate revenues through contract research, product sales and license fees. Historically, our contract research revenues have accounted for a large and growing proportion of our total revenues, and we expect that they will continue to represent a significant portion of our total revenues for the foreseeable future. Our contract research revenues grew from $10.4 million in 2003 to $13.8 million in 2004 and to $15.4 million in 2005.

Management's discussion and analysis of financial condition and results of operations

In the first quarter of 2006, we generated contract research revenues of $3.9 million. As of March 31, 2006, our Contract Research Group was working on 68 contracts. In addition to these contracts, we regularly have a backlog of contracts for which work has been scheduled, but for which a specified portion of work has not yet been completed. We define backlog as the dollar amount of obligations payable to us under negotiated contracts upon completion of a specified portion of work that has not yet been completed, exclusive of revenues previously recognized for work already performed under these contracts, if any. The approximate value of our backlog was $15.7 million as of March 31, 2006.

Revenues from product sales currently represent a small proportion of our total revenues, and, historically, we have derived most of these revenues from the sales of our sensing systems and products that make use of light-transmitting optical fibers, or fiber optics. License revenues have been significant in the last three fiscal years due to the Luna Analytics, Luna Energy and Luna i-Monitoring transactions described below. Although we have been successful in licensing certain technology we do not expect license revenues to represent a significant portion of future revenues, however, over time we do intend to gradually increase such revenues. In the near term, we expect revenues from product sales to increase because of our acquisition of Luna Technologies on September 30, 2005. We also expect to increase our investments in product development and commercialization, which we anticipate will lead to increased product sales growth. In the future, we expect that revenues from product sales will represent a larger proportion of our total revenues and that as we develop and commercialize new products, these revenues will reflect a broader and more diversified mix of products.

In July 1998, we established Luna Technologies, and funded its growth by raising venture capital, which ultimately diluted our equity ownership to as little as approximately 7% during our holding period and to approximately 10% as of September 2005. In line with our strategy of building a growing portfolio of businesses and products, we acquired all of the outstanding shares in Luna Technologies we did not already own in exchange for issuing shares of our common stock in September 2005. Luna Technologies continues to operate as our Luna Technologies Division.

In February 2002, we established a joint venture limited liability company, Luna Energy, LLC together with Baker Hughes Oilfield Operations, Inc. Baker Hughes agreed to pay up to $32.0 million in connection with this joint venture as follows: $12.0 million in working capital contributed to Luna Energy over an estimated three-year collaboration period beginning in February 2002; $10.0 million to us, which we recognized as license revenues ratably over the expected collaboration period; and up to $10.0 million, which we earned including $1.5 million, $3.0 million and $3.5 million during the years ended December 31, 2002, 2003 and 2004, respectively, upon achievement of such milestones. In December 2004, Baker Hughes acquired our remaining equity interest in Luna Energy for a non-refundable payment of $990 thousand and the license arrangement was terminated.

In October 2003, IHS Energy Group, Inc. acquired rights to certain intellectual property related to our sensor technology and our equity interest in Luna i-Monitoring, Inc. Prior to and in connection with this transaction, we transferred certain non-intellectual property assets to Luna i-Monitoring. In connection with these transactions, IHS Energy Group agreed to pay the following amounts: $2.0 million in total working capital contributed to Luna i-Monitoring during the five years subsequent to the agreement; $300 thousand to Luna i-Monitoring's creditors; $400 thousand to us in consideration for our transfer and license of intellectual property rights to IHS Energy Innovations; $100 thousand to us in consideration for our equity interest in Luna i-Monitoring; and $200 thousand to the other equityholders for their interests in Luna i-Monitoring. In addition, IHS Energy Group agreed to pay up to an aggregate of $6.5 million to the other equityholders and, following payment of the first $0.9 million of this amount, up to an aggregate of $2.5 million to us, based on a percentage of Luna i-Monitoring's sales from December 1, 2003 through November 30, 2008. As of March 31, 2006, the other equityholders of Luna i-Monitoring have received $82 thousand in aggregate additional consideration based on $773 thousand in Luna i-Monitoring sales since December 1, 2003. We have not received any additional consideration to date other than the $664 thousand that was paid at the date of the sale. In addition, we will not receive any additional consideration from Luna i-Monitoring unless aggregate Luna i-Monitoring product sales exceed $8.6 million prior to November 30, 2008, which amount would be inconsistent with historical sales to date. As a result, we do not anticipate that the amounts, if any, we may receive in the future from Luna i-Monitoring will be material to our business.

Management's discussion and analysis of financial condition and results of operations

In December 2003, we entered into a product development agreement between our Luna Analytics, Inc. subsidiary and a biotechnology company. In connection with this arrangement, the biotechnology company agreed to pay the following amounts: $2.0 million contributed in working capital to Luna Analytics in 2004; $1.0 million to us, which we recognized as license revenues over the collaboration period from December 2003 to December 2004; and up to an aggregate of $6.0 million to us upon the achievement of certain milestones. We are entitled to receive certain payments in connection with sales of Luna Analytics products through December 2013. The aforementioned biotechnology company terminated its product development work as provided by the terms of the product development agreement on December 31, 2004. We have not received any payments pursuant to the terms of this agreement, and, as a result of the termination of the product development work, we do not currently expect to receive any payments in the future.

In June 2005, Luna Technologies entered into a Joint Cooperation Agreement with Luna Energy. Under this agreement, both parties have agreed to cooperate to develop a fiber optic sensing system product and have agreed to contribute materials, intellectual property, personnel and other resources to the development effort. Upon successful completion of product development, Luna Energy will receive a license to certain of Luna Technologies' intellectual property and will be required beginning in 2007 and continuing through December 31, 2017 to make payments to Luna Technologies with respect to revenues derived from products sold that utilize this intellectual property. As of March 31, 2006, Luna Energy had not yet sold products that would entitle Luna Technologies to royalty payments under this joint cooperation agreement, Luna Technologies had received aggregate development milestone payments of $305 thousand as of that date under this agreement and is entitled to receive additional development milestone payments of up to $120 thousand in the aggregate, subject to the satisfaction of certain conditions. Luna Technologies also has the right to receive royalty payments from sales of products in the future. The license of certain of the intellectual property from Luna Technologies to Luna Energy shall be an exclusive license if Luna Energy makes certain minimum royalty payments of $420 thousand in the aggregate between 2007 and 2017, and shall be a non-exclusive license if Luna Energy fails to make these minimum royalty payments. Either party has the right to terminate this agreement during the development term (which, unless extended by mutual agreement of the parties, will expire June 6, 2006) upon a provision of advance written notice to the other party. However, if either party terminates the agreement for convenience or failure to meet certain development milestones, the terminating party may be required to grant license rights to the non-terminating party, including, where Luna Technologies is the terminating party, certain non-exclusive and certain exclusive rights with respect to intellectual property of Luna Technologies required to complete the development effort, and where Luna Energy is the terminating party, non-exclusive commercialization rights with respect to certain intellectual property of Luna Energy. Since December 2004, we have not held an ownership interest in Luna Energy. Luna Technologies continues to operate as our Luna Technologies Division after we acquired that entity in September 2005.

In connection with becoming a public company, we have and will incur significant additional expenses such as audit fees, professional fees, increased directors' and officers' insurance, advisory board and board of directors compensation, and expenses related to hiring additional personnel and expanding our administrative functions. Many of these expenses were not incurred by us in prior periods. We began to incur some of these expenses during the nine-month period ended March 31, 2006, and we expect that these expenses will continue to increase. In addition, upon receiving the net proceeds from our initial public offering, we intend to implement a strategy for expansion that will significantly increase our operating expenses and will likely create substantial losses. We incurred consolidated net losses of approximately $2.0 million and $1.9 million for the year ended December 31, 2005 and the three months ended March 31, 2006, respectively. We expect to continue to incur significant additional expenses as we expand our business, including increased expenses for research and development, sales and marketing, manufacturing, finance and accounting personnel and expenses associated with being a public company. We may also grow our business in part through acquisitions of additional companies and complementary technologies which could cause us to incur greater than anticipated transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we expect that we may likely continue to incur losses for the foreseeable future, and these losses could be substantial.

Description of Our Revenues, Costs and Expenses

Revenues

We generate revenues from contract research, product sales and license payments. We derive contract research revenues from providing research and development services to third parties, including government entities, academic institutions and corporations, and from achieving milestones established by some of these contracts and in collaboration agreements. In general, we complete contracted research over periods ranging from six months to three years, and recognize these revenues over the life of the contract as costs are incurred or upon the achievement of certain milestones built into the contracts. Our product revenues reflect amounts that we receive from sales of our products and currently represent a small portion of our total revenues. Our license revenues comprise up-front license fees paid to us in connection with licenses or sublicenses of certain patents and other intellectual property as well as royalties, which currently represent an insignificant portion of our license revenues.

Cost of Revenues

Cost of revenues associated with contract research revenues consists of research contract costs, including direct labor, amounts paid to subcontractors and overhead allocated to contract research activities.

Cost of revenues associated with product sales and license revenues consists of license fees for use of certain technologies; product manufacturing costs including all direct material and direct labor costs; amounts paid to our contract manufacturers; manufacturing, shipping and handling; provisions for product warranty; and inventory obsolescence, as well as overhead allocated to these activities. Product manufacturing activity is not yet a significant cost element due to our relatively low product sales activity in comparison with our other activities.

Operating Expense

Operating expense consists of selling, general and administrative expenses, as well as expenses related to research and development, depreciation of fixed assets and amortization of intangible assets. These expenses also include: compensation for employees in executive and operational functions; facilities costs; professional fees; salaries, commissions, travel expense and related benefits of personnel engaged in sales, product management and marketing activities; costs of marketing programs and promotional materials; salaries, bonuses and related benefits of personnel engaged in our own research and development beyond the scope and activities of our Contract Research Group; product development activities not covered by contracted research; and overhead costs related to these activities.

After completion of this offering, we anticipate our operating expenses will increase due to increased administrative costs for insurance, professional fees, external reporting requirements, Sarbanes-Oxley compliance and investor relations activities associated with operating as a publicly-traded company. These increases will also include the hiring of additional personnel.

Interest Expense

Interest expense historically related primarily to interest we paid under our senior secured revolving credit facility. As of March 31, 2006, there was no amount outstanding on our credit facility, and we do not expect to draw on that facility in the near term. Beginning the last week of 2005, interest expense includes interest accrued on the outstanding aggregate principal of the senior convertible promissory notes issued to Carilion Health System on December 30, 2005.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or judgments. While our significant accounting policies are described in more detail in the notes to our consolidated financial statements included in this prospectus, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Management's discussion and analysis of financial condition and results of operations

In the selection of our critical accounting policies, the objective is to properly reflect our financial position and results of operations for each reporting period in a consistent manner that can be understood by the reader of our financial statements. Our accounting policies and procedures are explained in note 1 of the notes to the consolidated financial statements contained elsewhere in this prospectus. We have identified the following as the most critical accounting policies which may have a significant effect on our reported financial results.

Contract Research Revenues

We recognize revenue when a contract has been executed, the contract price is fixed and determinable, delivery of services or products has occurred, and collectibility of the contract price is considered probable and can be reasonably estimated. Revenue is earned under cost reimbursable, time and materials and fixed price contracts. Direct contract costs are expensed as incurred.

Under cost reimbursable contracts, we are reimbursed for allowable costs, and paid a fixed fee. Revenues on cost reimbursable contracts are recognized as costs are incurred plus an estimate of applicable fees earned. We consider fixed fees under cost reimbursable contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Revenue on time and materials contracts are recognized based on direct labor hours expended at contract billing rates and adding other billable direct costs.

Fixed price contracts may include either a product delivery or specific service performance throughout a period. For fixed price contracts that are based on the proportionate performance method and involve a specified number of deliverables, we recognize revenue based on the proportion of the cost of the deliverables compared to the cost of the deliverables required by the contract. For fixed price contracts that provide for the development and delivery of a specific prototype or product, revenues are recognized on under the percentage of completion method in accordance with Statement of Position (SOP) 81-1 *Accounting for Performance of Construction-Type and Certain Production-Type Contract*.

Our contracts with agencies of the government are subject to periodic funding by the respective contracting agency. Funding for a contract may be provided in full at inception of the contract or ratably throughout the contract as the services are provided. In evaluating the probability of funding for purposes of assessing collectibility of the contract price, we consider our previous experiences with our customers, communications with our customers regarding funding status, and our knowledge of available funding for the contract or program. If funding is not assessed as probable, revenue recognition is deferred until realization is deemed probable.

Contract revenue recognition inherently involves estimation, including the contemplated level of effort to accomplish the tasks under the contract, the cost of the effort, and an ongoing assessment of progress toward completing the contract. From time to time, as part of the normal management processes, facts develop that require revisions to estimated total costs or revenues expected. The cumulative impact of any revisions to estimates and the full impact of anticipated losses on any type of contract are recognized in the period in which they become known.

The underlying bases for estimating our contract research revenues are measurable expenses such as labor, subcontractor costs and materials, the cost data of which is updated on a regular basis for purposes of preparing our cost estimates. Our research contracts generally have a period of performance of six to 18 months. Accordingly, our estimates of contract costs have historically been consistent with actual results. Revisions in these estimates between accounting periods to reflect changing facts and circumstances have not had a material impact on our operating results, and we do not expect future changes in these estimates to be material.

The allowability of certain costs under government contracts is subject to audit by the government. Certain indirect costs are charged to contracts using provisional or estimated indirect rates, which are subject to later revision based on government audits of those costs. Management is of the opinion that costs subsequently disallowed, if any, would not be significant.

Deferred Taxation

We estimate our tax liability through calculations we perform for the determination of our current tax liability, together with assessing temporary differences resulting from the different treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are recorded on our balance sheet. Management then assesses the likelihood that deferred tax assets will be recovered in future periods. In assessing the need for a valuation allowance against the net deferred tax asset, we consider factors such as future reversals of existing taxable temporary difference, taxable income in prior carryback years, if carryback is permitted under the tax law, tax planning strategies and future taxable income exclusive of reversing temporary differences and carryforwards. To the extent that we cannot conclude that it is more likely than not that the benefit of such assets will be realized, we establish a valuation allowance to adjust the net carrying value of such assets.

As we assess the sufficiency of future taxable income and other factors noted above in future periods, our estimate of the required valuation allowance may change, which could have a material impact on the accounting period(s) in which the change occurs.

Stock-Based Compensation

Prior to January 1, 2006, we recorded compensation expense under the intrinsic value method, pursuant to APB 25 and related interpretations, whenever the exercise price of an option grant was less than the fair market value of our common stock on the grant date. We recorded compensation expense whenever modified the terms of an option grant or directly or indirectly repriced outstanding options. Our Board of Directors is responsible for determining the fair value of our common stock for the purpose of establishing exercise prices for our option grants. Our Board has relied upon Market Place Transaction History as well as the assistance from independent valuation specialists for purposes of estimating the fair value of our common stock.

In August 2003, our board of directors authorized an option exchange program whereby holders of options for Class A Common Stock were given the opportunity to exchange their options for options to purchase Class B Common Stock on a one-for-one basis. The new options grants were immediately vested on September 29, 2003, the date of exchange, had an exercise price of $0.35 and a life of 10 years from the date of grant. All of the outstanding options issued under this exchange program had exercise prices in excess of the fair value of our Class A Common Stock as of the date of the exchange. As such, the option exchange was accounted for as a repricing in accordance with FIN 44. We are required to apply variable plan accounting to the replacement grant and measure compensation based on the change in fair value of the common stock at each reporting period. A total of 27,107 shares subject to such options exchanged under this program remain outstanding as of March 31, 2006. We will continue to incur a non-cash charge or benefit each quarter based upon the increase or decrease in fair value of our common stock, until such options are exercised, forfeited or expire. Assuming a fair value of $12.00 per share for our common stock, the mid-point of the range of the estimated offering price in this offering, this non-cash charge would be $280,554 for the quarter ending March 31, 2006, provided that this amount could increase or decrease subject to the actual trading price of our common stock.

The fair value of common stock for options granted was estimated by the Compensation Committee of our Board of Directors, applying a number of commonly accepted valuation methodologies. The Board of Directors also considered valuations performed by an independent third-party valuation specialist.

We currently anticipate granting stock options to our officers, directors and employees subsequent to the consummation of this offering. The exercise price of the options will be equal to the price per share to the public at the time of the grant.

Effective January 1, 2006, we adopted Financial Accounting Standards No. 123R, *Share Based Payment* (SFAS No. 123R) using the modified prospective transition method. Under this transition method, our financial statements for periods prior to

January 1, 2006 will not be restated. However, new awards and awards modified, repurchased or cancelled after January 1, 2006 will trigger compensation expense based on the fair value of the stock option as determined by an option pricing model. We will amortize stock-based compensation for such awards on a straight-line method over the related service period of the awards taking into account the effects of the employees' expected exercise and post-vesting employment termination behavior.

Results of Operations

Three Months Ended March 31, 2006 Compared to Three Months Ended March 31, 2005

Revenues

Total revenues increased 38.7% to $4.5 million for the three months ended March 31, 2006 from $3.3 million for the three months ended March 31, 2005. The increase was due in part to increased product sales related to our Luna Technologies Division, which was not acquired until September 30, 2005 and thus was not yet reflected in the results of our consolidated operations for the first quarter of 2005. Our acquisition of Luna Technologies and the subsequent product sales by that division is a key element of our strategic transition towards increased product sales revenues. We generated approximately $595 thousand in product sales in the first quarter of 2006 as compared with no such product sales revenues in the first quarter of 2005.

Growth in our contract research revenues also contributed to our overall revenues growth for the first quarter of 2006 as compared with the first quarter of 2005. Contract research revenues increased 20.4% to $3.9 million for the three months ended March 31, 2006 from $3.3 million for the same period in 2005.

Cost of Revenues

Cost of revenues increased 18.8% to $3.2 million for the three months ended March 31, 2006 from $2.7 million for the three months ended March 31, 2005. This increase was consistent with our overall increase in revenues. The main component of this overall increase was the inclusion of product sales costs due to the operations of our Luna Technologies Division during the first quarter of 2006; these costs were not previously a component of our operations in the first quarter of 2005. New product sales costs accounted for approximately $266 thousand, or over half, of the overall increase in costs of revenues.

Contract research costs increased 8.9% to $2.9 million for the three months ended March 31, 2006 from $2.7 million in the same period in 2005. This increase was consistent with but slightly less than the increase in our contract research revenues.

Despite the inclusion of product sales costs in our cost of revenues in the first quarter of 2006, our overall gross margin improved as compared with the first quarter of 2005. Our overall gross margin during the three months ended March 31, 2006 was 29.7%, which is an increase from 18.0% during the same period in 2005. During the three months ended March 31, 2006, contract research activity returned a gross margin of approximately 25.8%, while product sales activity returned an even-greater gross margin of 55.3%. Our objective of seeking greater relative product sales is based on the goal of achieving higher margins to improve our overall profitability.

Operating Expense

Operating expense increased 266.3% to $3.2 million for the three months ended March 31, 2006 from $882 thousand for the corresponding quarter in 2005. Much of the increase in the first quarter of 2006 as compared to the same period in 2005 was due to significant indirect expenses in connection with our general restructuring towards increasing our product sales capabilities as well as in anticipation of our initial public offering and the subsequent obligations as a public company. Consistent with our strategy of building a growing portfolio of businesses and products, we were and are actively hiring additional staff, incurring professional fees and implementing various internal changes to prepare and strengthen our existing

infrastructure and management resources during and after our transition to being a public company. With the completion of our financing round with Carilion Health System in December 2005, we gained the necessary resources to begin implementing many of these important changes to our business. We expect that our operating expenses will remain at these increased levels and perhaps increase further in the coming months due to our continued growth and development as well as due to the indirect costs of our initial public offering and compliance with the various reporting requirements of being a publicly-traded company.

Another significant factor in the increase in our operating expense between the first quarter of 2005 and the first quarter in 2006 was our adoption of SFAS No. 123R, which required us to record expense related to the increase in fair market value of options outstanding. We recorded share-based compensation expense of approximately $195 thousand during the three months ended March 31, 2006, part of which is the result of adoption of this new accounting policy.

Other Income (Expense)

The increase in other income (expense) was a result of our acquisition of the remaining outstanding equity of Luna Technologies as of September 30, 2005. Subsequent to that date, the operating results of Luna Technologies was consolidated with our operating results, including during the three months ended March 31, 2006. During the three months ended March 31, 2005, our interest in the losses of Luna Technologies was reflected as investment losses, a component of other income (expense), consistent with our accounting policies.

Net interest income (expense) increased from a net expense during the three months ended March 31, 2005 to net income during the same period in 2006. Nearly all of the interest expense during the three months ended March 31, 2006 was incurred on our senior convertible promissory notes issued to Carilion Health System on December 30, 2005 that were not previously outstanding during the first quarter of 2005. These notes have an aggregate outstanding principal of approximately $5.0 million and accrue simple interest at a rate of 6.0% per year. During the three month period ended March 31, 2006, interest expense on such notes was approximately $75 thousand. At the same time, the proceeds from the issuance of the senior convertible promissory notes and the proceeds from the sale of our Class C Common Stock received at the beginning of the first quarter in 2006 provided a cash surplus for us. These proceeds resulted in our holding greater interest-bearing balances in the three months ended March 31, 2006 than during the same period in 2005. Finally, during the first quarter of 2006, we did not have an outstanding balance on our line of credit, which otherwise permits us to borrow up to $2.5 million. As such, we did not incur interest expense on that line of credit in 2006 unlike in 2005, during which we had an outstanding balance throughout the quarter at an overall borrowing rate greater than that of the Carilion Health System notes. We do not anticipate a need to draw on that line of credit in the near term given the funds raised from our August and December 2005 financing rounds with Carilion Health System, as well as the generation of proceeds from this offering.

Year Ended December 31, 2005 Compared to Year Ended December 31, 2004

Revenues

Total revenues decreased 27.2% to $16.5 million for the year ended December 31, 2005 from $22.6 million for the year ended December 31, 2004. The decrease was a result of the absence of license revenues relating to our arrangement with Baker Hughes. The satisfaction of our right to receive certain milestone payouts in connection with that arrangement and the sale of our interest in Luna Energy to Baker Hughes in December 2004 represents the completion of our licensing arrangement with Baker Hughes. The decrease in license revenues was offset in part by an increase in contract revenues during the year ended December 31, 2005 as compared with the same period in 2004. During 2005, consistent with our business plan, we did not receive significant license payments for our technologies, and we do not expect license revenues comparable to those in 2002, 2003 and 2004 in the near term. We do, however, expect that product revenues will increase in the near term as a result of our acquisition of Luna Technologies on September 30, 2005. The acquisition of Luna Technologies was consistent with our strategy to transition our revenues mix from contract research revenues to product sales and license revenues. We generated approximately $1.1 million in product sales in 2005, virtually all of which were derived from operations of Luna Technologies subsequent to our acquisition.

Although total revenues decreased due to the cessation of revenues from the Luna Energy joint venture in December 2004, contract research revenues increased 11.2% to $15.4 million for the year ended December 31, 2005 from $13.8 million for the same period in 2004. This increase reflects our continued short-term commitment to steady and consistent growth of our contract research business while, at the same time, we seek to increase our product sales both in absolute terms and as a proportion of total revenues.

Cost of Revenues

Cost of revenues decreased 6.5% to $13.0 million for the year ended December 31, 2005 from $13.9 million for the year ended December 31, 2004. Consistent with our decrease in revenues, the decline was primarily driven by the lack of licensing revenues as our licensing arrangement with Baker Hughes was completed at the end of 2004.

Contract research cost of revenues increased 14.3% to $12.6 million for the year ended December 31, 2005 from $11.0 million in the same period in 2004. This increase was consistent with a corresponding increase in contract research revenues.

Cost of product sales and license cost decreased 85.8% to $410 thousand for the year ended December 31, 2005 from $2.9 million in the same period in 2004. This decrease was due to the cessation of license cost activity in 2005 with the completion of the Luna Energy joint venture in December 2004. Nearly all of the costs in this area incurred in 2005 were cost of product sales, which were driven by our increased product sales through our Luna Technologies Division beginning in the fourth quarter of 2005.

Operating Expense

Operating expense increased 43.3% to $6.0 million for the year ended December 31, 2005 from $4.2 million for the year ended December 31, 2004. The increase in operating expense was primarily attributable to our acquisition of Luna Technologies and the related indirect transaction and integration costs. Additionally, we incurred significant expenses in connection with our planned initial public offering that are not direct costs and are not otherwise capitalizable. These include hiring increased staff, professional fees and various other internal changes designed to supplement and enhance our existing infrastructure and human resources. The activity in 2005 is in line with our strategy of building a growing portfolio of businesses and products. We expect that our operating expenses will continue to increase in the coming months due to the indirect costs of our initial public offering and continued compliance with the various reporting requirements of being a publicly-traded company.

Other Income (Expense)

The decrease in other expense was primarily a result of a decrease in losses from equity method investees. We disposed of our investment in Luna Energy in December 2004 and acquired Luna Technologies in September 2005. Our share of losses from Luna Technologies prior to September 30, 2005 was nominal.

Interest expense decreased from 2004 as a result of paying down the line of credit in 2003. Our line of credit permits us to borrow up to $2.5 million. We do not anticipate a need to draw on the line of credit in the near term given the funds raised from our August and December 2005 financing rounds with Carilion Health System, as well as the generation of proceeds from this offering. We did not recognize substantial interest expense related to the senior convertible promissory notes issued to Carilion Health System on December 30, 2005 as such notes were only outstanding for one day during the period.

Management's discussion and analysis of financial condition and results of operations

Year Ended December 31, 2004 Compared to Year Ended December 31, 2003

Revenues

Total revenues increased 28.4% to $22.6 million in 2004 from $17.6 million in 2003. This increase was largely driven by growth in our volume of research contracts. Contract research revenues increased 32.1% to $13.8 million in 2004 as compared with $10.4 million in 2003. During 2003, we undertook an initiative to improve our ability to obtain additional contracts by devoting increased resources to support our Contract Research Group. Much of the result from these efforts in 2003 is reflected in our 2004 revenues because of a lengthy bidding process and because our contract research may take several months and sometimes years to complete. The length of our contract research efforts under a typical contract ranges from six months to three years. In addition to the growth of our existing contract research, we also experienced an increase in research contract volume in connection with the creation of our Luna nanoWorks Division. Contracts under our Luna nanoWorks Division accounted for approximately $337 thousand of the overall increase in our contract research revenues, while growth of our existing contract research business accounted for the remaining $3.1 million of such increase.

Product sales and license revenues also contributed significantly to our total revenues growth during this period. Product sales and license revenues increased 21.0% to $8.8 million in 2004 from $7.2 million in 2003. Much of this increase is the result of achieving milestones under the Luna Energy license agreement. As a result of the sale of our remaining interest in Luna Energy to Baker Hughes in December 2004, we do not expect license revenues to be significant in the near term. Revenues related to product sales represent a small proportion of our total revenues in 2004 and 2003. During that period, we continued to remain focused on our contract research business.

Cost of Revenues

Cost of revenues increased 32.1% to $13.9 million in 2004 from $10.5 million in 2003, with most of the increase directly attributable to increased volume of research contracts. Cost of contract research revenues, however, increased at a slightly lower rate of 22.7%, from costs of $8.9 million in 2003 to costs of $11.0 million in 2004. As our contract research volume increased, the costs related to these contracts also increased. However, as the volume of contracts increase, we also benefit from economies of scale. Accordingly, our costs of contract research for this period increased at a lower rate than the corresponding revenue growth.

In addition to our increased contract research activity, we also incurred increased license costs due to certain bonuses accrued and paid in 2004 to contributors and providers of intellectual property related to the Luna Energy joint venture. In December 2004, we sold our remaining interest in Luna Energy to Baker Hughes. In connection with that sale and the receipt of payments for achievement of certain milestones in connection with that venture, we paid bonuses to the technology partners from whom we licensed part of the intellectual property for the venture. Accordingly, the cost of our product sales and license revenues increased 86.7% to $2.9 million in 2004 as compared with $1.5 million in 2003. Although this increase outpaced the percentage increase in license and royalty revenues between 2003 and 2004, it is consistent with the overall growth in license and royalty revenues between 2002 and 2004, during which period the Luna Energy joint venture took place.

Operating Expense

Operating expenses decreased 13.7% to $4.2 million in 2004 from $4.9 million in 2003 as we were able to increase revenues year-over-year with no significant changes in our operating infrastructure as well as incurring fewer costs related to outside transactions. In 2003, we sold our interest in Luna i-Monitoring. No similar transactions occurred in 2004. Additionally, as our operations have become more mature, we have been able to substantially reduce operating expenses due to the increased use of long-term contracts and leases as well as to our improved ability to predict the needs of our operations.

Other Income (expense)

Our share of losses from equity method investees increased approximately $107 thousand as a result of advances made to such investees during the year which provided us basis to record such cases.

Interest expense remained consistent for the years ended December 31, 2004 and 2003.

Liquidity and Capital Resources

Prior to August 2005, our primary source of liquidity had been cash provided by operations and divestitures of certain assets and businesses. In August 2005, we completed our first outside equity financing and raised $7.0 million through an equity investment by Carilion Health System. Carilion Health System invested an additional $8.0 million in December 2005 in the form of $5.0 million aggregate principal amount of senior convertible promissory notes and $3.0 million in additional equity. Our principal uses of cash have been to fund our expansion, including facilities, personnel, working capital and other capital expenditures.

We have a $2.5 million senior secured revolving credit facility with First National Bank that is collateralized by a security interest in substantially all of our assets. The interest rate on borrowings under our secured revolving credit facility is equal to the prime rate, limited to no less than 6.0% and no greater than 10.0% per annum, and the interest accrued is payable monthly. Under the terms of the senior secured revolving credit facility, the outstanding principal is payable in full on demand or at maturity on May 30, 2006. The senior secured revolving credit facility contains covenants which require us to maintain $1.0 to $2.0 million in liquidity depending on our outstanding balance. Additionally, without First National Bank's prior approval, we may not make a direct loan to an affiliate or subsidiary of ours exceeding $500 thousand annually, guaranty the debt of our affiliate or subsidiary or incur debt in excess of $200 thousand non-First National Bank debt annually. Finally, we are obligated to continue to provide First National Bank an assignment of life insurance in a minimum amount of $1.0 million on the life of Kent A. Murphy, covering all of our indebtedness to First National Bank. As of December 31, 2005, we had repaid the outstanding balance on our secured revolving credit facility, and we do not anticipate a need to draw on that line of credit in the near term given the funds raised from our August and December 2005 financing rounds with Carilion Health System as well as the proceeds from this offering. With the exception of our obligations under our senior secured revolving credit facility and our capital lease, we have no other debt outstanding.

Discussion of Cash Flows

Recent Activity

During the three months ended March 31, 2006, we used approximately $2.1 million of net cash from operations. This was a substantial change over the activity in the corresponding quarter of 2005. Most of this change was due to the addition of operations from the Luna Technologies Division, which was not reflected in the cash flows from operations in the first quarter of 2005, and the general increase in cash outflows that resulted from our expenditures increase to achieve a greater relative amount of product sales and our preparation to become a public company.

Cash used in investing activities for the three months ended March 31, 2006 related primarily to the purchase of property and equipment and legal fees associated with securing patent rights to certain technology. Our overall cash used in investing activities slightly declined in the first quarter of 2006 as compared with the first quarter in 2005. This was due mostly to the recent addition of our Luna Technologies Division, which was acquired in a non-cash transaction. The acquisition of Luna Technologies represented a substantial increase in our capacity that slightly reduced our need for continued investment growth in the first quarter of 2006. Upon completion of this offering, we expect an increase in net cash used in investing activities as we will have the necessary resources to begin and complete a number of longer-term investments in our growth.

Cash flows from financing activities for the three months ended March 31, 2006 were very limited. During the year ended December 31, 2005, we received proceeds of approximately $10.0 million from two equity financing arrangements with

Carilion Health System, as well as an additional $5.0 million from the issuance of senior convertible promissory notes to Carilion Health System. These investments represented our first major round of venture financing. As a result of our increased cash position through that financing at the end of 2005, we did not need to draw additional financing from our line of credit or other sources in the first quarter in 2006 as we had previously done in the first quarter of 2005.

At March 31, 2006, total cash and cash equivalents were approximately $10.1 million. We believe that our current cash on hand, cash available under our line of credit agreement and the proceeds we expect to generate from our initial public offering will be sufficient to fund operations for the next 12 months.

Significant Liquidity Events

In March 2004, we received a grant of $900 thousand from the city of Danville, Virginia under a Grant Agreement to support the expansion of economic and commercial growth within the city. Under the Grant Agreement, we agreed to locate a nanomaterials manufacturing and research facility and maintain its operations in Danville until March 25, 2009. We agreed under the Grant Agreement to invest at least $5.2 million in capital equipment expenditures and $1.2 million in certain facilities by September 25, 2006 and to maintain such investments in our Danville facility until March 25, 2009. We also agreed to create by September 25, 2006 at least 54 new full-time jobs at the Danville facility at an average annual wage of at least $39 thousand plus benefits, and to maintain these jobs at such facility until March 25, 2009. If we fail to make these capital expenditures and create these jobs by September 25, 2006, we will be obligated to repay the city all or a portion of the funds based on a formula of the pro rata shortfall of such expenditures and jobs falling below such required levels. These contractual requirements will restrict the use of significant assets and could obligate us to an annual payroll obligation exceeding $2.0 million until March 25, 2009. To the extent such hiring results in salaries in excess of the required minimum wages, our annual payroll obligation could be substantially greater than $2.0 million. At this time, we do not anticipate that we will satisfy the investment and hiring targets of the grant prior to September 25, 2006, and we expect that we may have to return some or all of the grant proceeds. We currently have classified the full amount of the grant as a liability on our balance sheet in anticipation of returning the funds.

In August 2005, we entered into a Class C Common Stock financing agreement with Carilion Health System, or Carilion, whereby Carilion committed to providing approximately $15.0 million in equity financing in three tranches subject to certain conditions outlined in the agreement. In connection with this transaction, Carilion purchased shares of our Class C Common Stock for an aggregate purchase price of $7.0 million. On December 30, 2005, we reached an agreement with Carilion to terminate the August 2005 financing agreement and enter into a new Class C Common Stock financing agreement. Under the new agreement, Carilion provided $5.0 million in exchange for five $1.0 million senior convertible promissory notes, and $3.0 million in exchange for shares of Class C Common Stock. The notes are convertible into Class C Common Stock at a rate of $4.69159 per share and bear interest at 6% per annum and mature on December 30, 2009. As of March 31, 2006, we had received the full $15.0 million in proceeds from the issuance of such notes and the sale of our Class C Common Stock pursuant to our financing agreements with Carilion Health System.

Summary of Contractual Obligations

We lease our facilities in Blacksburg, Charlottesville, Danville, Hampton, McLean and Roanoke, Virginia under operating leases that expire between February 2006 and August 2011 or under a month-to-month arrangement. Upon expiration of the leases, we may exercise certain renewal options as specified in the leases.

We also lease certain computer equipment and software under a capital lease agreement that expires in February 2008. The assets subject to these obligations are included in property and equipment on our consolidated balance sheet.

In March 2006, our Luna Technologies Division executed a non-cancellable, non-reschedulable $1.2 million purchase order for multiple shipments of tunable lasers to be delivered over an 18-month period beginning in July 2006.

Set forth below is information concerning our known contractual obligations as of December 31, 2005 that are fixed and determinable. Except for facility leases, as of December 31, 2005, we did not have contractual obligations that extended beyond May 2009.

	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-term debt obligations*	$6,425,335	$—	$225,335	$6,200,000	$—
Capital equipment and software lease	226,285	105,947	120,338	—	—
Operating facility leases	3,475,060	650,469	1,982,283	502,721	339,587
Purchase order obligation	1,230,000	1,230,000	—	—	—
Deferred Credits:					
City of Danville grant**	900,000	900,000	—	—	—
Total	$12,256,680	$2,886,416	$2,327,956	$6,702,721	$ 339,587

* Long-term debt obligations consist of senior convertible promissory notes of aggregate principal amount of $5 million and interest thereon held by Carilion Health System and a secured promissory note of aggregate principal amount of $214,955 and interest thereon held by the Virginia Tech Foundation.

** In March 2004, we received a $900 thousand grant from the City of Danville, Virginia to be used for the expansion of economic and commercial growth within the City. Specifically, $450 thousand of the grant will be used to offset certain capital expenditures for leasehold improvements being made at our Danville facility, and the remaining $450 thousand is to be used for our creation of new jobs.

The grant stipulates that we must make estimated capital expenditures of at least $6,409,000 and create 54 new full time jobs at our Danville facility, at an average wage of at least $39 thousand plus benefits within 30 months of the award, and then maintain such employment levels for an additional 30 months. We could be required to repay the grant funds on a pro-rata basis should we fail to satisfy the conditions stipulated in this agreement by September 25, 2006 at the earliest. As such, since we have not yet met the stipulations of the grant, we have included the $900 thousand in deferred credits in the accompanying consolidated balance sheets as of December 31, 2004 and 2005.

Quantitative and Qualitative Disclosures about Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. We do not hold or issue financial instruments for trading purposes or have any derivative financial instruments. To date, all payments made under our research contracts are denominated in United States dollars. Our exposure to market risk is limited to interest rate fluctuations due to changes in the general level of United States interest rates, particularly because the interest rate on our line of credit is variable between 6.0% and 10.0% based on the current prime rate of interest. As of March 31, 2006, our cash reserves were maintained in money market investment accounts and were not exposed to material market risks.

Business

Overview

We research, develop and commercialize innovative technologies in two primary areas: molecular technology solutions and sensing solutions. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative products to market. We identify technologies that can fulfill large and unmet market needs and then take these technologies from the applied research stage through commercialization in our two areas of focus:

- **Molecular Technology Solutions.** We develop molecular technology solutions, which are substances and materials with enhanced performance characteristics obtained by harnessing chemical, physical and biological properties of novel combinations of matter. We focus on substances and materials at the molecular level, including nanomaterials, which are materials whose size can be measured in nanometers, or one billionth of a meter. Examples of our solutions in this area include flame retardants, protective coatings, and materials that can help physicians identify diseased tissues using magnetic resonance imaging, or MRI.
- **Sensing Solutions.** We develop integrated sensing solutions, which are products that combine sensors, software and hardware to measure, monitor and control chemical, physical and biological properties. We have particular expertise in optical, acoustic and wireless technologies. Examples of our solutions in this area include medical monitoring products and industrial instrumentation for aerospace, energy generation and distribution, and defense applications.

We have a successful track record in executing our market-driven business model. Since our inception, we have developed more than a dozen products serving various industries including energy, telecommunications, life sciences and defense. We have created five companies in our areas of focus, sold two of them to industry leaders in their fields, raised private capital for two of our companies, formed one joint venture and entered into four licensing agreements.

Our aggregate revenues from January 1, 2003 through March 31, 2006 were $61.1 million, and our aggregate cost of revenues during that same period were $40.5 million. However, we had a net losses of $2.0 million and $1.9 million for the year ended December 31, 2005 and the three months ended March 31, 2006, respectively, and we expect to incur significant additional expenses as we expand our business. We also expect significantly greater losses for the foreseeable future primarily due to increased expenditures related to our nanomaterial and medical device product development efforts.

Our company is organized into three main groups: our Contract Research Group, our Commercialization Strategy Group and our Products Group. These groups work closely together to turn ideas into products.

Contract Research Group. Our Contract Research Group provides applied research to customers in our areas of focus. Our engineers and scientists collaborate with our network of government, academic and industry experts to identify technologies and ideas with promising market potential. After these promising technologies are identified, our Contract Research Group competes to win fee-for-service contracts from government agencies and industrial clients who seek innovative solutions to practical problems that require new technology. We focus primarily on contract research opportunities where we can retain partial or full rights to the intellectual property developed, and generally obtain full funding of the costs of contracts we undertake from our customers. This approach allows us to cover the costs of early-stage technology development with contract research revenues. Our contract research revenues grew from $10.4 million in 2003 to $15.4 million in 2005, representing 48.5% total growth over that period, while our contract research costs increased from $8.9 million in 2003 to $12.6 million in 2005, representing a total increase of 40.3% over that period. These revenues have in general been a growing part of our business from inception, and our Contract Research Group seeks to continually supply our product pipeline with new opportunities.

Commercialization Strategy Group. Our Commercialization Strategy Group works closely with our network of federal and industrial customers to identify new market opportunities for our technologies. After ideas are driven to proof of concept in the

Contract Research Group, our Commercialization Strategy Group develops detailed business plans for commercially viable products. It is at this stage that we first consider investing our own funds to finance the continued development of a product, which is then managed in our Products Group.

Products Group. Our Products Group currently consists of the following three divisions:

- **Luna Advanced Systems Division.** Most new product opportunities that are approved for further development by our management team are initially allocated to our Luna Advanced Systems Division. Products currently managed in this division include medical diagnostic instruments using our innovative ultrasound technologies, non-destructive industrial testing and homeland security devices, remote and secure wireless asset monitoring systems, flame retardants, multi-functional protective coating systems and blast and ballistic resistant materials. We transfer products to existing or new divisions within our Products Group with the resources needed for the successful commercialization of the technology if we determine that a product line is broad enough or that the market opportunity is sufficiently large.
- **Luna nanoWorks Division.** Our Luna nanoWorks Division develops and commercializes innovative products based on nanomaterials made from carbon, or carbon nanomaterials, that have broad potential applications. This division is developing MRI contrast agents, which are materials that can help physicians identify diseased tissues using MRI and that are designed to be potentially safer than, and technically superior to, contrast agents currently on the market. We currently supply nanomaterials to research laboratories and plan to supply proprietary high value-added carbon nanomaterials to customers who manufacture products such as solar cells, strong and light-weight composites and coatings to shield devices from electromagnetic interference.
- **Luna Technologies Division.** Our Luna Technologies Division manufactures and markets test and measurement equipment and integrated sensing solutions. This division's products are used for process and control monitoring in telecommunications, manufacturing, power generation and distribution, down-hole oil and gas production, aerospace, and defense applications. These products have won numerous awards and are sold and distributed throughout North America, Europe, the Middle East and Asia.

We expect that the capital raised in this offering will provide us greater flexibility in funding the commercialization of new technologies and will provide us the opportunity to increase the speed, quality and volume of products that we can develop.

We have knowledge and experience in molecular technology solutions and sensing solutions and, as of March 31, 2006, we owned or had exclusive rights to use 39 issued U.S. patents and 63 additional pending U.S., international and foreign patent applications. As of March 31, 2006, approximately 90 of our 161 employees were directly engaged in research in our Contract Research Group, of whom 31 hold Ph.D.s and 34 hold advanced degrees.

Industry Background and Market Opportunity

Molecular Technology Solutions

Our molecular technology solutions generally utilize advanced materials with enhanced performance characteristics. These materials are produced by harnessing unique chemical, physical and biological properties through novel combinations of matter and include metals, ceramics, nanomaterials, composites and polymers, which are materials made up of smaller, linked building blocks. Nanotechnology, which focuses on manipulating materials at the atomic scale to create advanced materials with novel properties, is itself a broad field and many national governments have made a priority of supporting nanotechnology research and development. According to the National Nanotechnology Initiative, since the inception of the U.S. National Nanotechnology Initiative in 2001, the U.S. government has invested $4 billion to support nanotechnology research and development activities.

Business

In general, advanced materials enable significant improvements in the performance, cost and functionality of existing products and allow the development of products not previously possible. Such materials have potential applications in many industries, including semiconductors, electronics, biotechnology, textiles, alternative energy and defense. Some advanced material products that are currently being developed include: very high density and cost efficient digital memories; smart sensors; pharmaceuticals; drug delivery systems; cost efficient fuel cells, solar cells and light sources; stain resistant textiles; lightweight, high strength composites for civil and military applications; and wear resistant and anti-corrosion coatings for industrial applications.

In 2004, the market sizes of the following advanced material subsectors—coatings and flame retardants—were estimated to be approximately $9.5 billion and $1.6 billion, respectively, according to *Chemical Week*. In 2005, the market sizes of the following advanced material subsectors—ceramics and composites—were estimated to be approximately $2.0 billion and $4.8 billion, respectively, according to Electronics.ca Publications and the *Market Leaders- Cook Composites and Polymers* report .

Sensing Solutions

Our sensing solutions involve the integration of multiple technologies to design, manufacture and commercialize new products. Such products require a broad range of expertise and technical competencies, including research and development, engineering design, software programming and product testing. Our optical, ultrasound and wireless sensing solutions address a wide variety of end markets including defense and military, healthcare, telecommunications, industrial measurement, security applications and consumer electronics. We believe that Homeland Security-related applications are one of the most attractive sensing solutions markets given recent increases in government investment in this area. For example, the research and development budget of the U.S. Department of Defense was expected to reach $70.0 billion in 2005 according to the American Association for the Advancement of Science.

Examples of sensing solutions products include industrial and military sensors to increase equipment operating efficiency, perimeter and impact detection systems, diagnostic systems for telecommunications networks, devices to measure physical properties of materials for medical and industrial applications and secure wireless communication systems.

Many of these end markets represent very large opportunities. For example, in 2004, the market sizes of the following sensing solutions sub-sectors—industrial sensors and electromechanical actuator systems—were estimated to be approximately $4.2 billion and $7.1 billion, respectively, according to *Electronic Business*.

Opportunity to Accelerate the Commercialization of Technology

Technology innovation is a key engine for growth in an increasingly global and competitive marketplace. According to the National Science Foundation, over $312.0 billion was spent in research and development in the United States in 2004 as follows: $93.4 billion by federal agencies, $199.0 billion by the private sector, $11.1 billion by academic institutions and $8.6 billion by not-for-profit organizations.

However, the transition from technology discovery to commercialization is challenging, and government agencies, academic institutions and corporations frequently lack formal processes to enable timely commercialization of technologies in response to marketplace demands. One problem is that research and development is often done in isolation, without input or feedback from the marketplace. In addition, due to the inherent complexity of new technologies, cross-disciplinary and integration issues are often not addressed because researchers, engineers and product developers have very specialized areas of expertise. Moreover, research organizations may be unable to commercialize technologies because their networks may not be broad or deep enough to connect them expeditiously with partners, investors and customers. Development efforts can also fail for a host of other reasons, such as inability to manufacture at commercial scale, unanticipated competition or poorly understood customer needs.

Business

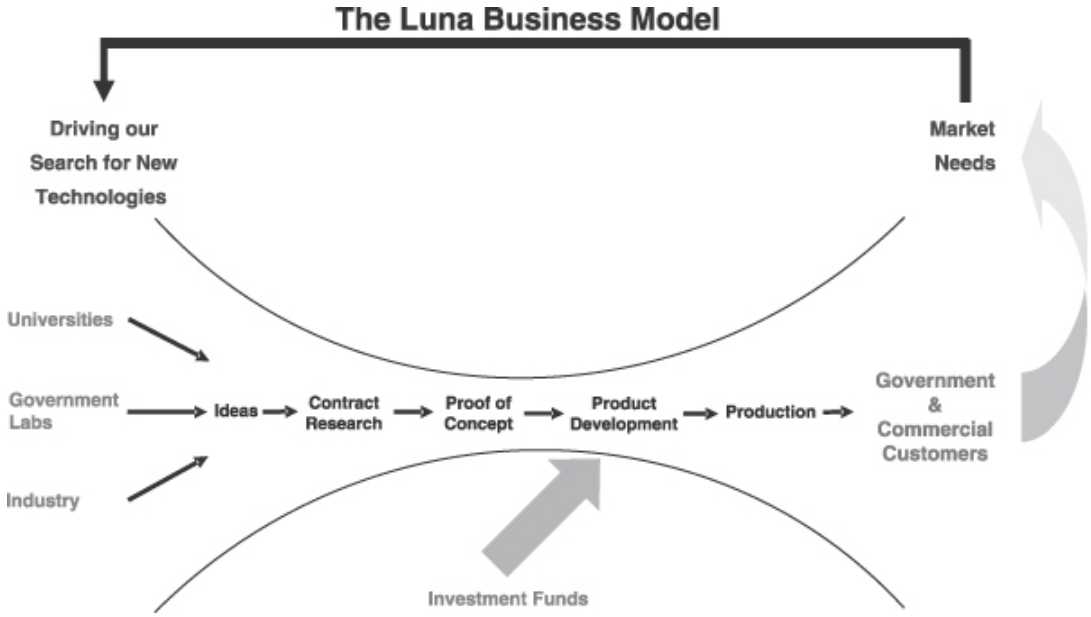
Technology innovation in areas such as molecular technology solutions and sensing solutions is particularly susceptible to these challenges because it requires expertise across a number of technical disciplines, which are often isolated from each other. We have developed a model for technology innovation that addresses these issues and that we believe has the potential to significantly accelerate the creation and commercialization of new technologies.

Our Business Model

We have developed a disciplined and integrated process to accelerate the development and commercialization of innovative technologies. Our business model employs a market-driven approach and provides the infrastructure, resources and know-how throughout the process of developing and commercializing new products. To manage a diverse set of products effectively across a range of development stages, we are organized into three main groups: our Contract Research Group, our Commercialization Strategy Group and our Products Group. These groups work together through all product development stages, including:

- Ø Searching for emerging technologies based on market needs;
- Ø Conducting applied research;
- Ø Developing and commercializing innovative products; and
- Ø Applying proven technologies and products to new market opportunities.

The graphic below illustrates our business model:



The strength of our business model is exemplified by our track record in taking innovative technologies from the applied research stage through product development and ultimately to the creation of independent businesses. For example, we have created five companies in our areas of focus, sold two of them to industry leaders in their fields, raised private capital for two of our companies and formed one joint venture. In addition, we have developed more than a dozen products serving several

industries including energy, telecommunications, life sciences and defense. We describe below three examples of independent businesses that we have created:

- **Luna Analytics, Inc.** In June 1999, we created Luna Analytics to commercialize analytical instruments that improve the assessment of protein interactions. Luna Analytics' devices are being developed to provide advanced disease diagnostics, treatment and drug discovery. We currently own approximately 39% of Luna Analytics.
- **Luna Energy, LLC.** In February 2002, we created Luna Energy to commercialize real-time, state-of-health pipeline monitoring sensors for the oil and gas industry. Luna Energy was acquired in December 2004 by Baker Hughes Oilfield Operations Inc., a leader in oil field services. We no longer have an ownership interest in Luna Energy, but our Luna Technologies Division is entitled to receive payments from Luna Energy in connection with future product sales beginning in 2007.
- **Luna i-Monitoring, Inc. (now IHS i-Monitoring).** In May 2002, we created Luna i-Monitoring to commercialize a suite of highly integrated wireless sensors called iNodes for cost-effective remote monitoring and Internet accessibility for the oil and gas marketplace. Luna i-Monitoring was acquired by IHS Energy, Inc. in October 2003, and therefore we no longer have any ownership interest in Luna i-Monitoring. However, we are entitled to receive payments under a Share Purchase and Asset Transfer Agreement with IHS Energy in connection with future product sales through November 2008. This agreement provides, among other things, that we are entitled to receive up to $2.5 million in payments based on a percentage of Luna i-Monitoring's sales. We have not received any payments to date under this agreement and based on historical sales to date, we do not anticipate that the amounts, if any, we may receive in the future from Luna i-Monitoring will be material to our business.

Our Growth Strategy

We have the following key strategies to achieve our goal of accelerating the development and commercialization of innovative technologies and to create successful products in our areas of focus:

- **Focus on developing and commercializing a growing portfolio of innovative products.** We intend to build and commercialize a growing portfolio of high value-added products using innovative technologies and utilize our existing relationships to identify, prioritize and allocate resources to respond rapidly to market needs and shorten the time to market for new products.
- **Transition our mix of revenues to a higher percentage of product and license revenues.** We plan to commercialize a growing number of products in order to increase the amount of revenues that we generate from product sales and license payments. To this end, we will seek to expand our distribution network and our ability to service our customers. We will also seek to allocate resources to improve our ability to manufacture and shorten the cycle time from idea to market and to monetize our intellectual property portfolio by licensing our technologies. As a result, we believe that product sales and license revenues will comprise a greater portion of our total revenues in the future.
- **Continue to strengthen our Contract Research Group.** We will seek to strengthen our Contract Research Group through increased resource allocation and hiring and by expanding our network of relationships with federal laboratories, major research universities and industry leaders. These steps will provide us the opportunity to grow our applied research business, remain informed of the latest technological advances and increase the quality and volume of high potential technologies that will support our product pipeline.
- **Expand our intellectual property portfolio in our areas of focus.** We will seek to expand our intellectual property portfolio by applying our disciplined processes to generate know-how and intellectual property through our network of relationships and our own research and development efforts. By continuing to expand our intellectual property, we will seek to enhance our competitive position and develop additional products in these areas.

Business

Contract Research Group

Our Contract Research Group provides applied research to customers in our areas of focus – molecular technology solutions and sensing solutions. Our Contract Research Group competes to win contracts in these areas on a fee-for-service basis. This group has a successful track record of evaluating innovative technologies to address the needs of our customers. We identify these needs by utilizing our knowledge of the markets in our areas of focus and by consulting with major government entities, leading research universities and large corporations. We also use this network to obtain favorable technology transfer agreements, contract research revenues and strategic partnerships for the products that we develop based on our applied research.

We are working or have worked with over 60 corporate, academic and government collaborators, including:

- **Universities.** The College of William and Mary, Duke University, Georgia Institute of Technology, North Dakota State University, The Ohio State University, The Pennsylvania State University, University of California, San Diego, University of Pittsburgh, University of Virginia, Washington University in St. Louis, University of Wyoming, and Virginia Polytechnic Institute and State University, or Virginia Tech;
- **Government entities.** Defense Advanced Research Projects Agency, Defense Threat Reduction Agency, Environmental Protection Agency, National Aeronautics and Space Administration, National Institutes of Health, National Institute of Standards and Technology, National Science Foundation, United States Air Force, United States Army, United States Department of Agriculture, United States Department of Commerce, United States Department of Defense, United States Department of Energy, United States Department of Transportation and United States Navy; and
- **Corporations.** Anteon International Corporation, Applied Research Associates, Inc., Dana Corporation and Northrop Grumman Corporation.

We seek to continue to maximize the benefits we derive from our contract research business, including revenues generation and identification of promising technologies for further development. For example, we proactively target selected projects with the highest commercialization potential. Also, we take a disciplined approach to contract research to ensure that in general the costs of any contract we undertake are fully covered. This approach enables us to cover the costs of riskier stage technology development with outside funding. We believe that this model is cost efficient and reduces our risk significantly.

As of March 31, 2006, our Contract Research Group was engaged in 68 separate active contracts that typically last from six months to three years. These projects span a wide range of applications across our areas of focus. The table below illustrates the type of research that these contracts encompass:

Competency/Platform Technology	Number of Contracts	Examples of Potential Products
Molecular Technology Solutions	30	Disease-targeting MRI contrast agents; flame retardants; coatings to shield devices from electromagnetic interference; multi-functional protective coating systems; and blast and ballistic resistant materials
Sensing Solutions	38	Medical diagnostic and monitoring instruments for heart and lung bypass operations, compartment syndrome and bone strength measurement; non-destructive industrial testing systems; and wireless remote and secure asset monitoring
Total	68	

Although we conduct our applied research on a fee-for-service basis for third parties, we seek to retain full or partial rights to the technologies and patents developed under those contracts and to continuously enlarge and strengthen our intellectual property portfolio. Often, a new technology that we develop complements existing technologies and enables us to develop applications and products that were not previously possible. In addition, the technologies we develop are often applicable to commercial markets beyond what was originally contemplated in the contract research of such technologies and we endeavor to capture the value of those opportunities.

As of March 31, 2006, our Contract Research Group team consisted of 90 people, 31 with Ph.D.s and 34 with advanced degrees. Our Contract Research Group also utilizes the knowledge and experience of researchers employed through the academic institutions, corporations and government agencies with which we subcontract. The Contract Research Group is organized into subgroups according to the area of technology, with each subgroup managed by its own director responsible for its financial performance. In addition, our Contract Research Group has in place disciplined processes designed to ensure quality control of proposal preparation, program reviews, pipeline reviews, revenues tracking and financial reporting.

Our Contract Research Group has a high historical success rate in winning bids for SBIR contracts, and we have won two National Tibbett's Awards from the Small Business Administration for outstanding SBIR performance. SBIR contracts include Phase I feasibility contracts of up to $100 thousand and Phase II proof-of-concept contracts, which can be as high as $750 thousand. We also have been successful at winning contracts outside the SBIR program from corporations and government entities. Such contracts have no financial limit and typically have a longer duration, ranging from 12 to 24 months. As we continue to grow, one of our goals is to derive a larger portion of our contract research revenues from contracts outside the SBIR program.

Commercialization Strategy Group

Our Commercialization Strategy Group works with our Contract Research Group to identify technologies that have demonstrated proof of concept and that are ready for further development. After a detailed review, it is at this stage that we first consider investing our own funds to finance continued development. To this end, we have rigorous processes to evaluate the merits of further developing any given technology.

Initially, the Commercialization Strategy Group prepares proposals for selected high-potential proof-of-concept technologies for consideration by our internal investment committee. These proposals have the basic elements of a business plan, including detailed market, competitive, sales, marketing, distribution, financing and intellectual property analyses. Our internal investment committee, which is composed of key members of our management team and experts in the fields relevant to each opportunity, evaluates the merits of each proposal and makes recommendations to our management. Once qualified opportunities are approved by management, resources are allocated and the prototyping and development of a commercial product begins. During the product development process, the Commercialization Strategy Group and our internal investment committee regularly review progress and evaluate whether or not to allocate additional resources to, and to continue funding, development.

Our Commercialization Strategy Group includes personnel with a mix of intellectual property, technical and business backgrounds, including individuals who have experience with venture capital-backed companies and others who have successfully run major divisions of large corporations. In addition, we plan to consult with members of our advisory board with respect to product development matters from time to time. We believe that this combination of skills and experience is critical to the success of the product development process.

We have a successful track record, having developed more than a dozen products serving industries including energy, telecommunications, life sciences and defense. We believe our Commercialization Strategy Group is positioned to continue that success.

Business

Products Group

Overview

Our Products Group currently consists of the Luna Advanced Systems Division, the Luna nanoWorks Division and the Luna Technologies Division. We provide a description of these divisions below.

Luna Advanced Systems Division

The Luna Advanced Systems Division provides product development resources to a number of technologies and product candidates in transition from the Contract Research Group to a division within our Products Group. Although this division is currently offering some of our legacy products for commercial sale, we intend to build our capability to commercialize our existing innovative technologies. For example, to support our commercialization efforts, we have recently assembled a team of dedicated sales and marketing personnel with experience in industries related to our product candidates. Below we describe some of the products in our development pipeline.

Ultrasonic Technologies

We are developing a number of new devices that use high frequency sound, or ultrasonic, waves to evaluate the physical properties of materials. Application of ultrasonic technology in the medical field is commonly known as ultrasound. Our devices can determine the physical condition of an object by analyzing numerical measurements taken from ultrasonic waves that interact with the object. Our quantitative ultrasonic signal processing technology is designed to be extremely sensitive, detecting changes in the physical properties of the object studied. Our instruments report a numerical signature, not an image that is subject to interpretation and sometimes requires an expert consultant. Our technology thus provides information that cannot be obtained by traditional non-quantitative ultrasonic methodologies. Our quantitative ultrasonic technology has applications in medical diagnosis, non-destructive industrial testing and homeland security. All of our ultrasonic devices discussed below are currently in development stage and are not yet available for commercial sale.

Medical Monitoring and Diagnostic Devices

Ultrasound is an important, non-invasive tool for diagnosing disease inside the body. Roughly 700 thousand procedures utilizing ultrasound devices are performed each day worldwide. Our quantitative ultrasound supplements other diagnostic tools, providing a numerical readout of certain physical properties of the body part being analyzed, such as pressure or strain, which helps physicians diagnose certain disease conditions. We are developing medical device products with our ultrasound platform technology for the diagnosis of the following:

- **Compartment syndrome.** Compartment syndrome is a buildup of pressure within muscles or other body parts following a severe traumatic blow. Such pressure buildup is often undetectable without surgery or other invasive procedures and the reduced blood flow from the disease can lead to debilitating injuries. QUS-1000CS is our compartment syndrome diagnostic device that is currently under development and is being designed to enable the doctors' office or emergency room nursing staff to easily and consistently monitor this condition using a non-invasive method.
- **Bone strength.** Bone loss due to osteoporosis is presently determined using x-ray techniques that measure the density of calcium in the bone. Our ultrasound technology measures the stiffness of the bone and can detect the difference between a bone bearing weight and one that is not. This measurement reflects the load bearing capacity, which is data that current devices in the market do not provide. QUS–1000BQ is our bone strength measurement device that is currently under development and is being designed to allow the monitoring of bone integrity and provide diagnostic information to improve the care of patients with osteoporosis.

- **Intracranial pressure buildup.** A heavy blow to the head can cause internal pressure that builds up rapidly and can cause morbidity and death if not treated. This condition is typically diagnosed by evaluating a patient's response to external stimuli, which is not possible if the patient is unconscious. Our ultrasound technology can detect such pressure buildup rapidly in non-responsive patients by using a non-invasive device that reports a numerical readout and that does not require expert interpretation. QUS-1000ICP is our intracranial pressure measurement device that is currently under development and is being designed to enable trauma personnel to diagnose and monitor such a condition.

All three products, the QUS-1000CS, the QUS-1000BQ and the QUS-1000ICP, share common components, but also have customized interfaces specific to each application. The pathway to market for medical diagnostic devices requires approval by government agencies. For example, we are required to obtain certification for safety through international standards as well as approval from the FDA through a 510(k) registration which we do not anticipate before the end of 2007. We are currently developing our marketing and distribution strategy for these products.

Non-Destructive Industrial Testing and Homeland Security Applications

We are developing a multi-purpose diagnostic instrument for the United States Army's initiative to improve field service for deployed vehicles. Our multi-purpose diagnostic device measures the physical integrity of parts in the field based on their responses to an ultrasonic probe. Each part has its own distinct acoustic response to an ultrasonic probe which our device can read. A response falling outside a specified range indicates the part will not perform as required. Our device can test the integrity of a large number of replaceable vehicle parts having various uses and made of various materials. Other potential markets for this product include materials laboratories and manufacturing quality assurance departments.

We are also developing homeland security products based on our ultrasonic platform technology, such as an ultrasonic wand to detect weapons concealed beneath clothing and a product that identifies vehicles on the highway system that might be transporting weapons of mass destruction. We plan to continue to develop these homeland security products through our Contract Research Division until we have completed prototype testing, which we anticipate will take at least one year. We intend to market these products, should they prove viable, to government entities and corporations.

Remote and Secure Asset Monitoring

We are developing innovative applications integrating sensors, software and hardware components to provide remote and secure asset monitoring solutions and products. These products, which are currently in development and are not yet available for commercial sale, integrate several technologies such as:

- Sensors utilizing light-transmitting optical fibers, or fiber optic sensors, that collect vital information, such as temperature, pressure, strain, movement, moisture, sound or other changes where they are deployed. We have particular experience developing sensors that operate in harsh environments.
- Encryption technology that scrambles wireless communications to provide security for military or industrial uses. We are designing a card that plugs into the network slot of a laptop or other portable wireless device and serves as a receptacle for any standard network card, converting the wireless communication into a secure, encrypted transmission that can only be unscrambled by a receiver with a similar card.
- Wireless transmission technology to send the data from remote sensors to a central monitoring station, enabling a customer to maintain real time, sensitive contact information about the health of machinery, or other equipment without the expense and inconvenience of installing cable-connected sensors.
- Secure wireless technology that encrypts the data from wireless sensors prior to transmission for settings where the customer needs security.

Business

We are developing cost-effective remote and secure asset monitoring products that are simple to install and that offer industrial customers the ability to gather data critical to the performance of their equipment and to increase the reliability and performance of their machinery. These sensors are designed to work in harsh environments or in difficult to reach sites to monitor critical data, such as temperature, pressure and a number of other variables.

We also are developing products for military secure wireless communication applications. For example, we are working with the U.S. Navy to enable handheld wireless devices to communicate securely with a ship or submarine network. In addition, we are developing a sophisticated system that is designed to detect security breaches.

Flame Retardants

We are developing a proprietary flame retardants that can be mixed with other components into fire resistant composites or spray-on coatings for textiles. Originally developed to provide the U.S. Navy with fire resistant ammunition packages, our flame retardant produces a non-combustible surface under fire condition and slows heat transfer through the material. Unlike many flame retardants used today, we believe that our product is environmentally sound in both its manufacture and disposal and that it does not produce toxic fumes if it eventually burns. We plan to collaborate with a leading manufacturer and marketer of textile products to continue development of our flame retardant coating technology.

Multi-Functional Protective Coating Systems

We are developing a family of multi-functional protective coating products to meet numerous market opportunities. Our approach involves the combination of innovative resin systems with commercially available and proprietary additives to create high performance primers and topcoats. Our engineered coating systems are designed to have a variety of key performance attributes, including anti-corrosion, self-healing, rapid cure, non-skid, and tailored dielectric properties. In addition to coatings, we are also developing other complementary products, such as surface cleaners and pretreatments that will improve the performance of the entire coating system. We plan to engage with large coatings manufacturers for the eventual production and distribution of our coating systems through established channels.

Blast and Ballistic Resistant Materials

We are developing a variety of blast and ballistic resistant coatings, materials and composites for critical defense and homeland security applications. We combine resins, polymers, fibers, fabrics and composites that we have developed with commercially-available components to create high strength, lightweight and flexible materials that range in application from soldiers to ships. Specific examples of potential applications include a new ammunition packaging system to protect both ordnance and soldiers; a flexible blast resistant polymer to improve the integrity of ship deck coating systems and to prevent interior shrapnel in the event of an explosive blast; and lightweight, transparent, ballistic resistant polymers for use in next generation military visors.

Luna nanoWorks Division

Overview

Our Luna nanoWorks Division is developing advanced carbon nanomaterials, which are molecular structures consisting of carbon atoms in distinctive geometric shapes. Advanced carbon nanomaterials include: Trimetasphere™ nanomaterials, a new class of materials that we describe in more detail below; fullerenes, which are carbon spheres that resemble a soccer ball; and carbon nanotubes, which are carbon rings shaped like a cylinder.

A Trimetasphere™ nanomaterial is a carbon sphere with three metal atoms enclosed inside. Using different combinations of a group of 17 rare earth metals, we can develop thousands of different types of Trimetasphere™ nanomaterials, each with distinctive properties and performance characteristics and each potentially marketable as a separate product. We recently were awarded the Nano 50 Products Award by NASA's Tech Briefs publication for our Trimetasphere™ nanomaterials.

Business

Through our collaborative relationship with Virginia Tech, we have obtained an exclusive license to commercialize Trimetasphere™ nanomaterials under an issued U.S. patent and pending U.S. applications. Each type of Trimetasphere™ nanomaterial has distinctive chemical, physical or biological properties due to the properties of the metals enclosed in its carbon cage. We can further customize Trimetasphere™ nanomaterials for specific applications by attaching different atoms or molecules to the surface of their carbon spheres. In some cases, the knowledge we gain from customizing Trimetasphere™ nanomaterials for specific applications may provide us with new intellectual property covering Trimetasphere™ nanomaterials and may also provide us with new intellectual property covering carbon nanomaterials other than Trimetasphere™ nanomaterials, further expanding our inventory of potential new products.

We are still in the process of developing intellectual property covering fullerenes and carbon nanotubes. We intend to develop this intellectual property internally and, if necessary, through licensing arrangements with third parties.

We have won a number of government contracts funding new applications of nanotechnology totaling approximately $11.0 million. These contracts are partially funding our development of manufacturing processes to produce nanomaterials in large quantities. Furthermore, we are researching and developing new applications exploring the physical properties of nanomaterials. As of March 31, 2006, we had invested nearly $3.1 million of our own funds in these activities and we plan to continue to compete for additional research contracts to support our Luna nanoWorks Division.

Our Luna nanoWorks Division will focus on business opportunities in which we are well-positioned to have a strong intellectual property position in the United States and for which our products are likely to command premium pricing. We believe these opportunities exist in materials supply and medical applications. Our Luna nanoWorks Division plans to supply advanced carbon nanomaterials to customers in different industries where our nanomaterials will enable and become components of our customers' products. Our Luna nanoWorks Division is also identifying medical application products utilizing Trimetasphere™ nanomaterials.

Medical Imaging

Magnetic resonance imaging, or MRI, has been established as the imaging technology of choice for a broad range of applications, including the identification and diagnosis of a variety of medical disorders. MRI provides three-dimensional images that enable physicians to diagnose and manage disease in a minimally invasive manner. MRI contrast agents, used in about 30% of MRI procedures, improve the resolution of MRI images by enhancing the contrast in the organ or tissue in the body where the contrast agent circulates. Most of the contrast agents approved by the FDA use gadolinium, a toxic metal. To neutralize gadolinium's toxicity, contrast agents use organic compounds called chelates that wrap around the gadolinium, shielding the patient from its toxicity. However, chelates cannot neutralize the gadolinium if it escapes into the bloodstream. Hence, the longer the agent circulates, the greater the risk of toxicity. As a result, the contrast agents currently in use need to be eliminated from the body quickly, making it difficult to produce high quality images.

Our Luna nanoWorks Division is developing a Trimetasphere™ nanomaterial-based MRI contrast agent. We believe our Trimetasphere™ nanomaterial-based contrast agent offers two potential advantages: lower risk of toxicity and higher image contrast. Due to the strength of the Trimetasphere™ nanomaterial's carbon cage enclosing the gadolinium, our Trimetasphere™ nanomaterial-based contrast agent can neutralize gadolinium for a longer period of time, and therefore allow the contrast agent to remain safely in the body longer. Experiments have also shown that Trimetasphere™ nanomaterials provide a stronger contrast effect than the other contrast agents currently on the market. The first compound in this program is in preclinical development, with an investigational new drug application, or IND, planned for the end of 2006.

In addition, we are developing various modifications to the Trimetasphere™ nanomaterials to target them for specific tissues or physiological conditions. We believe that, using the Trimetasphere™ nanomaterials, a complete family of disease-targeting diagnostic agents can be created to enhance the capabilities of MRI imaging and significantly expand its applications.

Medical contrast agents for human use must be approved by the FDA or similar foreign regulatory agencies before they can be marketed, which we do not expect before 2009. We are in the early stages of developing a marketing strategy for our MRI contrast agent.

Business

Materials Supply Business

Our Luna nanoWorks Division has two goals for its materials supply business: to identify new product opportunities by supplying carbon nanomaterials to research laboratories in academia, government and industry; and to develop customized products with specialized performance characteristics for use in industrial applications.

Luna nanoWorks sells carbon nanomaterial kits to academic, federal and private laboratories. These kits are sold to dedicated researchers with the objective of encouraging the discovery of new applications such as nano-scale circuit components, memory storage devices and biological tracers. Should these researchers discover an important new use, we expect that our proprietary position surrounding the relevant material will position us to negotiate favorable terms with the inventors of such new use.

We also have active research programs investigating the enhancement of various industrial materials, including:

- **High performance solar panels.** Solar panels are designed to capture light and convert its energy into electrical power. Solar panels currently on the market face limitations in efficiently converting solar energy into electrical power. We are in the early stages of developing a product that uses the electrical properties of Trimetasphere™ nanomaterials to increase the overall efficiency of solar panels.
- **Stronger and lighter composites.** Composite structures utilizing polymers, which are materials made up of smaller, linked building blocks, have replaced many metal structures for use in military body and vehicle armor due to their greater strength and lighter weight. We are investigating new technologies to further reduce the weight and enhance the strength of these composites including enhancements to the carbon nanotubes that we currently manufacture.
- **Coatings to shield devices from electromagnetic interference.** Carbon nanomaterials provide the strength of carbon fibers and are lightweight and highly conductive, making them suitable for use in coatings designed to shield electronics and electrical equipment from radio waves.

Luna Technologies Division

We reacquired Luna Technologies, Inc. in September 2005, and currently operate it as our Luna Technologies Division. We established Luna Technologies, Inc. in July 1998 and funded its growth by raising venture capital. Such financing activities diluted our equity ownership to as little as approximately 7% during our holding period and to approximately 10% prior to September 2005. In line with our strategy of building a growing portfolio of products, we purchased all of the stock of Luna Technologies, Inc. that we did not own in exchange for shares of our common stock in September 2005. Our acquisition of Luna Technologies is expected to enhance our development and production of fiber-optic technology.

Test and Measurement Equipment

Our test and measurement products monitor the integrity of fiber optic network components and subassemblies. Luna Technologies Division's products are targeted at manufacturers and suppliers of optical components and sub-assemblies and allow them to reduce costs and improve the quality of their products. Most manufacturers and suppliers of optical components and modules currently use a combination of different types of optical test equipment to identify and measure failures in optical networks, such as bad splices, bends, crimps and other reflective and non-reflective events. Our optical test equipment products replace the need for these multiple test products and address all stages of the end user's product development life cycle including: design verification, component qualification, assembly process verification and failure analysis.

Our Luna Technologies Division has two flagship product lines—our Optical Vector Analyzer, or OVA, and our Optical Backscattering Reflectometer, or OBR. Our award winning OVA platform allows manufacturers and suppliers of optical components and sub-assemblies to reduce costs and time-to-market by replacing multiple, time consuming and expensive measurement platforms with a single, integrated and easy-to-use instrument. Our most recent version of OVA operating

software provides customers with faster testing times, advanced data analysis options and an extended dynamic range relative to previous versions.

Our OBR is a highly sensitive diagnostic device that allows data and telecommunications companies and the service providers who maintain their own fiber optic networks to reduce test time and improve product quality. Our OBR introduces the ability to inspect metropolitan fiber networks with higher resolution and better sensitivity than previously possible. Its user-friendly graphical user interface also makes the OBR product suitable for both research and manufacturing applications.

We expect to increase sales of our optical test equipment products by expanding our customer base beyond the telecommunications industry into avionics, defense and academic research laboratories.

In 2005, Luna Technologies Division received the Frost & Sullivan “Award for Product Line Strategy” for its OVA product and the Frost & Sullivan “Optical Product of the Year Award” for its OBR product.

In June 2005, Luna Technologies entered into a Joint Cooperation Agreement with Luna Energy. Under this agreement, both parties have agreed to cooperate to develop a fiber optic sensing system product and have agreed to contribute materials, intellectual property, personnel and other resources to the development effort. Upon successful completion of product development, Luna Energy will receive a license to certain of Luna Technologies’ intellectual property and will be required beginning in 2007 and continuing through December 31, 2017 to make payments to Luna Technologies with respect to revenues derived from products sold that utilize this intellectual property. Although as of March 31, 2006, Luna Energy had not yet sold products that would entitle Luna Technologies to royalty payments under this joint cooperation agreement, Luna Technologies had received aggregate development milestone payments of $305 thousand as of that date under this agreement and is entitled to receive additional development milestone payments of $120 thousand in the aggregate, subject to the satisfaction of certain conditions. Luna Technologies also has the right to receive royalty payments from sales of products in the future. The license of certain of the intellectual property from Luna Technologies to Luna Energy shall be an exclusive license if Luna Energy makes certain minimum royalty payments of $420 thousand in the aggregate between 2007 and 2017, and shall be a non-exclusive license if Luna Energy fails to make these minimum royalty payments. Either party has the right to terminate this agreement during the development term (which, unless extended by mutual agreement of the parties, will expire June 6, 2006) upon a provision of advance written notice to the other party. However, if either party terminates the agreement for convenience or failure to meet certain development milestones, the terminating party may be required to grant license rights to the non-terminating party, including, where Luna Technologies is the terminating party, certain non-exclusive and certain exclusive rights with respect to intellectual property of Luna Technologies required to complete the development effort, and where Luna Energy is the terminating party, non-exclusive commercialization rights with respect to certain intellectual property of Luna Energy. Since December 2004, we have not held an ownership interest in Luna Energy. Luna Technologies continues to operate as our Luna Technologies Division after we acquired that entity in September 2005.

Integrated Sensing Solutions

We have significant knowledge and experience in Distributed Sensing Systems, or DSS, which are products comprised of multiple sensors whose input is integrated through a fiber optic network and software. Our DSS products use fiber optic sensing technology with an innovative monitoring system that allows several thousand sensors to be networked along a single optical fiber. Some key applications, markets and technical advantages of our DSS are described below.

- **Distributed Strain.** Potential markets for our DSS products include the airframe industry, integrated structural monitoring on civil structures and space applications. For example, a major air frame manufacturer deployed our DSS products during fatigue tests to measure strain through a network of sensors distributed throughout an aircraft. Our distributed strain measurement technology can also provide three-dimensional shape measurement. We are developing this technology for use in robotic tethers and for wing structures. We have sold our shape-sensing probes to a major aircraft manufacturer for measuring shape on an aerodynamic surface.

- **Distributed Temperature.** We sell a network of distributed temperature sensors to a major manufacturer of electrical generators. This DSS product enables the direct monitoring of temperature, which helps to prolong generator life and to increase operational efficiency. We have also sold our DSS temperature sensors to NASA for both ultra-cold and extremely high-temperature measurements. Potential markets include industrial process control and electrical system monitoring.

Competition

We compete for government, university and corporate research contracts relating to a broad range of technologies. We also compete in the materials supply sensing and fiber optic network testing markets. In addition, we plan to develop and commercialize multiple molecular technology and sensing solutions products across many industries, technologies and markets. As a result, we compete, or will compete, with a variety of companies in several different markets.

Competition for contract research is intense and the industry has few barriers to entry. We compete against a number of in-house research and development departments of major corporations, as well as a number of small, limited-service contract research providers. The contract research industry continues to experience consolidation, which has resulted in greater competition for clients. Increased competition might lead to price and other forms of competition that could harm our operating results.

We compete for contract research on the basis of a number of factors, including reliability, past performance, expertise and experience in specific areas, scope of service offerings, technological capabilities and price. Although there can be no assurance that we will continue to do so, we believe that we compete favorably in these areas. If in the future we are unable to effectively compete in these areas, we could lose business to our competitors, which could harm our operating results. Our competitors in contract research include, but are not limited to, companies such as General Dynamics Corporation, Lockheed Martin Corporation, SAIC, Inc. and SRA International, Inc.

In the molecular technology solutions products market, our competitors include, but are not limited to, large public manufacturers such as The Dow Chemical Company, E.I. du Pont de Nemours and Company, Rohm and Haas Company and 3M Company, as well as emerging advanced materials companies.

In addition, in the MRI contrast agent market, our competitors include Amersham plc, Berlex Laboratories, Inc., Bracco Diagnostics, Inc. and Mallinckrodt Inc.

In the sensor solutions products market, our competitors include, but are not limited to, large companies such as Agilent Technologies, Inc., Analog Devices, Inc., Freescale Semiconductor, Inc., JDS Uniphase Corp., Robert Bosch GmbH and Silicon Sensing, as well as emerging companies developing innovative sensing technologies.

The products that we have developed or are currently developing will compete with other technologically innovative products, as well as products incorporating conventional materials and technologies. We expect that our products will compete with companies in a wide range of industries, including semiconductors, electronics, biotechnology, textiles, alternative energy, military, defense, healthcare, telecommunications, industrial measurement, security applications and consumer electronics.

Intellectual Property

We seek patent protection on inventions that we consider important to the development of our business. We rely on a combination of patent, trademark, copyright and trade secret laws in the United States and other jurisdictions, as well as confidentiality procedures and contractual provisions to protect our proprietary technology and our brand. We control access to our proprietary technology and enter into confidentiality and invention assignment agreements with our employees and consultants and confidentiality agreements with other third parties.

Our success depends in part on our ability to develop patentable products and obtain, maintain and enforce patent and trade secret protection for our products, as well as successfully defend these patents against third party challenges both in the United States and in other countries. We will only be able to protect our technologies from unauthorized use by third parties to

the extent that we own or have licensed valid and enforceable patents or trade secrets that cover them. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage.

Currently, we own or license numerous U.S. patents and patent applications, and we intend to file, or request that our licensors file, additional patent applications for patents covering our products. However, patents may not be issued for any pending or future pending patent applications owned by or licensed to us. Claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to protect our technologies. Any issued patents owned by or licensed to us now or in the future may be challenged, invalidated or circumvented, and, in addition, the rights under such patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture or increase their market share with respect to related technologies. Although we are not currently involved in any legal proceedings related to intellectual property, we could incur substantial costs to defend ourselves in suits brought against us or in suits in which we may assert our patent rights against others. An unfavorable outcome of any such litigation could have a material adverse effect on our business and results of operations.

As of March 31, 2006, we owned or had exclusive rights to use at least 39 issued U.S. patents and at least 63 additional pending U.S., international and foreign patent applications. As of March 31, 2006, we did not have any issued or granted foreign patents. In particular, as of March 31, 2006, we owned or had exclusive license to the following issued patents and applications as they relate to specific products:

- Ø two issued U.S. patents with expiration dates ranging from December 2021 to April 2024, three pending U.S. patent applications, and two pending foreign patent applications relating to our OVA and OBR products;
- Ø four issued U.S. patents with expiration dates ranging from August 2019 to August 2021, six pending U.S. patent applications, and 11 pending foreign patent applications relating to our carbon nanomaterials, including Trimetasphere™ nanomaterials;
- Ø three pending U.S. patent applications and one pending foreign patent application relating to our DSS technology;
- Ø 11 issued U.S. patents with expiration dates ranging from June 2011 to September 2022, three pending U.S. patent applications and two pending foreign patent application relating to our ultrasound technologies for medical applications;
- Ø one issued U.S. patent expiring April 2024, two pending U.S. patent applications and three pending foreign applications relating to our ultrasonic technologies for weapons detection and non-destructive industrial testing technologies;
- Ø five issued U.S. patents with expiration dates ranging from February 2012 to April 2020, and three pending U.S. patent applications and one pending foreign patent applications relating to our remote and secure asset monitoring technologies;
- Ø two issued U.S. patents expiring April 1, 2024, four pending U.S. patent applications and seven pending foreign patent applications relating to our flame retardant, impact indicator coatings and multifunctional protective coatings; and
- Ø 14 issued U.S. patents with expiration dates ranging from February 2016 to March 2024, and 12 pending U.S. and foreign patent applications relating to our various other technologies.

We own 25 of the issued U.S. patents, 22 of the U.S. patent applications and 26 of the foreign patent applications identified above. The remaining 14 issued U.S. patents, seven U.S. patent applications and eight foreign patent applications are owned by and licensed exclusively from third parties, which include educational institutions, government agencies and for-profit

companies. We consider the following exclusive license agreements to be material to our business:

- **Virginia Tech nanomaterials license.** Our Amended and Restated License Agreement with Virginia Tech Intellectual Properties, Inc., or VTIP, dated March 19, 2004, relating to Trimetasphere™ nanomaterials, which provides us with rights to one issued U.S. patent, one U.S. patent application and one foreign patent application. Under this license agreement, VTIP granted us an exclusive worldwide license, in all fields of use, under the foregoing patent rights, to make, have made, use and sell licensed products, with a reservation of rights by VTIP for educational and research purposes. We are required to diligently pursue development, manufacture and sale of licensed products, and are also required to, among other things, raise financing before March 19, 2009, make annual expenditures toward development of the licensed products, use reasonable efforts to market the licensed products and meet market demand, and distribute research samples of the licensed products. If we fail to do so, VTIP has the right to terminate the license or to change the exclusive license to a non-exclusive license. We paid up-front fees for this license agreement and are required to pay to VTIP royalties on product sales, including royalties on product sales by companies to which we have granted a sublicense. We are also required to pay VTIP $225 thousand in the aggregate upon the achievement of certain milestones. We have made aggregate royalty and milestone payments of $38 thousand through March 31, 2006 under this agreement. Our licensed products sold in the United States must be manufactured substantially in the United States. The license expires upon the expiration of the last licensed patent set forth in the license agreement, and our remaining milestone payment obligations through that date are $225 thousand in the aggregate. We have the right to terminate the license agreement for convenience, and VTIP has the right to terminate the agreement upon a material breach by us or our failure to make a payment. We agreed to indemnify VTIP against any claims arising out of our exercise of the license granted or any sublicense, including for products liability claims. VTIP is responsible for diligently pursuing the prosecution and maintenance of the patents at issue, and must consult with us and provide us with a reasonable opportunity to review and comment on all proposed submissions to any patent office. VTIP has the first right to institute an action for infringement of the licensed intellectual property; we can bring an infringement claim against third parties only if VTIP elects not to. Recoveries from any such action belong to the party bringing suit. If legal actions are brought jointly by VTIP and us where we each fully participate in such action, the recoveries are shared in jointly in proportion to the share of expense paid by each party.
- **NASA ultrasound technologies license.** Our License Agreement No. DE-384 with NASA dated October 28, 2004, relating to ultrasound technologies, which provides us with rights to 10 issued U.S. patents, two U.S. patent applications and one foreign patent application. Under this license agreement, NASA granted us a terminable, exclusive license to make, have made, use and sell licensed inventions, in the United States (including its territories and possessions) and other jurisdictions that are covered by a patent or patent application, in the field of medical applications for assessing and measuring intracranial pressure and compartment syndrome. We are required to achieve practical application, which is generally defined as a commercial application or use for which a market exists, of the licensed application before September 7, 2006, and achieve certain milestones along the way. We paid up-front fees for this license agreement and are required to pay to NASA and to the University of California, a joint owner with NASA of one of the patent applications covered by the license agreement, royalties on product sales, including minimum annual royalties from 2004 through the term of the license agreement as well as royalties on product sales by companies to which we have granted a sublicense. We have made aggregate payments of five thousand dollars through March 31, 2006 under this agreement. Our products under this license must be manufactured substantially in the United States. The license expires upon the expiration of the last licensed patent set forth in the license agreement, and our minimum annual royalty payments from January 1, 2006 through that date are $40 thousand in the aggregate. We may terminate the license agreement with advance notice or immediately upon a material breach by NASA. NASA may terminate the license upon a material breach by us or if NASA determines, among other things, that (i) we have failed to achieve or maintain practical application of the

licensed invention before September 7, 2006, (ii) we have not substantially manufactured the licensed invention in the United States, or (iii) we have failed to meet market demand, to pay royalties or to submit required reports. In addition, until September 7, 2009, NASA is permitted to unilaterally modify or revoke the license as to any licensed invention for which we have not achieved a practical application. We agreed to indemnify NASA and the University of California against claims arising out of our use of the licensed invention or our sale, use or disposition of products or processes made by use of such inventions. We have the right to enforce the licensed patents, subject to the U.S. government's right to bring suit or intervene, and any recoveries must be shared with NASA and the University of California on terms to be negotiated with them.

In addition to the exclusive license agreements described above, we consider the following non-exclusive license agreements to be material to our business because they relate to certain of our key products:

- **NASA OVA and OBR products and DSS technology licenses.** Our License Agreement with NASA No. DN-982 dated June 10, 2002, as modified on dated January 23, 2006, and our License Agreement with NASA No. DN-951 dated December 20, 2000, relating to our OVA and OBR products and DSS technology, which provide us with rights to four issued U.S. patents and two foreign patent applications. Under these license agreements, NASA granted us a terminable, non-exclusive license to make, have made, use and sell licensed inventions, in the United States (including its territories and possessions), in all fields of use. We paid up-front fees for this license agreement and are required to pay royalties on product sales, including minimum annual royalties from 2003 through the term of the license agreement as well as royalties on product sales by, and other payments we receive from, companies to which we have granted a sublicense. We have made aggregate payments of $350 thousand through March 31, 2006 under this agreement. Our products under this license must be manufactured substantially in the United States. The license expires upon the expiration of the last licensed patent set forth in the license agreement, and our minimum annual royalty payments from January 1, 2006 through that date are $160 thousand in the aggregate. We may terminate the license agreement with advance notice or immediately upon a material breach by NASA. NASA may terminate the license upon a material breach by us or if NASA determines, among other things, that (i) we failed to achieve or maintain practical application of the licensed invention before June 10, 2004, (ii) we have not substantially manufactured the licensed invention in the United States, or (iii) we have failed to meet market demand, to pay royalties or to submit required reports. In addition, NASA is permitted to unilaterally modify or terminate the agreement in event of a breach by us by providing notice to us and allowing us to challenge or protest its decision. We agreed to indemnify NASA against claims arising out of our use of the licensed invention or information provided by NASA, or our sale, use or disposition of products or processes made by use of such inventions or such information. We have the right to enforce the licensed patents, subject to the U.S. government's right to bring suit or intervene, and any recoveries must be shared with NASA on terms to be negotiated with them.
- **United Technologies Corporation DSS technology license.** Our Fiber Optic Patent License with United Technologies Corporation, or UTC, dated September 22, 2003, relating to DSS technology, which provides us with rights to two issued U.S. patents. Under this license agreement, UTC granted us a non-exclusive, non-transferable, worldwide license, under the foregoing patent rights, to make, have made, use and sell licensed products, without the right to grant sublicenses. We paid non-refundable up-front fees for this license agreement and are required to pay royalties on product sales. We have made aggregate payments of $272 thousand through March 31, 2006 under this agreement. The license expires upon the expiration of the patent licensed that has the longest life unless earlier terminated. We do not have the right to terminate the license agreement without the agreement of UTC, but UTC has the right to terminate upon, among other things, a material breach by us or our failure to make a payment. We agreed to indemnify UTC against any claims relating to (i) use of the licensed patents by us, our customers, subcontractors, agents or employees, and (ii) our manufacture, use and sale of the licensed products. UTC may decide in its sole discretion whether to enforce its rights under the licensed patents or to defend any action with respect to such patents. Any such action would be under UTC's sole control and at its expense, and UTC would retain all damages and recoveries from any such action.

We may not be able to prevent third parties from obtaining rights from our licensor that are identical to ours. For example, because our licenses from NASA and UTC described above that relate to fiber Bragg grating and fiber optic strain sensing are non-exclusive, others, including our competitors, may obtain rights from our licensor that are identical to ours.

The development of some of our intellectual property, including software, may have been funded by the U.S. government including under, or in connection with, U.S. government contracts and other federal agreements. Similarly, some of our patents may cover inventions that were conceived or first reduced to actual practice under, or in connection with, U.S. government contracts or other federal funding agreements. The U.S. government may constrain the use of intellectual property, including patents and software that was developed through or under U.S. government contracts, federal funding agreements or other federal agreements. In addition, in instances where the U.S. government has provided funding of, or for, the development of intellectual property, the U.S. government typically retains a non-exclusive, royalty-free, world-wide license to use the intellectual property in any manner it deems appropriate including, in some specific circumstances, providing it to our competitors. When we work on U.S. government contracts, federal funding agreements and other federal instruments, we seek to protect our proprietary technologies and intellectual property developed at private expense by taking steps to maintain ownership of such intellectual property, as well as steps intended to limit the U.S. government's rights in such intellectual property to the extent permitted by applicable statutes, rules and regulations. We may not have succeeded in our efforts to maintain title in patents or ownership or in limiting the U.S. government's rights in our proprietary technologies and the intellectual property whether developed in the performance of a federal funding agreement or developed at private expense.

In addition to patent and trade secret protection, we also rely on several registered and unregistered trademarks to protect our brand. LUNA INNOVATIONS is a registered trademark in the United States. Our unregistered trademarks include: our logo (a black and white image of a moth design); TRIMETASPHERES; EDAC; APHROTROPHIN, AMANUET, SECURING SILICON and SOFTWARE and THE AMANUET ARCHITECTURE.

Our intellectual property policy is to protect our products, technology and processes by asserting our intellectual property rights where appropriate and prudent. However, we currently have no foreign issued patents and only three pending foreign applications in the field of endohedral metallofullerenes, and any pending or future pending patent applications owned by or licensed to us (in the United States or abroad) may not be allowed or may in the future be challenged, invalidated or circumvented, and the rights under such patents may not provide us with competitive advantages. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Protecting our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results.

There is always the risk that third parties may claim that we are infringing upon their intellectual property rights and, if successful in proving such claims, we could be prevented from selling our products or services. For example, we are aware of competitors with patents in technology areas applicable to our optical test equipment products. Such competitors may allege that we infringe these patents. In addition, we acquired a business that had received a letter in 2002 from a competitor alleging infringement of certain patents. The competitor sent an additional letter on January 14, 2004 to the business that we acquired, again alleging infringement of the competitor's patents. Neither we nor the business that we acquired have received any further communications from this third party. We cannot currently predict whether this third party, or any other third party, will assert a claim against us, or whether any third parties that have asserted such claims against businesses that we have acquired will assert claims or pursue infringement litigation against us; nor can we predict the ultimate outcome of any such potential claims or litigation.

Even if such claims are unfounded, we could suffer significant litigation or licensing expenses as a result of such claims. Companies in the molecular technology solutions, advanced materials, nanotechnology, systems integration, sensing and fiber optics industries own numerous patents, copyrights and trademarks and frequently enter into litigation based on allegations of infringement or other violations of intellectual property rights. As we face increasing competition, the possibility of intellectual property claims against us grows. Our technologies may not be able to withstand any third-party claims or rights against their use.

In recent years, numerous patent applications have been filed by others with the United States Patent and Trademark Office that refer to molecular technology solutions, advanced materials, nanotechnology, systems integration, sensing, fiber optics and our other core technologies. Information contained in patent applications is generally not publicly available. Consequently, we are unable to evaluate the underlying intellectual property until these patent applications become issued or published. The process to issue patents is long and certain innovations that have not yet resulted in issued patents could have been developed prior to our intellectual property. These patents, if and when issued, may predate our patents and may have superior claims or superior rights or otherwise be in conflict with our technology or business processes.

For additional, important information related to our intellectual property, please review the information set forth in “Risk factors—Risks Related to Our Business and Technologies.”

Government Regulation

Small Business Innovation Research Qualifications

We presently benefit from our status as qualifying for the U.S. Government’s Small Business Innovation Research, or SBIR, program administered by the U.S. Small Business Administration, or SBA. SBIR is a highly competitive program that encourages small businesses to explore their technological potential and provides them incentive to profit from the commercialization of technologies. Each year, ten federal agencies and departments, including NASA, the Department of Defense and the National Institutes of Health, are required to set aside a portion of their grant awards for SBIR-qualified organizations. SBIR contracts include Phase I feasibility contracts of up to $100 thousand and Phase II proof-of-concept contracts, which can be as high as $750 thousand. Several of our research contracts have used this program as a key source of project funding to develop new technologies.

We must continue to qualify for the SBIR program in order to be eligible to receive future SBIR awards. The eligibility requirements are:

- **Ownership.** The company must be at least 51 percent owned and controlled by U.S. citizens or permanent resident aliens, or owned by an entity that is itself at least 51 percent owned and controlled by U.S. citizens or permanent resident aliens; and
- **Size.** The company, including its affiliates, cannot have more than 500 employees.

These requirements are set forth in the SBA’s regulations and are interpreted by the SBA’s Office of Hearings and Appeals. In determining whether we satisfy the 51% equity ownership requirement, agreements to merge, stock options, convertible debt and other similar instruments are given “present effect” by the SBA as though the underlying security were actually issued unless the exercisability or conversion of such securities is speculative, remote or beyond the control of the security holder. We therefore believe our outstanding options and warrants held by eligible individuals may be counted as outstanding equity for purposes of meeting the 51% equity ownership requirement. As of March 31, 2006, giving present effect to our outstanding options, at least approximately 74% of our equity was owned by U.S. citizens or permanent residents. Upon the completion of this offering, at least approximately 56% of our equity will be owned by U.S. citizens or permanent residents (and at least approximately 54% assuming exercise of the underwriters’ over-allotment option). In addition, to be eligible for SBIR contracts, the number of our employees, including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of March 31, 2006, we, including all of our divisions, had 148 full-time and 13 part-time employees. In determining whether we have 500 or fewer employees, the SBA may count the number of employees of entities that are large stockholders who are “affiliated”, or have the power to control us. In determining whether two or more firms are affiliated, the SBA will look at indicia such as stock ownership or common management, but ultimately will make its determination based on the “totality of the circumstances.” The SBA presumes that a large stockholder of ours has the power to control us absent evidence rebutting that presumption. With respect to Carilion Health System, our only large institutional stockholder, we believe we would not be required to count the employees of Carilion Health System. We believe the relative beneficial ownership of our individual stockholders rebuts the presumption of control by Carilion Health System because the shares held by our executive officers and directors constitute the controlling voting interest in us. Eligibility protests can be raised to the SBA by a competitor or by the awarding contracting agency. Accordingly, a company can be declared ineligible for a contract award as a result of a competitor’s

protest to the SBA or as a result of questioning by the awarding contracting agency. We believe that we are currently in compliance with the SBIR eligibility criteria, but we cannot provide assurance that the SBA will interpret its regulations in our favor. As we grow larger, and as our ownership becomes more diversified, we may no longer qualify for the SBIR program, and we may be required to seek alternative sources and partnerships to fund some of our research and development costs. See “Risk factors—Risks Related to Our Business and Technologies.”

Environmental

Our facilities and current and proposed activities involve the use of a broad range of materials that are considered hazardous under applicable laws and regulations. Accordingly, we are subject to a number of foreign and domestic laws and regulations relating to health and safety, protection of the environment, product labeling and product take back, and the storage, use, disposal of, and exposure to, hazardous materials and wastes. We could incur costs, fines and civil and criminal penalties, personal injury and third party property damage claims, or we could be required to incur substantial investigation or remediation costs if we were to violate or become liable under environmental, health and safety laws. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us from conducting our business. Liability under environmental laws can be joint and several and without regard to fault. There can be no assurance that violations of environmental health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Further, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment, or to incur potentially significant costs to comply with environmental regulations.

The European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment, known as the “WEEE Directive,” requires producers of certain electrical and electronic equipment, including monitoring instruments, to be financially responsible for specified collection, recycling, treatment and disposal of past and present covered products placed on the market in the European Union. As a manufacturer of covered products, we may be required to register as a producer in some European Union countries, and we may incur some financial responsibility for the collection, recycling, treatment and disposal of both new products sold, and products already sold prior to the WEEE Directive’s enforcement date, including the products of other manufacturers where these are replaced by our own products. European Union Directive 2002/95/EC on the Restriction of the Use of Hazardous Substances in electrical and electronic equipment, known as the “RoHS Directive,” restricts the use of certain hazardous substances, including mercury, lead and cadmium in specified covered products; however, the RoHS Directive currently exempts monitoring instruments from its requirements. If the European Commission were to remove this exemption in the future, we would be required to change our manufacturing processes, and redesign products regulated under the RoHS Directive in order to be able to continue to offer them for sale within the European Union. For some products, substituting certain components containing regulated hazardous substances may be difficult or costly, or result in production delays. We will continue to review the applicability and impact of both directives on the sale of our products within the European Union. Although we cannot currently estimate the extent of such impact, they are likely to result in additional costs, and could require us to redesign or change how we manufacture our products, any of which could adversely affect our operating results. Failure to comply with the directives could result in the imposition of fines and penalties, inability to sell covered products in the European Union and loss of revenues.

We have made, and will continue to make, expenditures to comply with current and future environmental laws. We anticipate that we could incur additional capital and operating costs in the future to comply with existing environmental laws and new requirements arising from new or amended statutes and regulations. In addition, because the applicable regulatory agencies have not yet promulgated final standards for some existing environmental programs, we cannot at this time reasonably estimate the cost for compliance with these additional requirements. The amount of any such compliance costs could be material. We cannot predict the impact that future regulations will impose upon our business.

Business

FDA Regulation of Products

Some of the products that we are developing are subject to regulation under the FDC Act. In particular, our Trimetasphere™ nanomaterial-based MRI contrast agent and our ultrasound diagnostic devices for measuring certain medical conditions will be considered a drug and medical devices, respectively, under the FDC Act. Both the statutes and regulations promulgated under the FDA Act govern, among other things, the testing, manufacturing, safety efficacy, labeling, storage, recordkeeping, advertising and other promotional practices involving the regulation of drug and devices.

New Drugs

Obtaining FDA approval for a new drug has historically been a costly and time consuming process. Generally, in order to gain FDA premarket approval, a developer first must conduct preclinical studies in the laboratory and in animal model systems to gain preliminary information on an agent's efficacy and to identify any safety problems. The results of these studies are submitted as a part of an investigational new drug, or IND, application which the FDA must review before human clinical trials of an investigational drug can start. The IND application includes a detailed description of the clinical investigations to be undertaken. In order to commercialize any drug, we must sponsor and file an IND application and be responsible for initiating and overseeing the clinical studies to demonstrate the safety, efficacy and potency that are necessary to obtain FDA approval of any of the products. We will be required to select qualified investigators to supervise the administration of the products and ensure that the investigations are conducted and monitored in accordance with FDA regulations. Clinical trials are normally done in three phases, although the phases may overlap. Phase I trials are concerned primarily with the safety and preliminary effectiveness of the drug, involve fewer than 100 subjects and may take from six months to over one year. Phase II trials typically involve a few hundred patients and are designed primarily to demonstrate effectiveness in treating or diagnosing the disease or condition for which the drug is intended, although short-term side effects and risks in people whose health is impaired may also be examined. Phase III trials are expanded clinical trials with larger numbers of patients which are intended to evaluate the overall benefit-risk relationship of the drug and to gather additional information for proper dosage and labeling of the drug. The process of clinical trials generally takes two to five years to complete, but may take longer. The FDA receives reports on the progress of each phase of clinical testing, and it may require the modification, suspension or termination of clinical trials if it concludes that an unwarranted risk is presented to patients.

If clinical trials of a new product are completed successfully, the sponsor of the product may seek FDA marketing approval. If the product is regulated as a drug, the FDA will require the submission and approval of a new drug application, or NDA, before commercial marketing of the drug. The NDA must include detailed information about the drug and its manufacture and the results of product development, preclinical studies and clinical trials. The testing and approval processes require substantial time and effort, and we cannot guarantee that any approval will be granted on a timely basis, if at all. If questions arise during the FDA review process, approval can take more than five years. Even with the submissions of relevant data, the FDA may ultimately decide that the NDA does not satisfy its regulatory criteria for approval and deny approval or require additional clinical studies. In addition, the FDA may condition marketing approval on the conduct of specific post-marketing studies to further evaluate safety and effectiveness. Even if FDA regulatory clearances are obtained, a marketed product is subject to continual review. Later discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions.

Medical Devices

Any device products that we may develop are likely to be regulated by the FDA as medical devices rather than drugs. The nature of the FDA requirements applicable to devices depends on their classification by the FDA. A device developed by us would be automatically classified as a Class III device, requiring pre-market approval, unless the device was substantially equivalent to an existing device that has been classified in Class I or Class II or to a pre-1976 device that has not yet been classified or we convince the FDA to reclassify the device as Class I or Class II. Class I or Class II devices require registration through the 510(k) exemption. If we were unable to demonstrate such substantial equivalence and unable to obtain

reclassification, we would be required to undertake the costly and time-consuming process, comparable to that for new drugs, of conducting preclinical studies, obtaining an investigational device exemption to conduct clinical tests, filing a pre-market approval application, and obtaining FDA approval.

If the device were a Class I product, the general controls of the Federal Food, Drug, and Cosmetic Act, chiefly adulteration, misbranding and good manufacturing practice requirements, would nevertheless apply. If substantial equivalence to a Class II device could be shown, the general controls plus special controls, such as performance standards, guidelines for safety and effectiveness, and post-market surveillance, would apply. While demonstrating substantial equivalence to a Class I or Class II product is not as costly or time-consuming as the pre-market approval process for Class III devices, it can in some cases also involve conducting clinical tests to demonstrate that any differences between the new device and devices already on the market do no affect safety or effectiveness. If substantial equivalence to a pre-1976 device that has not yet been classified has been shown, it is possible that the FDA would subsequently classify the device as a Class III device and call for the filing of pre-market approval applications at that time. If the FDA took that step, then filing an application acceptable to the FDA would be a prerequisite to remaining on the market.

Employees

As of March 31, 2006, we employed 161 people, including 148 people on a full-time basis, 159 in the United States and two internationally. Of these, 33 employees hold Ph.D.s and 39 hold advanced degrees. We have experienced no work stoppages and believe that our employee relations are good.

Facilities

Our corporate headquarters are located in Roanoke, Virginia, and, in late 2006, we will move into 20,000 square feet of leased office space currently under construction at the Riverside Center in Roanoke, Virginia. Additional administrative functions currently located in 14,700 square feet of space in Blacksburg, Virginia, under a lease expiring June 30, 2006 will be moved to the corporate headquarters when construction is complete.

We lease an additional 15,000 square feet of space in Blacksburg, Virginia for research, development, manufacturing and administrative functions. Our Luna Technologies Division occupies an additional 6,310 square foot facility space in Blacksburg, Virginia, also for research, development, manufacturing and administrative functions. In the third quarter of 2006, all of our Blacksburg, Virginia, research, development and manufacturing functions will be consolidated into 32,000 square feet of newly leased space in Blacksburg.

Our Luna nanoWorks Division occupies a 24,000 square foot facility in Danville, Virginia for nanomaterials manufacturing and research and development.

Our facility in Charlottesville, Virginia currently occupies approximately 8,000 square feet for research and development of molecular technology solutions. Our facility in Hampton, Virginia, which is located near the NASA Langley Research Center, occupies approximately 10,000 square feet for research and development of non-destructive evaluation and certain ultrasonic technologies. We also maintain additional office space in McLean, Virginia.

We believe that our existing facilities are adequate for our current needs and suitable additional or substitute space will be available as needed to accommodate expansion of our operations.

Legal Proceedings

We are not party to any material legal proceedings, nor are we currently aware of any threatened material proceedings. From time to time, we may become involved in litigation in relation to claims arising out of our operations in the normal course of

business. While management currently believes the amount of ultimate liability, if any, with respect to these actions will not materially affect our financial position, results of operations, or liquidity, the ultimate outcome of any litigation is uncertain. Were an unfavorable outcome to occur, or if protracted litigation were to ensue, the impact could be material to us.

In March 2003, the Office of Inspector General of the Department of Commerce advised us that the government was investigating anonymous allegations of contract improprieties. We have cooperated fully and extensively with that investigation through interviews and document production. In April 2003, the government advised our regulatory counsel that to date no wrongdoing had been identified, although the government indicated that we may not have fully complied with contractual reporting requirements in one or two instances, which the government did not specify. We believe that the investigation has been resolved favorably, based on statements by the government investigator to company employees in June 2003, and that this matter effectively is at an end absent any advice or communication from the government to the contrary. However, if the government pursues this investigation further, there can be no assurance as to how or whether our relationships, business, financial condition or results of operations will ultimately be affected.

On November 9, 2004, we received a subpoena from the Department of Defense's Office of the Inspector General covering certain government research contracts awarded to us between January 1, 1998 and November 9, 2004 to determine if we had duplicated work in our submission of project reports to the government. In connection with the investigation, the government alleged that duplication occurred in three research reports that we prepared under the contracts. We submitted a response to the Inspector General in September 2005 challenging the government's findings. On November 15, 2005, we entered into a settlement agreement with the government and received a general release with respect to the civil and administrative claims in this matter in return for a payment of $165,333.

In July 2005, we received a letter from legal counsel retained by a former employee that such law firm is investigating whether such former employee has any claims against us, including breaches of contract, fiduciary duty, implied covenants of good faith and fair dealing as well as potential violations of minority stockholder rights that such former employee may have as a stockholder in one of our subsidiaries. In 2006, we responded to additional inquiries from counsel for such former employee seeking information about the relationship between us and the subsidiary in which the employee holds stock. Although we believe none of these potential claims has merit, we cannot currently predict whether such former employee will file litigation against us or the ultimate outcome of any such potential litigation.

Advisory Board

We have assembled a twelve member advisory board of leaders with backgrounds in government, academia and industry with which we consult on a formal basis regarding strategic and technical matters. In general, they serve on an exclusive basis within a defined field of collaboration. In connection with their appointment to and as consideration for their service on the advisory board, each advisor receives a stock option grant to purchase 5,000 shares of our common stock.

Our advisory board members include:

Frank Bonsal, Jr. is co-founder of the venture capital firm New Enterprise Associates, or NEA, where he has focused on the development of its early stage companies. He is also a co-founder of Red Abbey Venture Partners in Lutherville, Maryland and he is a special limited partner of Amadeus Capital Partners, Boulder Ventures, Novak Biddle Venture Partners, Trellis Ventures and Windward Ventures. Mr. Bonsal's current board memberships include Advertising.com, Inc., CeraTech and Cibernet Corporation. Mr. Bonsal is also a member on the Johns Hopkins Hospital Endowment Board. Prior to founding NEA, Mr. Bonsal was a general partner of Alex. Brown & Sons Inc.

Terry Brady was most recently employed by Oridion Systems Ltd. to launch a new division in the United States. Prior to joining Oridion Systems Ltd., Mr. Brady founded Array Medical, Inc., where he served as President and Chief Executive Officer. Before founding Array Medical, Inc., Mr. Brady was President of International Technidyne Corporation Commercial Group.

Business

Ronald E. Carrier, Ph.D. is currently president emeritus of James Madison University, where he served previously as President for 27 years. During his presidency, James Madison University changed from a teachers' college to a major comprehensive university. Dr. Carrier has been active on a number of national and state commissions and has been a board member of several companies that have been acquired by Fortune 200 companies.

John F. Hay is currently a principal with P3 Consulting, LLC in Washington, D.C. Mr. Hay has over 40 years of experience in the national security arena having served twelve years as an industry executive and thirty one years in uniform with the Department of the Navy. In 2000, Mr. Hay was appointed to the Bush-Cheney Transition Advisory Committee and subsequently served as an advisor to the Secretary of Defense and the NASA Administrator. He currently serves as an advisor to the Secretary of the Army and is a member of the Army Science Board. During his time in industry, Mr. Hay was Senior Vice President, Corporate and International Affairs for Westinghouse Electric and CBS Corporation. Before joining Westinghouse, Mr. Hay spent five years as a Congressional Affairs Officer in the Office of the Secretary of the Army. During the previous twenty-six years, his military service included serving in the Chief of Staff of the Army's Office and a series of command and staff assignments in Infantry, Special Operations, Intelligence and Military Police units. Mr. Hay received his bachelors degree from the University of Nebraska, his masters degree from Wichita State University and is a graduate of the U.S. Army Command and Staff College and the FBI National Academy.

Charles Edward Hamner, Jr. DVM, Ph.D. is currently the President and CEO of Hamner Advisory Service; he specializes in management in the pharmaceutical and health care industries and academic administration. From 1988-2002 Dr. Hamner served as President and CEO of the North Carolina Biotechnology Center, and was a Research Professor in the OB/GYN Department at the University of North Carolina at Chapel Hill. He has also worked as Associate Vice President for Health Affairs at the University of Virginia Medical Center (1978-1988), and served as Interim Executive Director for the Center in 1981. Dr. Hamner received his bachelors degree in Animal Science from Virginia Tech and his masters degree in Chemistry, DVM in Veterinary Medicine and Ph.D. in Bio-Chemistry from the University of Georgia.

Sir Harold W. Kroto is one of the co-recipients of the 1996 Nobel Prize in Chemistry. Dr. Kroto's Nobel Prize was based on his co-discovery of buckminsterfullerene, a form of pure carbon better known as "buckyballs." Dr. Kroto earned his Doctorate in chemistry from the University of Sheffield. He started his academic career at the University of Sussex at Brighton in 1967, where he became a professor in 1985 and, in 1991 was made a Royal Society Research Professor.

The Honorable John O. Marsh Jr. is currently a Senior Fellow at the National Center for Technology and Law and a Distinguished Adjunct Professor at the George Mason University School of Law. Prior to that, Mr. Marsh served in the U.S. House of Representatives for Virginia, as Secretary of the Army for eight years, and as National Security Advisor to Vice President and, later, President Gerald R. Ford. Mr. Marsh is also the former Chairman and interim Chief Executive Officer of Novavax, Inc., a specialty biopharmaceutical company. Mr. Marsh received his law degree from Washington and Lee University.

John B. Noftsinger, Jr., Ph.D. is currently the Associate Vice President of Academic Affairs for Research and Program Innovation, the Executive Director of the Institute for Infrastructure and Information Assurance, and an Associate Professor of Integrated Science and Technology and Education at James Madison University, where he specializes in interdisciplinary program and grant development. Dr. Noftsinger is also the Co-Chair of the Virginia Research and Technology Advisory Committee and the Chair of the Virginia Technology Alliance.

Jay Sculley, Ph.D. is the Chairman Emeritus and former Chairman, President and Chief Executive Officer of The Allied Defense Group, Inc. Dr. Sculley was previously the Director of Advanced Studies and Technologies at Grumman Corporation. Dr. Sculley served as the Assistant Secretary for Research and Development for the U.S. Army during President Ronald Reagan's administration. In addition, Dr. Sculley was a professor and Dean of the Department of Civil Engineering at the Virginia Military Institute, where he also served as a member of the Board of Visitors.

Business

Jerre Stead is currently Chairman of IHS, Inc. and is the former Chairman and Chief Executive Officer of Ingram Micro Inc. He previously served as Chief Executive Officer of Legent Corporation, Chairman and Chief Executive Officer of AT&T Global Information Solutions, and Chairman, President, and Chief Executive Officer of Square D Company. Mr. Stead also serves on the board of directors of TBG, Armstrong World Industries, Inc., Brightpoint, Inc., Conexant Systems, Inc., Mindspeed Technologies, Inc., and Mobility Electronics, Inc.

G. Kim Wincup is senior vice president of Science Applications International Corporation. Mr. Wincup previously served as counsel to the U.S. House of Representatives Armed Services Committee and U.S. House of Representatives Veterans Affairs Committee, as staff director of the U.S. House of Representatives Armed Services Committee and the Joint Committee on the Organization of Congress, and as Assistant Secretary of both the Air Force and the Army. Mr. Wincup has a bachelors degree in Political Science from DePauw University, and received a law degree from the University of Illinois School of Law.

General Larry D. Welch was formally the U.S. Air Force Chief of Staff. As Chief, he served as the senior uniformed Air Force Officer responsible for the organization, training and equipage of a combined active duty, Guard, Reserve and civilian force serving at locations in the United States and overseas. As a member of the Joint Chiefs of Staff, he and the other service chiefs functioned as the principal military advisers to the secretary of defense, National Security Council and the President. General Welch received a bachelor’s degree in Business Administration from the University of Maryland and a Masters Degree in International Relations from the George Washington University. General Welch completed Armed Forces Staff College at Norfolk, Va., in 1967, and National War College at Fort Lesley J. McNair, Washington, D.C., in 1972.

Management

Executive Officers and Directors

The following table sets forth certain information concerning our current executive officers and directors as of March 31, 2006:

Name	Age	Position	Director or Executive Officer Since
Kent A. Murphy, Ph.D.	47	President, Chief Executive Officer, Secretary, Treasurer and Chairman of the Board of Directors	1990
Scott A. Graeff	39	Chief Financial Officer and Executive Vice President, Corporate Development	2005
John T. Goehrke	48	Chief Operating Officer	2005
Scott A. Meller	39	President, Contract Research Group	2000
Kenneth D. Ferris	58	President, Luna Advanced Systems Division	2005
Robert P. Lenk, Ph.D.	58	President, Luna nanoWorks Division	2005
N. Leigh Anderson, Ph.D.	56	Director	2006
John C. Backus, Jr.(1)(2)	47	Director	2005
Bobbie Kilberg	61	Director	2006
Edward G. Murphy, M.D.(1)(3)	50	Director	2005
Richard W. Roedel(1)(2)(3)	56	Director	2005
Paul E. Torgersen, Ph.D.(2)(3)	74	Director	2000

(1) Member of our nominating and corporate governance committee.
(2) Member of our audit committee.
(3) Member of our compensation committee.

Kent A. Murphy, Ph.D., our founder, has served as our President, Chief Executive Officer, Secretary, Treasurer and Chairman of the Board since 1992. Dr. Murphy received his Ph.D. in Electrical Engineering from Virginia Polytechnic Institute and State University and is formerly a tenured professor in Virginia Tech's Bradley Department of Engineering, where he filed for over 35 patents. In 2001, he was named SBIR Entrepreneur of the Year and in 2004 was named Outstanding Industrialist of the Year by Virginia's Governor Warner. Dr. Murphy is the founding member of The Accelerating Innovation Foundation, a non-profit organization whose goal is to promote and facilitate development of a technology innovation cluster in the Mid-Atlantic region. Dr. Murphy is not related to Edward G. Murphy, M.D., a member of our board of directors.

Scott A. Graeff has served as our Chief Financial Officer since July 2005 and was a member of our Board of Directors from August 2005 until March 2006. In addition, he currently serves as our Executive Vice President, Corporate Development. From December 1999 to June 2001, Mr. Graeff served as Chief Financial Officer of Liquidity Link, a software development company. From June 2001 to August 2002, Mr. Graeff served as President and Chief Financial Officer of Autumn Investments. From August 2002 until July 2005, Mr. Graeff served as a Managing Director for Gryphon Capital Partners, a venture capital investment group. From August 2003 until July 2005, Mr. Graeff also served as the Acting Chief Financial Officer of Luna Technologies, Inc. Mr. Graeff is presently a member of the Board of Directors of Provox Technologies Corporation, a provider of speech recognition-based medical documentation and workflow management systems, a position he has held since June 2004. Mr. Graeff holds a B.S. in Commerce from the University of Virginia.

John T. Goehrke has served as our Chief Operating Officer since September 2005. From August 2003 to September 2005, Mr. Goehrke served as President and Chief Executive Officer of Luna Technologies, Inc. From April 2000 to April 2003, Mr. Goehrke served as General Manager of the Access Division of Acterna, LLC, a provider of communications test solutions

for telecommunications and cable network operators. Mr. Goehrke holds a B.S. in Electrical Engineering from the University of Connecticut and a M.B.A. from the University of Pittsburgh.

Scott A. Meller has served as our President, Contract Research Group, since September 2005. From May 2004 to September 2005, Mr. Meller served as our Chief Operating Officer. From October 2002 to May 2004, Mr. Meller served as our Vice President of Research and Development and previously served as Director of Engineering from September 2000 to October 2002. Mr. Meller joined Luna Innovations in 1996 and was a major contributor to early research that led to spin-offs and new products, including Luna Technologies, Inc. Mr. Meller holds a B.S. in Electrical Engineering from Clemson University, a M.S. in Electrical Engineering from Virginia Tech, and is a licensed Professional Engineer. He also holds three patents in optical fiber sensors and devices.

Kenneth D. Ferris has served as President of our Luna Advanced Systems Division since December 2005. Prior to joining Luna iMonitoring as Director in 2002, Ken was with Carrier Access, where as VP and General Manger of Broadband Terminal Products, he was responsible for Product Development and Product Management activities. Ken joined Carrier Access in August of 2000 when Carrier acquired Millennia Systems, a company he co-founded with Dr. Phil Couch. Prior to starting Millennia in 1998, Ken was a Vice President for FiberCom, as part of the team who developed the company from infancy to maturity. Prior to joining FiberCom he was with ITT -EOPD in Roanoke for three years. Ken spent the first 10 years of his career in the U.S. Department of Defense performing systems engineering and program management for a variety of projects. Ken led the partnership of Luna iMonitoring with IHS in 2003. Mr. Ferris holds a B.S. in Electrical Engineering from Virginia Tech.

Robert P. Lenk, Ph.D. has served as President of our Luna nanoWorks Division since August 2005. Since December 2003, Dr. Lenk has served as President of Oncovector Inc., a biopharmaceutical company. Dr. Lenk has also served as a member of Oncovector's Board of Directors since May 2003. From July 1999 to September 2003, Dr. Lenk was President and Chief Executive Officer of Therapeutics 2000, an inhalation pharmaceutical research company. Dr. Lenk holds a Ph.D. in Cell Biology from the Massachusetts Institute of Technology.

N. Leigh Anderson, Ph.D. has served as a member of our board of directors since March 2006. Since 2002, Dr. Anderson has served as the Chief Executive Officer of the Plasma Proteome Institute, a scientific research institute in Washington, D.C., of which he is also a founder. Dr. Anderson is currently a member of the Board of Directors and a member of the Audit Committee of Dade Behring Holdings, Inc. (DADE), a Nasdaq-traded company. Dr. Anderson also consults through Anderson Forschung Group, of which he has been a Principal since 2002. From 2001 to 2002, Dr. Anderson served as the Chief Scientific Officer and a member of the board of directors of Large Scale Biology Corporation, a biotechnology corporation that previously traded on Nasdaq under the symbol "LSBC" and ceased operations in December 2005. Dr. Anderson earned a B.A. in Physics from Yale University and a Ph.D. in Molecular Biology from Cambridge University.

John C. Backus, Jr. has served as a member of our board of directors since September 2005. Mr. Backus is a member of our audit committee and chairman of our nominating and corporate governance committee. Since 1999, Mr. Backus has served as a Managing Director and Partner at Draper Atlantic, an early stage information technology venture capital firm based in Northern Virginia which he co-founded. Prior to founding Draper Atlantic, Mr. Backus was a founder and the President and Chief Executive Officer of InteliData Technologies Corporation, a developer of software products and services for the financial services industry. Mr. Backus earned a B.A. in Economics and an M.B.A. from Stanford University.

Bobbie Kilberg has served as a member of our board of directors since March 2006. She is the President and CEO of the Northern Virginia Technology Council, or NVTC, the largest technology council in the United States. In addition, she was appointed by President George W. Bush to serve on the President's Council of Advisors on Science and Technology, or PCAST, and also serves on the Board of Trustees/Board of Directors of George Washington University, Washington D.C. public television station WETA, the Wolf Trap Foundation for the Performing Arts, United Bank - Virginia, and the Advisory Board of George Mason University's School of IT & Engineering. Ms. Kilberg has served on the Attorney General of Virginia's Task Forces on Identity Theft and on Regulatory Reform and Economic Development. Among her prior professional positions, Ms. Kilberg served as Deputy Assistant to the President for Public Liaison and Deputy Assistant to the President for Intergovernmental Affairs for President George H.W. Bush, as Associate Counsel to President Gerald R. Ford, as Vice President and General Counsel of the Roosevelt Center for American Policy Studies, as an attorney at Arnold & Porter, and

as a White House Fellow in the Nixon Administration. Ms. Kilberg received her law degree from Yale University, a Masters Degree in Political Science from Columbia University and a Bachelors Degree from Vassar College.

Edward G. Murphy, M.D. has served as a member of our board of directors since September 2005. Dr. Murphy is chairman of our compensation committee and a member of our nominating and corporate governance committee. Since January 2001, Dr. Murphy has served as President and Chief Executive Officer of Carilion Health System, where he served as Executive Vice President and Chief Operating Officer from January 2000 until January 2001. Dr. Murphy holds a B.S. in Biochemistry and Economics from the University of New York at Albany and an M.D. from Harvard Medical School. Dr. Murphy is not related to Kent A. Murphy, Ph.D., our President, Chief Executive Officer, Secretary, Treasurer and Chairman of our board of directors.

Richard W. Roedel has served as a member of our board of directors since September 2005. Mr. Roedel is chairman of our audit committee and a member of our nominating and corporate governance and compensation committees. From 1985 through 2000, he was employed by BDO Seidman, LLC as an Audit Partner, later being promoted in 1990 to Managing Partner in Chicago and then Managing Partner in New York in 1994 and finally in 1999 to Chairman and Chief Executive Officer. In October of 2002, he joined the Board of Directors of Take-Two Interactive Software, Inc. (TTWO) as Chairman of the Audit Committee and served in several capacities through June 2005, including Chairman and Chief Executive Officer. Mr. Roedel is currently a member of the Board of Directors and Chairman of the Audit Committees of two Nasdaq traded companies, Brightpoint, Inc. (CELL) and Dade Behring Holdings, Inc. (DADE), and a member of the Board of Directors of IHS, Inc., a NYSE traded company. He is also a member of the Board of Directors of the Association of Audit Committee Members, Inc., a not-for-profit organization dedicated to strengthening the audit committee by developing best practices. Mr. Roedel holds a B.S. in Accounting and Economics from The Ohio State University and is a Certified Public Accountant.

Paul E. Torgersen, Ph.D. has served as a member of our board of directors since 2000. Dr. Torgersen is a member of our audit and compensation committees. Dr. Torgersen is President Emeritus of Virginia Tech where he has served as the John W. Hancock Chair in Engineering since January 2000. From 1993 until 2000, Dr. Torgersen served as President of Virginia Tech. Dr. Torgersen currently serves on the board of directors of Electrical Distribution Design and formerly served on the board of Roanoke Electric Steel Corporation. Dr. Torgersen holds a B.S. in Industrial Engineering from Lehigh University and a M.S. and Ph.D. in Industrial Engineering from The Ohio State University.

Significant Employees

Certain of our key employees who are not also executive officers or directors are as follows:

Name	Age	Position
Mark Froggatt, Ph.D.	36	Chief Technology Officer
Joseph S. Heyman, Ph.D.	62	Chief Scientific Officer
Kenneth L. Walker, Ph.D.	53	Executive Vice President of Luna nanoWorks Division
Stephen R. Wilson, Ph.D.	59	Chief Technical Officer of Luna nanoWorks Division

Mark Froggatt, Ph.D. has been our Chief Technology Officer since September 2005. He co-founded Luna Technologies in the fall of 2000 to develop instrumentation for fiber optic devices. Dr. Froggatt is the primary inventor of the technology used in the OVA and a leading expert in the field of interferometric measurement. Before joining Luna Technologies, Dr. Froggatt worked at the NASA Langley Research Center developing ultrasonic and optical instrumentation for which he received eight patents. He received his B.S. and M.S. degrees in Electrical Engineering from Virginia Tech and a Ph.D. from the University of Rochester Institute of Optics.

Joseph S. Heyman, Ph.D. has served as our Chief Scientific Officer since May 2003. Dr. Heyman has over 30 patents and the distinction of winning four international IR-100 awards as one of the 100 most significant technology developments of the year. Dr. Heyman served as Vice President and Chief Technology Officer of Nascent Technology Solutions from July 2001 to May 2003. He had a 36 year career at the NASA Langley Research Center, retiring as the Langley Chief Technologist for the

Director. Dr Heyman is an Adjunct Professor of Physics and Applied Science at The College of William and Mary. He received his B.A. in Physics from Northeastern University and his M.A. in Solid State Physics and Physical Acoustics and his Ph.D. in Solid State Physics and Ultrasonics at Washington University.

Kenneth L. Walker, Ph.D. has served as Executive Vice President of our Luna nanoWorks Division since May 2005. Dr. Walker founded a specialty photonic devices business within Lucent Technologies Inc. which grew from a concept to a business with over $200.0 million in revenues. Upon the divestiture of this business to Furukawa Co., Ltd., Dr. Walker continued as President of the division. Dr. Walker received his undergraduate degree from the California Institute of Technology and his Ph.D. degree from Stanford University.

Stephen R. Wilson, Ph.D. has served as Chief Technical Officer of our Luna nanoWorks Division since May 2004 and served as acting Chief Executive Officer of our Luna nanoWorks Division from May 2004 until May 2005. From 1985 through 2004, he served in a tenured faculty position in the Chemistry department at New York University. He founded and served as Chief Executive Officer of Sphere Biosystems, Inc., a fullerene biomedical company which was the predecessor of C Sixty Inc., a bionanotechnology company. Dr. Wilson is the author of more than 220 peer-reviewed articles, books, book chapters and patents. Dr. Wilson received his B.A. in Chemistry and M.S. and Ph.D. in Organic Chemistry from Rice University.

Executive Officers

Our executive officers are elected by, and serve at the discretion of, our board of directors.

Board of Directors

Our authorized number of directors is seven. Upon completion of this offering, our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes, each with staggered three-year terms: Class I, Class II and Class III. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Dr. Edward Murphy and Dr. Kent Murphy have been designated as Class I directors, whose terms will expire at the 2007 annual meeting of stockholders. Bobbie Kilberg, and Dr. Paul Torgersen have been designated as Class II directors, whose terms will expire at the 2007 annual meeting of stockholders. Mr. John Backus, N. Leigh Andersen and Mr. Richard Roedel have been designated as Class III directors, whose terms will expire at the 2008 annual meeting of stockholders. This classification of the board of directors may delay or prevent a change in control of our company or our management. See “Description of capital stock—Anti-Takeover Effects of Provisions of the Amended and Restated Certificate of Incorporation and Bylaws.”

A majority of the members of our board of directors, who are N. Leigh Anderson, Ph.D., John C. Backus, Jr., Bobbie Kilberg, Edward G. Murphy, M.D., Richard W. Roedel and Paul E. Torgersen, Ph.D., are independent within the meaning of applicable Nasdaq rules.

Board Committees

Our board of directors has an audit committee, a compensation committee, and a nominating and governance committee.

Audit Committee. The audit committee of our board of directors recommends the appointment of our independent auditors, reviews our internal accounting procedures and financial statements, and consults with and reviews the services provided by our independent auditors, including the results and scope of their audit. The audit committee is currently comprised of John C. Backus, Jr., Richard W. Roedel and Paul E. Torgersen, Ph.D., each of whom is independent, within the meaning of the requirements of the Sarbanes-Oxley Act of 2002, and applicable SEC and Nasdaq rules. Richard W. Roedel is chairman of our audit committee as well as our audit committee financial expert, as currently defined under the SEC rules

implementing the Sarbanes-Oxley Act of 2002. We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, The Nasdaq National Market, and SEC rules and regulations.

Compensation Committee. The compensation committee of our board of directors reviews and recommends to our board of directors the compensation and benefits for all of our executive officers, administers our stock plans, and establishes and reviews general policies relating to compensation and benefits for our employees. The compensation committee is currently comprised of Edward G. Murphy, M.D., Richard W. Roedel and Paul E. Torgersen, Ph.D., each of whom is independent, within the meaning of Nasdaq rules. Edward G. Murphy, M.D. is chairman of our compensation committee. We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, The Nasdaq National Market, and SEC rules and regulations.

Nominating and Governance Committee. The nominating and governance committee of our board of directors is responsible for:

- reviewing the appropriate size, function and needs of the board of directors;
- developing the board's policy regarding tenure and retirement of directors;
- establishing criteria for evaluating and selecting new members of the board, subject to board approval thereof;
- identifying and recommending to the board for approval individuals qualified to become members of the board of directors, consistent with criteria established by the committee and by the board;
- overseeing the evaluation of management and the board; and
- monitoring and making recommendations to the board on matters relating to corporate governance.

The nominating and governance committee currently consists of John C. Backus, Jr., Edward G. Murphy, M.D., and Richard W. Roedel each of whom is independent, within the meaning of applicable Nasdaq rules. John C. Backus, Jr. is chairman of our nominating and corporate governance committee. We believe that the composition and functioning of our nominating and governance committee complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, The Nasdaq National Market, and SEC rules and regulations.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has, at any time, been one of our officers or employees. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Director Compensation

Our non-employee directors are reimbursed for certain of their out-of-pocket expenses incurred in connection with attending board and committee meetings. In the past, we have granted to our directors options to purchase our common stock pursuant to the terms of our 2003 Stock Plan. Each non-employee director appointed to the board after the completion of this offering will receive an initial option under our 2006 Equity Incentive Plan to purchase 56,523 shares of common stock upon such appointment except for those directors who become non-employee directors by ceasing to be employee directors. This option will vest as to 18,841 shares subject to the option on the first anniversary of the date of grant and as to 1,570 shares each month thereafter, subject to the director's continued service on each relevant vesting date. All options granted under these provisions have a term of ten years and an exercise price equal to fair market value on the date of grant. See "—Benefit Plans" below for further information.

Management

Executive Compensation

The following table sets forth the summary information concerning compensation during 2005 for the following persons: (i) our chief executive officer, (ii) those of our executive officers who received compensation during 2005 of at least $100 thousand and who were executive officers on December 31, 2005, and (iii) two additional former executive officers who would have been included under clause (ii) above if they had been executive officers on December 31, 2005. We refer to these persons as our "named executive officers" elsewhere in this prospectus. Except as provided below, none of our named executive officers received any other compensation required to be disclosed by law or in excess of 10% of their total annual compensation.

Summary Compensation Table

		Annual Compensation		Long Term Compensation Awards	
Name and Position	Year	Salary ($)	Bonus ($)	Securities Underlying Options (#)	All Other Compensation ($)
Kent A. Murphy, Ph.D. President, Chief Executive Officer, Secretary, Treasurer and Chairman of the Board of Directors	2005	$210,208	$32,120	113,046	$6,708(1)
Scott A. Graeff(2) Chief Financial Officer and Executive Vice President, Corporate Development	2005	76,318	26,250	226,092	1,181(3)
Scott A. Meller President, Contract Research Group	2005	125,401	609	—	4,410(4)
Robert P. Lenk, Ph.D.(5) President, Luna nanoWorks Division	2005	68,993	15,566	113,046	76,491(6)
Stephen R. Wilson, Ph.D.(7) Chief Technical Officer, Luna nanoWorks Division	2005	200,641	974	84,785	11,546(8)
Michael F. Gunther(9) Vice President, Patents and Licensing	2005	129,864	180,604(10)	—	5,026(11)

(1) Reflects $6,708 in 401(k) matching contributions made by us.
(2) On July 1, 2005, Mr. Graeff was appointed our Chief Financial Officer, and subsequently our Executive Vice President, Corporate Development.
(3) Reflects $1,181 in 401(k) matching contributions made by us.
(4) Reflects $4,410 in 401(k) matching contributions made by us.
(5) On August 13, 2005, Dr. Lenk was appointed President of Luna nanoWorks Division.
(6) Reflects $75,000 in consulting fees paid prior to Dr. Lenk becoming a full time employee and relocation expense reimbursement.
(7) Dr. Wilson served as executive officer in charge of Luna nanoWorks until May 2005.
(8) Reflects $6,707 in 401(k) matching contributions made by us as well as relocation expense reimbursement.
(9) Mr. Gunther served as an executive officer (Vice President of Operations) until September 30, 2005.

(10) Reflects payment made pursuant to that certain Cash Bonus Agreement dated March 21, 2003, by and between us and Mr. Gunther, whereby we were obligated to pay Mr. Gunther a fixed cash bonus over a period of three years, of which $180,000 remained due and payable after December 31, 2005 and has since been paid.
(11) Reflects $5,026 in 401(k) matching contributions made by us.

Option Grants in Last Fiscal Year

In 2005, we granted options to purchase an aggregate of 2,574,834 shares of our common stock to our employees, directors, advisory board members and consultants, all of which were granted under the 2003 Stock Plan. These options generally vest at the rate of 25% after one year of service from the date of grant, and monthly thereafter, in equal amounts, generally over 36 additional months.

These options have terms of no more than ten years, but may terminate before their expiration dates if the optionee's status as an employee, director or consultant is terminated, or upon the optionee's death or disability. See "—Benefit Plans" for more detail regarding these options.

We granted 536,969 stock options to our named executive officers during 2005.

Option Grants in Last Fiscal Year

Name	Number of Securities Underlying Options Granted(#)	% of Total Options Granted to Employees In Fiscal Year	Exercise of Base Price ($/Sh)	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Options Term	
					5%	10%
Kent A. Murphy, Ph.D.	113,046	4.4%	$0.39	5/20/15	$16,000	$36,000
Scott A. Graeff	56,523	2.2%	0.35	5/20/15	10,000	20,000
	22,609	0.8%	0.35	6/3/15	4,000	8,000
	56,523	2.2%	0.35	7/1/15	10,000	20,000
	90,437	3.5%	0.35	8/1/15	16,000	32,000
Scott A. Meller	—	—	—	—	—	—
Robert P. Lenk, Ph.D.	56,523	2.2%	0.35	5/20/15	10,000	20,000
	56,523	2.2%	1.77	10/26/15	50,000	100,000
Stephen R. Wilson, Ph.D.	84,785	3.3%	0.35	5/20/15	15,000	30,000
Michael F. Gunther	—	—	—	—	—	—

Aggregated Option Exercises in 2005 and Year-End Option Values

The following table sets forth certain information concerning the number and value of unexercised options held by each of the named executive officers, as of December 31, 2005. No options were exercised by the named executive officers in 2005. The value of in-the-money stock options represents the fair market value of the shares underlying the options, which is based upon the assumed initial public offering price of $12.00 per share, minus the exercise price per share, multiplied by the number of shares underlying the options.

2005 Aggregated Option Exercises and Year-End Values

Name	Number of Securities Underlying Unexercised Options at December 31, 2005		Value of Unexercised In-The-Money Options at December 31, 2005(2)	
	Exercisable	Unexercisable	Exercisable	Unexercisable
Kent A. Murphy, Ph.D.	—	113,046(1)	$ —	$ 1,312,464
Scott A. Graeff	169,569	56,523	1,975,479	658,493
Scott A. Meller	235,276	36,035	2,740,965	419,808
Robert P. Lenk, Ph.D.	—	113,046	—	1,236,723
Stephen R. Wilson, Ph.D.	—	84,785	—	987,745
Michael F. Gunther	—	—	—	—

(1) Excludes options to purchase 64,000 shares of common stock of Luna Analytics, Inc. at an exercise price of $0.11 per share granted on January 17, 2002, pursuant to the Luna Analytics, Inc. 2001 Stock Plan.
(2) Values based on the difference between the exercise price per share and the estimated initial public offering price per share.

Benefit Plans

The following section provides more details concerning our 2003 Stock Plan and 2006 Equity Incentive Plan.

2003 Stock Plan

Our 2003 Stock Plan was adopted by our board of directors and approved by our stockholders, as amended, on March 16, 2004. Our 2003 Stock Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants. We will not grant any additional options under our 2003 Stock Plan following this offering. Instead, we will grant options and other equity-based awards under our 2006 Equity Incentive Plan.

As of March 31, 2006, we have reserved a total of 9,715,000 shares of our common stock for issuance pursuant to the 2003 Stock Plan, of which 443,253 shares have been issued upon exercise of options granted under the 2003 Stock Plan. Also as of March 31, 2006, options to purchase 4,826,311 shares of common stock were outstanding and 221,646 shares were available for future grant under this plan. The maximum aggregate number of shares that may be subject to option and sold under the 2003 Stock Plan is 9,715,000 shares, unless adjusted by the administrator.

Our compensation committee appointed by our board of directors administers our 2003 Stock Plan. The administrator has the power to determine the terms of the options, including the service providers who will receive awards, the number of shares subject to each such option, the exercisability of options and the form of consideration payable upon exercise.

In addition, the administrator determines the exercise price of options granted under our 2003 Stock Plan. With respect to all incentive stock options, the exercise price may not be less than the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed ten years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed five years and the exercise price may not be less than 110% of the fair market value on the grant date. The administrator determines the term of all other options.

After termination of an employee, director or consultant, he or she may exercise his or her option for the period of time as the administrator may determine. In the absence of a specified time, the option will remain exercisable for three months following

termination other than by reason of death or disability and for twelve months following termination for death or disability. If, on the date of termination, the employee, director or consultant is not vested as to his or her entire option, the shares covered by the unvested portion of the option will revert to the 2003 Stock Plan.

Unless the administrator provides otherwise, our 2003 Stock Plan does not allow for the transfer of options other than by will or the laws of descent and distribution and only the recipient of an option may exercise an option during his or her lifetime.

Our 2003 Stock Plan provides that in the event of our "change in control," the successor corporation or its parent or subsidiary will assume or substitute an equivalent award for each outstanding option. If there is no assumption or substitution of outstanding options, the administrator will provide notice to the recipient that he or she has the right to exercise the option as to all of the shares subject to the option for a period of 15 days from the date of such notice. The option will terminate upon the expiration of that 15-day period.

Our 2003 Stock Plan will automatically terminate in 2014, unless we terminate it sooner. In addition, our board of directors has the authority to amend, suspend or terminate the 2003 Stock Plan, provided such action does not impair the rights of any participant. Our board of directors has decided to suspend the 2003 Stock Plan as of the completion of this offering.

2006 Equity Incentive Plan

Our board of directors recommended that our stockholders approve our 2006 Equity Incentive Plan on January 19, 2006, and the plan is pending their approval. Our 2006 Equity Incentive Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, stock appreciation rights, performance units and performance shares to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants.

We have reserved a total of 3,000,000 shares of our common stock for issuance pursuant to the 2006 Equity Incentive Plan plus (a) any shares remaining available for grant under our 2003 Stock Plan as of the effective date of this offering and (b) any shares that otherwise would have been returned to our 2003 Stock Plan on or after the effective date of this offering as a result of termination of options or the repurchase of shares issued under the 2003 Stock Plan. In addition, our 2006 Equity Incentive Plan provides for annual increases in the number of shares available for issuance thereunder on the first day of each fiscal year, beginning with our fiscal year 2007, equal to the least of:

- Ø 10% of the outstanding shares of our common stock on the first day of the fiscal year;
- Ø 3,000,000 shares; and
- Ø such other amounts as our board of directors may determine.

Our compensation committee of our board of directors administers our 2006 Equity Incentive Plan. In the case of awards intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Internal Revenue Code, the committee or a subcommittee of that committee granting the awards will consist of two or more "outside directors" within the meaning of Section 162(m) of the Code. The administrator has the power to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards and the form of consideration payable upon exercise. The administrator also has the authority to institute an exchange program whereby the exercise prices of outstanding awards may be reduced or outstanding awards may be surrendered in exchange for awards with a lower exercise price.

The administrator determines the exercise price of options granted under our 2006 Equity Incentive Plan, but with respect to all incentive stock options, the exercise price may not be less than the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed ten years, except that with respect to any participant who owns

more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed five years and the exercise price may not be less than 110% of the fair market value on the grant date. The administrator determines the term of all other options.

No optionee may be granted in any fiscal year an option to purchase more than 750,000 shares. However, in connection with his or her initial service, an optionee may be granted an option to purchase up to 2,750,000 shares.

After termination of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in the option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 12 months. In all other cases, the option will generally remain exercisable for three months. However, an option generally may not be exercised later than the expiration of its term.

Stock appreciation rights may be granted under our 2006 Equity Incentive Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the date of grant and the exercise date. The administrator determines the terms of stock appreciation rights, including when such rights become exercisable and whether to pay the appreciation in cash or with shares of our common stock, or a combination thereof; however, stock appreciation rights expire under the same rules that apply to stock options.

Restricted stock may be granted under our 2006 Equity Incentive Plan. Restricted stock awards are shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any participant. The administrator may impose whatever conditions to vesting it determines to be appropriate. For example, the administrator may set restrictions based on the achievement of specific performance goals. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Performance units and performance shares may be granted under our 2006 Equity Incentive Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance goals in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance units and performance shares to be paid out to participants. Performance units will have an initial dollar value established by the administrator prior to the grant date. Performance shares will have an initial value equal to the fair market value of our common stock on the grant date. Payment for performance units and performance shares may be made in cash or in shares of our common stock with equivalent value, or in some combination, as determined by the administrator.

Unless the administrator provides otherwise, our 2006 Equity Incentive Plan does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Our 2006 Equity Incentive Plan provides that in the event of our “change in control,” the successor corporation or its parent or subsidiary will assume or substitute an equivalent award for each outstanding award. If there is no assumption or substitution of outstanding awards, the administrator will provide notice to the recipient that he or she has the right to exercise the option and stock appreciation right as to all of the shares subject to the award, all restrictions on restricted stock will lapse, and all performance goals or other vesting requirements for performance shares and units will be deemed achieved, and all other terms and conditions met. The option or stock appreciation right will terminate upon the expiration of the period of time the administrator provides in the notice. In the event the service of an outside director is terminated on or following a change in control, other than pursuant to a voluntary resignation, his or her options and stock appreciation rights will fully vest and become immediately exercisable, all restrictions on restricted stock will lapse, and all performance goals or other vesting requirements for performance shares and units will be deemed achieved, and all other terms and conditions met.

Management

Our 2006 Equity Incentive Plan will automatically terminate in 2016, unless we terminate it sooner. In addition, our board of directors has the authority to amend, suspend or terminate the 2006 Equity Incentive Plan provided such action does not impair the rights of any participant.

Employment Agreements and Change in Control Arrangements

Employment at our company is at will. As discussed in note 14 of the Luna Technologies, Inc. 2004 financial statements included elsewhere in this prospectus, the president of that company previously had an employment agreement with Luna Technologies. In connection with our repurchase and consolidation of Luna Technologies, all employment agreements with employees in that subsidiary have been terminated. In the period from April 2005 through October 2005, we entered into officer employment letters with Scott A. Graeff, our Chief Financial Officer and Executive Vice President, Corporate Development, Robert P. Lenk, Ph. D., President of our Luna nanoWorks Division, John T. Goehrke, our Chief Operating Officer, Aaron S. Hullman, our Vice President and General Counsel, and Kenneth D. Ferris, President of our Luna Advanced Systems Division. These officer employment letters provide the officers with monthly salaries, ranging from $10,834 to $16,667, bonuses payable upon achievement of certain conditions or milestones, stock option grants and rights to participate in benefits plans, including our 401(k) retirement plan, health insurance plan, dental plan and life insurance plan, all as generally available to our executives.

Certain relationships and related party transactions

We describe below the transactions and series of similar transactions that have occurred this year or during the last three fiscal years to which we or our subsidiaries were a party or will be a party, in which:

- Ø the amounts involved exceeded or will exceed $60,000; and
- Ø a director, executive officer, holder of more than 5% of our common stock or any member of their immediate family had or will have a direct or indirect material interest.

Luna Technologies Acquisition

In September 2005, we acquired all of the outstanding shares of common stock and preferred stock of Luna Technologies that we did not already own in exchange for 582,884 shares of our Class B Common Stock, excluding 2,035 shares of our Class B Common Stock reserved for issuance upon the exercise of warrants that were exchanged for warrants formerly issued by Luna Technologies. An additional 111,013 shares of our Class B Common Stock and warrants exercisable for 388 shares of our Class B Common Stock were held in escrow at closing pending completion of certain additional equity investments by Carilion Health System, of which 41,634 shares and warrants exercisable for 145 shares were released from escrow on December 30, 2005 upon closing of an additional $3.0 million equity investment by Carilion Health System. The remaining 69,379 escrow shares and warrants exercisable for 242 shares are subject to either release from escrow or termination. In addition, the stockholders receiving shares of our common stock in connection with our acquisition of Luna Technologies have a redemption right for a certain percentage of the outstanding shares issued pursuant to that transaction. That redemption right will be cancelled upon the effectiveness of our offering.

Dr. Kent Murphy, our President, Chief Executive Officer, Secretary and Treasurer, was also Chairman of the Board of Directors of Luna Technologies immediately prior to the acquisition and a former stockholder of Luna Technologies. Shortly prior to this transaction, Dr. Murphy sold all of his shares of Luna Technologies stock to two other Luna Technologies stockholders for an aggregate purchase price of approximately $10,600; as a result, Dr. Murphy did not receive any additional shares of our common stock in connection with the transaction. Also, in connection with this transaction, John Goehrke, the Chief Executive Officer of Luna Technologies, became our Chief Operating Officer and Mark Froggatt, a founder and employee of Luna Technologies, became our Chief Technology Officer. All former employees of Luna Technologies as of September 30, 2005 who became employees of Luna Innovations after the transaction received options to purchase shares of our common stock, subject to a three year vesting schedule. An aggregate of 404,139 options were issued to former Luna Technologies employees in connection with this transaction. In addition, Mr. Goehrke received $75,000 from Luna Technologies as a bonus paid prior to close of that transaction, $150,000 from two other Luna Technologies stockholders and $25,000 from us as a signing bonus in connection with the transaction. Dr. Paul Torgersen, a member of our board of directors, was also a former stockholder in Luna Technologies and received common stock of Luna Innovations upon the same terms and conditions as other stockholders of Luna Technologies. Scott Graeff, a former member of our board of directors and our Chief Financial Officer and Executive Vice President, Corporate Development, was formerly acting Chief Financial Officer of Luna Technologies from August 2003 until July 2005.

Because there was no public market for our shares at the time of the transaction, the number of shares of our nonvoting Class B Common Stock paid as consideration in the transaction was arrived at by negotiating a percentage of the financial ownership of our company that the Luna Technologies stockholders would receive. As a result, the parties to the transaction did not assign a specific value to the shares issued in the transaction. The number of shares and percentage were determined by arms-length negotiations with the three largest stockholders of Luna Technologies prior to the acquisition. Subsequent to this transaction, we engaged an independent third-party appraiser, who estimated the value of Luna Technologies to be approximately $2.0 million as of September 30, 2005 and also estimated that our nonvoting Class B Common Stock was valued at $1.63 per share on that date, or $948,735 for the 582,884 shares that were issued at closing. The independent third-party appraiser also estimated that our nonvoting Class B Common Stock was valued at $1.65 per share on December 30, 2005, or $68,502 for the 41,634 shares that were released from escrow on that date.

Certain relationships and related party transactions

Financing Transactions

In August 2005, Carilion Health System purchased 1,492,031 shares of our Class C Common Stock for an aggregate purchase price of $7.0 million. Dr. Edward Murphy, Chairman and Chief Executive Officer of Carilion Health System, became a member of our board of directors in connection with this transaction and was appointed chair of the Compensation Committee of our board of directors in October 2005. The purchase price for the securities was negotiated at arms length by the parties. In connection with this transaction, Scott Graeff, a former member of our board of directors and our Chief Financial Officer and Executive Vice President, Corporate Development, received fully vested stock options to purchase 169,569 shares of our common stock.

In the definitive transaction documents relating to the August 2005 financing transaction, Carilion Health System agreed to purchase additional shares of our Class C Common Stock in two tranches for aggregate additional consideration of $8.0 million upon the achievement of certain milestones relating to, among other things, our filing of Investigational New Drug applications with the FDA. However, in December 2005, we agreed with Carilion Health System to terminate these milestone requirements in connection with Carilion Health System's purchase of an additional 639,441 shares of our Class C Common Stock for an aggregate purchase price of $3.0 million. Concurrent with the December 2005 equity investment, Carilion Health System invested $5.0 million aggregate principal amount in a series of senior convertible promissory notes. These notes accrue simple interest at a rate of 6.0% per year and are due and payable on December 30, 2009 or a later date if extended by the holders of a majority of the aggregate principal amount of the notes, absent acceleration due to an event of default. The holders of a majority of the aggregate principal amount of the notes may also extend the maturity date of these notes for one additional year by providing notice to us and may further extend the maturity date for up to an additional three consecutive one year periods if we are not eligible for or have elected not to pursue SBIR funding. After the first extension, if any, we will have the right to repay any accrued interest in cash rather than common stock. The holders of these notes have the option to convert their notes (subject to certain limitations) into shares of our common stock at maturity or upon the occurrence of certain events prior to this offering. In addition, the holders may convert their notes (subject to certain limitations) into shares of common stock if we are no longer eligible for SBIR grants or have not applied for an SBIR grant within the preceding 12 months. These notes entitle the holders to convert the principal amount of the notes into an aggregate of 1,065,736 shares of common stock and to convert accrued interest on the notes into up to an aggregate of 511,553 shares of our common stock. Under the terms of these notes, we agreed that we will not, without the prior written consent of the holders of a majority of the aggregate principal amount of the notes, draw down any amount under our existing senior secured revolving credit facility with First National Bank or incur additional indebtedness other than under certain limited conditions.

In addition, so long as Carilion Health System continues to hold any of the senior convertible promissory notes or 423,923 shares of voting common stock, and to the extent such technology is not restricted by other contractual arrangements in effect as of August 2, 2005, we have an obligation to disclose to Carilion Consolidated Laboratory for review on a confidential basis, that technology developed now or in the future by our employees or the employees of our affiliates which impacts, or has an application to, the clinical laboratory industry, at least sixty days prior to disclosing such technology to any third-party for purpose of commercialization. Carilion Consolidated Laboratory is an affiliate of Carilion Health System, and Dr. Edward Murphy, Chairman and Chief Executive Officer of Carilion Health System, is a member of our board of directors. We do not have an obligation to offer either Carilion Health System or Carilion Consolidated Laboratory the opportunity to participate in any of our commercialization efforts. The purpose of providing Carilion Consolidated Laboratory with a limited right to review this technology is to allow Carilion Consolidated Laboratory the opportunity to make a first offer to license or acquire this technology, but we will not be obligated to accept such offers, if any, from Carilion Consolidated Laboratory.

Finally, in connection with these transactions, we granted certain anti-dilution protections to Carilion Health System as holders of our Class C Common Stock. These protections provide that upon an initial public offering, all outstanding shares of Class C Common Stock shall convert at a rate resulting in conversion to 22.2% of the aggregate voting rights of Class A Common Stock and 20.06% of the outstanding shares of Class B Common Stock on a fully-diluted basis, both of which classes would automatically convert to shares of our common stock. Based on our capitalization at March 31, 2006 and our expected

capitalization upon this offering, Carilion Health System would receive an additional 367,710 shares of our common stock upon effectiveness of this offering.

Other Agreements with Executive Officers

Pursuant to that certain Cash Bonus Agreement dated March 21, 2003, by and between us and Michael Gunther, we were obligated to pay Mr. Gunther a fixed cash bonus over a period of three years, of which the last $180 thousand payment was made in January 2006. Mr. Gunther was formerly an executive officer, our Vice President of Operations, and he is currently our Vice President, Intellectual Property.

Lease

We have entered into an agreement with Carilion Medical Center to lease 20,000 square feet of office space currently being built at the Riverside Center in Roanoke, Virginia. The landlord of this property, Carilion Medical Center, is an affiliate of Carilion Health System, currently our second largest stockholder. Dr. Edward Murphy, Chairman and Chief Executive Officer of Carilion Health System became a member of our board of directors in connection with an investment by Carilion Health System in August 2005. Dr. Murphy was appointed chairman of the Compensation Committee of our board of directors in October 2005.

Registration Rights Agreements

In connection with the investment by Carilion Health System in August 2005 and its subsequent investment in December 2005, we entered into an amended and restated investor rights agreement dated as of December 30, 2005, with Carilion Health System and Dr. Kent Murphy. Dr. Murphy is our President, Chief Executive Officer, Secretary, Treasurer and Chairman and is also our largest individual stockholder. Pursuant to this agreement, under certain circumstances Carilion Health System and Dr. Kent Murphy are entitled to require us to register their shares of common stock under the securities laws for resale.

In connection with the acquisition of Luna Technologies in September 2005, we granted the former stockholders of Luna Technologies certain registration rights in the event we elect to file a registration statement for our common stock. Such rights are set forth in that certain Stock Purchase Agreement dated as of September 30, 2005 with the former stockholders of Luna Technologies. Unlike Carilion Health System, the former Luna Technologies stockholders do not have the right to require us to register their shares of common stock for resale if we are not otherwise filing a registration statement to sell securities. For additional information, see “Description of capital stock—Registration Rights.”

Indemnification Agreements

We have entered into an indemnification agreement with each of our directors and officers. The indemnification agreements and our amended and restated certificate of incorporation and bylaws require us to indemnify our directors and officers to the fullest extent permitted by Delaware law.

Principal stockholders

The following table sets forth certain information with respect to beneficial ownership of our common stock, as of March 31, 2006, after giving effect to the conversion of our Class A Common Stock, Class B Common Stock and Class C Common Stock into shares of our common stock, by:

- Ø each beneficial owner of 5% or more of the outstanding shares of our common stock;
- Ø each of our directors;
- Ø each of our named executive officers; and
- Ø all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of March 31, 2006 are deemed outstanding, but are not deemed outstanding for computing the percentage ownership of any other person. Percentage of beneficial ownership is based upon 6,505,267 shares of common stock outstanding as of March 31, 2006 after giving effect to the conversion of our Class A Common Stock, Class B Common Stock and Class C Common Stock into shares of our common stock which includes the conversion of Class C common stock such that an additional 367,710 is issued to Carilion Health Systems. To our knowledge, except as set forth in the footnotes to this table and subject to applicable community property laws, each person named in the table has sole voting and investment power with respect to the shares set forth opposite such person's name. Except as otherwise indicated, the address of each of the persons in this table is c/o Luna Innovations Incorporated, 10 South Jefferson Street, Suite 130, Roanoke, Virginia 24011.

	Beneficial Ownership Before Offering		Beneficial Ownership After Offering			
			Excluding Exercise of Over-allotment Option		Including Exercise of Over-allotment Option	
Name and Address of Beneficial Owner	Number of Shares	%	Number of Shares	%	Number of Shares	%
Carilion Health System (1) c/o Carilion Roanoke Memorial Hospital First Floor Roanoke, Virginia 24033	2,499,182	38.4%	2,499,182	23.8%	2,499,182	22.5%
Kent A. Murphy, Ph.D.	2,637,158	40.5%	2,637,158	25.1%	2,637,158	23.7%
Scott A. Graeff(2)	169,569	2.6%	169,569	1.6%	169,569	1.5%
Scott A. Meller(3)	235,276	3.6%	235,276	2.2%	235,276	2.1%
Robert P. Lenk, Ph.D.	—	*	—	*	—	*
N. Leigh Anderson, Ph.D.	—	*	—	*	—	*
John C. Backus, Jr.	—	*	—	*	—	*
Bobbie Kilberg	—	*	—	*	—	*
Edward G. Murphy, M.D. (1)	2,499,182	38.4%	2,499,182	23.8%	2,499,182	22.5%
Richard W. Roedel	—	*	—	*	—	*
Paul E. Torgersen, Ph.D. (4)	21,761	*	21,761	*	21,761	*
Stephen R. Wilson, Ph.D.	—	*	—	*	—	*
Michael F. Gunther	196,700	3.0 %	196,700	1.9%	196,700	1.8%
All executive officers and directors as a group (11 persons)(1)(5)	5,562,946	85.5%	5,562,946	53.0%	5,562,946	50.0%

* Represents less than 1% of the outstanding shares of common stock.

(1) Does not include $5.0 million aggregate principal amount of senior convertible promissory notes which convert into up to 1,065,736 shares of common stock or accrued interest on the notes into up to an aggregate of 511,553 shares of common stock. Edward G. Murphy, M.D. is the President and Chief Executive Officer of Carilion Health System and shares voting and

investment power over the shares beneficially owned by Carilion Health System with Don Lorton and Rob Vaughan, the Treasurer and Assistant Treasurer of Carilion Health System, respectively. Includes 367,710 shares of common stock issuable upon the effectiveness of this offering to Carilion Health System in connection with certain anti-dilution provisions afforded to that stockholder.

(2) Includes 169,569 shares subject to options that are immediately exercisable or exercisable within 60 days of March 31, 2005.

(3) Includes 235,276 shares subject to options that are immediately exercisable or exercisable within 60 days of March 31, 2005.

(4) Includes 21,761 shares subject to options that are immediately exercisable or exercisable within 60 days of March 31, 2005.

(5) Includes 426,606 shares subject to options that are immediately exercisable or exercisable within 60 days of March 31, 2005.

Description of capital stock

The following information describes our common stock and preferred stock, as well as our convertible securities and options and warrants to purchase our common stock and provisions of our amended and restated certificate of incorporation and bylaws. This description is only a summary. You should also refer to our amended and restated certificate of incorporation and bylaws, which have been filed with the Securities and Exchange Commission as exhibits to our registration statement, of which this prospectus forms a part.

Upon the completion of this offering our authorized capital stock will consist of 100,000,000 shares of common stock with a $0.001 par value per share, and 5,000,000 shares of preferred stock with a $0.001 par value per share.

Common Stock

As of March 31, 2006, after giving effect to the conversion of all outstanding Class A Common Stock, Class B Common Stock and Class C Common Stock into shares of common stock, there were an aggregate of 6,137,557 shares of common stock outstanding that were held of record by 44 stockholders. Based on our capitalization at March 31, 2006 and our expected capitalization upon this offering, an additional 367,710 shares of our common stock would be issued to Carilion Health System upon effectiveness of this offering in connection with certain anti-dilution provisions afforded to that stockholder. An additional 69,379 shares of Class B Common Stock issued or reserved for issuance in connection with the acquisition of Luna Technologies, Inc. were held in escrow on that date and will be cancelled prior to the completion of this offering. After giving effect to the sale of common stock offered in this offering, including the issuing of 367,710 to Carilion Health System pursuant to its anti-dilution rights available upon this offering, there will be 10,505,267 shares of common stock outstanding. As of March 31, 2006, there were outstanding options to purchase a total of 4,826,311 shares of our Class B Common Stock under our 2003 Stock Plan, which options will be automatically converted into options to purchase shares of our common stock upon completion of this offering. We recently adopted our 2006 Equity Incentive Plan, under which no options have been issued as of yet.

Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the shares voting are able to elect all directors being elected at such time. Subject to preferences that may be granted to any then outstanding preferred stock, holders of common stock are entitled to receive ratably only those dividends as may be declared by the board of directors out of funds legally available therefor. See “Dividend policy.” In the event of our liquidation, dissolution or winding up, holders of common stock are entitled to share ratably in all of our assets remaining after we pay our liabilities and distribute the liquidation preference of any then outstanding preferred stock. Holders of common stock have no preemptive or other subscription or conversion rights. Upon the completion of this offering, there will be no redemption or sinking fund provisions applicable to the common stock.

Preferred Stock

Upon the completion of this offering, our board of directors will have the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in our control or other corporate action. Upon completion of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Warrants

As of March 31, 2006, there were outstanding warrants (not subject to escrow) to purchase 61,196 shares of our common stock at a weighted-average exercise price of $3.03 per share held by 33 warrantholders of record. In addition, there were

outstanding warrants to purchase 242 shares of common stock at an exercise price of $37.26 held in escrow as of December 31, 2005. No other warrants remain outstanding or will be exercisable following the completion of this offering.

Senior Convertible Promissory Notes

As of March 31, 2006, we had $5.0 million aggregate principal amount of a series of senior convertible promissory notes outstanding. The holders of these notes have the option to convert their notes (subject to certain limitations) into shares of common stock at maturity or upon the occurrence of certain events prior to this offering. In addition, the holders may convert their notes (subject to certain limitations) into shares of common stock if we are no longer eligible for SBIR grants or have not applied for an SBIR grant within the preceding 12 months. These notes entitle the holders to convert the principal amount of the notes into an aggregate of 1,065,736 shares of common stock and to convert accrued interest on the notes into up to an aggregate of 511,553 shares of our common stock.

Registration Rights

After the closing of this offering, the holders of approximately 5,760,858 shares of our common stock will be entitled to certain rights with respect to the registration of such shares under the Securities Act. All of these holders may require us to register the resale of all or a portion of their shares on Form S-3, subject to certain conditions and limitations. Of these holders, the holders of approximately 5,136,340 shares of our common stock have additional registration rights. For example, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these approximately 5,136,340 shares are entitled to notice of such registration and are entitled to include their common stock in such registration, subject to certain marketing and other limitations. Beginning 180 days after the closing of this offering, the holders of at least 50% of such 5,136,340 shares of our common stock have the right to require us, on not more than two occasions, to file a registration statement on Form S-1 under the Securities Act in order to register the resale of their shares of common stock. We may, in certain circumstances, defer such registrations and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations. In addition, these holders have certain “piggyback” registration rights. If we propose to register any of our equity securities under the Securities Act other than pursuant to the registration rights noted above or specified excluded registrations, these holders may require us to include all or a portion of their registrable securities in the registration and in any related underwriting. In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of registrable securities such holders may include. Additionally, such piggyback registrations are subject to delay or termination of the registration under certain circumstances. The underwriters named in this prospectus have notified us that no holders of registration rights will be permitted to include any of their shares in this offering.

Anti-Takeover Effects of Provisions of the Amended and Restated Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation, to be effective upon completion of this offering, will provide for our board of directors to be divided into three classes, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders representing a majority of the shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation and bylaws, to be effective upon completion of this offering, will provide that only our board of directors, chairman of the board, chief executive officer or president (in the absence of a chief executive officer) may call a special meeting of stockholders. Our amended and restated certificate of incorporation, to be effective upon completion of this offering, will require a 66 2/3% stockholder vote for the amendment, repeal or modification of certain provisions of our amended and

restated certificate of incorporation and bylaws relating to the absence of cumulative voting, the classification of our board of directors, and the designated parties entitled to call a special meeting of the stockholders.

The combination of a classified board, the lack of cumulative voting and the 66 2/3% stockholder voting requirements will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions may have the effect of deterring hostile takeovers or delaying changes in our control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and in the policies they implement, and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in our management.

Section 203 of the General Corporation Law of the State of Delaware

We are subject to Section 203 of the General Corporation Law of the State of Delaware, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- Ø before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- Ø upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- Ø on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $^{2}/_{3}$% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- Ø any merger or consolidation involving the corporation and the interested stockholder;
- Ø any sale, lease, exchange, mortgage, transfer, pledge or other disposition of 10% or more of either the assets or outstanding stock of the corporation involving the interested stockholder;
- Ø subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- Ø any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or

- Ø the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines interested stockholder as an entity or person who, together with affiliates and associates, beneficially owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Nasdaq National Market Listing

Application has been made for quotation of our common stock on The Nasdaq National Market under the symbol “LUNA.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company. Its address is 59 Maiden Lane, Plaza Level, New York, NY 10038, and its telephone number is (800) 937-5449.

Shares eligible for future sale

We will have 10,505,267 shares of common stock outstanding after the completion of this offering (11,105,267 shares if the underwriters' over-allotment is exercised in full). Of those shares, the 4,000,000 shares of common stock sold in the offering (4,600,000 shares if the underwriters' over-allotment option is exercised in full) will be freely transferable without restriction, unless purchased by persons deemed to be our "affiliates" as that term is defined in Rule 144 under the Securities Act. Any shares purchased by an affiliate may not be resold except pursuant to an effective registration statement or an applicable exemption from registration, including an exemption under Rule 144 promulgated under the Securities Act. The remaining 6,505,267 shares of common stock to be outstanding immediately following the completion of this offering are "restricted," which means they were originally sold in offerings that were not registered under the Securities Act. Restricted shares may be sold through registration under the Securities Act or under an available exemption from registration, such as provided through Rule 144, which rules are summarized below. Taking into account the 180-day lock up agreements described below, and assuming the underwriters do not release any stockholders from these agreements, shares of our common stock will be available for sale in the public market as follows:

- Ø 565 shares will be immediately eligible for sale in the public market without restriction pursuant to Rule 144(k);
- Ø no additional shares will be eligible for sale in the public market under Rule 144 or Rule 701 beginning 90 days after the date of this prospectus, subject to volume, manner of sale, and other limitations under those rules;
- Ø 3,902,015 additional shares will become eligible for sale, subject to the provisions of Rule 144, Rule 144(k) or Rule 701, beginning 180 days after the date of this prospectus, upon the expiration of agreements not to sell such shares entered into between the underwriters and such stockholders; and
- Ø 2,602,687 additional shares will be eligible for sale from time to time thereafter upon expiration of their respective one-year holding periods, but could be sold earlier if the holders exercise any available registration rights. Of such shares subject to the provisions of Rule 144, 1,749,428 and 749,754 shares may be sold by Carilion Health System beginning August 4, 2006 and December 30, 2006, respectively, and 103,505 shares may be sold by three individuals beginning November 22, 2006.

Rule 144

In general, under Rule 144, as currently in effect, beginning 90 days after the effective date of this offering, a person (or persons whose shares are aggregated), including an affiliate, who has beneficially owned shares of our common stock for one year or more, may sell in the open market within any three-month period a number of shares that does not exceed the greater of:

- Ø one percent of the then outstanding shares of our common stock (approximately 105,053 shares immediately after the offering); or
- Ø the average weekly trading volume in the common stock on The Nasdaq National Market during the four calendar weeks preceding the sale.

Sales under Rule 144 are also subject to certain limitations on the manner of sale, notice requirements and the availability of our current public information.

Rule 144(k)

Under Rule 144(k), a person (or persons whose shares are aggregated) who is deemed not to have been our affiliate at any time during the 90 days preceding a sale by him and who has beneficially owned his shares for at least two years, may sell

the shares in the public market without regard to the volume limitations, manner of sale provisions, notice requirements or the availability of current public information we refer to above.

Rule 701

Any of our employees, officers, directors or consultants who purchased his or her shares before the completion of this offering or who holds options as of that date pursuant to a written compensatory plan or contract is entitled to rely on the resale provisions of Rule 701, which permits non-affiliates to sell their Rule 701 shares without having to comply with the public information, holding period, volume limitation or notice provisions of Rule 144 and permits affiliates to sell their Rule 701 shares without having to comply with Rule 144's holding-period restrictions, in each case commencing 90 days after completion of this offering. Neither Rule 144, Rule 144(k) nor Rule 701 supersedes the contractual obligations of our security holders set forth in the lock-up agreements described below.

Stock Options

Within three months following the completion of this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register 12,715,000 shares of common stock reserved for issuance under our 2003 Stock Plan and 2006 Equity Incentive Plan, thus permitting the resale of such shares.

Prior to the completion of this offering, there has been no public market for our common stock, and any sale of substantial amounts in the open market may adversely affect the market price of our common stock offered hereby.

Warrants

In addition, holders of warrants exerciseable for up to 57,525 shares of common stock may exercise their rights and subsequently sell the underlying shares in the public market.

Lock-Up Agreements

Subject to certain exceptions, each of our officers, directors and security holders have agreed not to offer to sell, sell, pledge, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right, or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock, whether any transaction is to be settled by delivery of our common stock or other securities, in cash or otherwise, without the prior written consent of ThinkEquity Partners LLC for a period of 180 days after the date of this prospectus. Notwithstanding the foregoing, for the purpose of allowing the underwriters to comply with NASD Rule 2711(f)(4), if (1) during the last 17 days of the initial 180-day lock-up period, we release earnings results or material news or a material event relating to us occurs or (2) prior to the expiration of the initial 180-day lock-up period, we announce that we will release earnings results during the 16-day period beginning on the last day of the initial 180-day lock-up period, then in each case the initial 180-day lock-up period will be extended until the expiration of the 18-day period beginning on the date of release of the earnings results or the occurrence of the material news or material event, as applicable.

Stock Sale Restriction Agreements

In addition, employees holding options exercisable for 3,921,730 shares of our common stock have entered into an agreement not to sell more than 20.0% of such shares in any year during the five years following the effective date of this

offering, provided, any share subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. Certain members of our management holding options exercisable for shares of our common stock have entered into an agreement not to sell more than 15.0% of such shares in any year during the five years following the effective date of this offering, provided, any share subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. We have the right to waive any of these resale restrictions for employees and management at our discretion, and in such instance, the shares would become freely tradable.

Registration Rights

After the offering, the holders of approximately 5,760,858 shares of our common stock will be entitled to registration rights. For more information on these registration rights, see “Description of capital stock—Registration Rights.”

U.S. federal income and estate tax consequences to non-U.S. holders

This section summarizes certain material U.S. federal income and estate tax considerations relating to the ownership and disposition of common stock by non-U.S. holders. This summary does not provide a complete analysis of all potential tax considerations. The information provided below is based on existing authorities. These authorities may change, or the IRS might interpret the existing authorities differently. In either case, the tax considerations of owning or disposing of common stock could differ from those described below. For purposes of this summary, a “non-U.S. holder” is any holder other than a citizen or resident of the United States, a corporation organized under the laws of the United States or any state, a trust that is (i) subject to the primary supervision of a U.S. court and the control of one of more U.S. persons or (ii) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person or an estate whose income is subject to U.S. income tax regardless of source. If a partnership or other flow-through entity is a beneficial owner of common stock, the tax treatment of a partner in the partnership or an owner of the entity will depend upon the status of the partner or other owner and the activities of the partnership or other entity. The summary generally does not address tax considerations that may be relevant to particular investors because of their specific circumstances, or because they are subject to special rules. Finally, the summary does not describe the effects of any applicable foreign, state or local laws.

INVESTORS CONSIDERING THE PURCHASE OF COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF FOREIGN, STATE, OR LOCAL LAWS AND TAX TREATIES.

Dividends

Any dividend paid to a non-U.S. holder on our common stock will generally be subject to U.S. withholding tax at a 30% rate. The withholding tax might not apply, however, or might apply at a reduced rate, if the non-U.S. holder satisfies the applicable conditions under the terms of an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. A non-U.S. holder must demonstrate its entitlement to treaty benefits by providing a properly completed Form W-8BEN or appropriate substitute form to us or our paying agent. If the holder holds the stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to the agent. The holder’s agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. For payments made to a foreign partnership or other flowthrough entity, the certification requirements generally apply to the partners or other owners rather than to the partnership or other entity, and the partnership or other entity must provide the partners’ or other owners’ documentation to us or our paying agent. Special rules, described below, apply if a dividend is effectively connected with a U.S. trade or business conducted by the non-U.S. holder.

Sale of Common Stock

Non-U.S. holders will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange, or other disposition of common stock. This general rule, however, is subject to several exceptions. For example, the gain would be subject to U.S. federal income tax if:

- the gain is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business (in which case the special rules described below under the caption “Dividends or Gain Effectively Connected with a U.S. Trade or Business” apply);
- the non-U.S. holder was a citizen or resident of the United States and thus is subject to special rules that apply to expatriates;

U.S. federal income and estate tax consequences to non-U.S. holders

- Ø subject to certain exceptions, the non-U.S. holder is an individual who is present in the United States for 183 days or more in the year of disposition, in which case the gain would be subject to a flat 30% tax, which may be offset by U.S. source capital losses, even though the individual is not considered a resident of the U.S.; or
- Ø the rules of the Foreign Investment in Real Property Tax Act, or FIRPTA, described below, treat the gain as effectively connected with a U.S. trade or business.

The FIRPTA rules may apply to a sale, exchange or other disposition of common stock if we are, or were within five years before the transaction, a "U.S. real property holding corporation," or USRPHC. In general, we would be a USRPHC if interests in U.S. real estate comprised most of our assets. We do not believe that we are a USRPHC or that we will become one in the future.

Dividends or Gain Effectively Connected With a U.S. Trade or Business

If any dividend on common stock, or gain from the sale, exchange or other disposition of common stock, is effectively connected with a U.S. trade or business conducted by the non-U.S. holder, then the dividend or gain will be subject to U.S. federal income tax at the regular graduated rates. If the non-U.S. holder is eligible for the benefits of an income tax treaty between the United States and the holder's country of residence, any "effectively connected" dividend or gain would generally be subject to U.S. federal income tax only if it is also attributable to a permanent establishment or fixed base maintained by the holder in the United States. Payments of dividends that are effectively connected with a U.S. trade or business, and therefore included in the gross income of a non-U.S. holder, will not be subject to the 30 percent withholding tax. To claim exemption from withholding, the holder must certify its qualification, which can be done by filing a Form W-8ECI. If the non-U.S. holder is a corporation, that portion of its earnings and profits that is effectively connected with its U.S. trade or business would generally be subject to a "branch profits tax" in addition to any regular U.S. federal income tax on the dividend or gain. The branch profits tax rate is generally 30 percent, although an applicable income tax treaty might provide for a lower rate.

U.S. Federal Estate Tax

The estates of nonresident alien individuals are generally subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, our common stock will be U.S. situs property and therefore will be included in the taxable estate of a nonresident alien decedent. The U.S. federal estate tax liability of the estate of a nonresident alien may be affected by a tax treaty between the United States and the decedent's country of residence.

Backup Withholding and Information Reporting

The Code and the Treasury regulations require those who make specified payments to report the payments to the IRS. Among the specified payments are dividends and proceeds paid by brokers to their customers. The required information returns enable the IRS to determine whether the recipient properly included the payments in income. This reporting regime is reinforced by "backup withholding" rules. These rules require the payors to withhold tax from payments subject to information reporting if the recipient fails to cooperate with the reporting regime by failing to provide his taxpayer identification number to the payor, furnishing an incorrect identification number, or repeatedly failing to report interest or dividends on his returns. The withholding tax rate is currently 28 percent. The backup withholding rules do not apply to payments to corporations, whether domestic or foreign.

Payments to non-U.S. holders of dividends on common stock will generally not be subject to backup withholding, and payments of proceeds made to non-U.S. holders by a broker upon a sale of common stock will not be subject to information reporting or backup withholding, in each case so long as the non-U.S. holder certifies its nonresident status. Some of the common means of certifying nonresident status are described under "— Dividends." We must report annually to the IRS any

dividends paid to each non-U.S. holder and the tax withheld, if any, with respect to such dividends. Copies of these reports may be made available to tax authorities in the country where the non-U.S. holder resides.

Any amounts withheld from a payment to a holder of common stock under the backup withholding rules can be credited against any U.S. federal income tax liability of the holder.

THE PRECEDING DISCUSSION OF U.S. FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE, LOCAL, AND FOREIGN TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

Underwriting

ThinkEquity Partners LLC is acting as sole book-runner of this offering, and, together with WR Hambrecht + Co, LLC and Merriman Curhan Ford & Co., are acting as representatives of the underwriters named below. Subject to the terms and conditions stated in the underwriting agreement, each underwriter named below has agreed to purchase, and we have agreed to sell to that underwriter, the number of shares of common stock set forth opposite that underwriter's name.

Underwriters	Number of Shares
ThinkEquity Partners LLC	
WR Hambrecht + Co, LLC	
Merriman Curhan Ford & Co.	
Total	4,000,000

The underwriting agreement provides that the obligations of the underwriters to purchase the shares included in this offering are subject to approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all the shares, other than those covered by the over-allotment option described below, if they purchase any of the shares.

The underwriters have advised us that they propose to offer the shares initially to the public at $ per share. The underwriters propose to offer the shares to certain dealers at the same price less a concession of not more than $ per share. The underwriters may allow and the dealers may reallow a concession of not more than $ per share on sales to certain other brokers and dealers. If all the shares are not sold at the initial public offering price, the representatives may change the offering price and other selling terms.

We have granted to the underwriters an over-allotment option to purchase up to an additional 600,000 shares of our common stock from us at the same price as to the public, and with the same underwriting discount, as set forth on the front cover of this prospectus. The underwriters may exercise this option any time during the 30-day period after the date of this prospectus, but only to cover over-allotments, if any. To the extent the underwriters exercise the option, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of the additional shares as it was obligated to purchase under the underwriting agreement.

Each underwriter has represented, warranted and agreed that:

- Ø it has not offered or sold and, prior to the expiry of a period of 12 months from the closing date, will not offer or sell any shares included in this offering to any persons in the United Kingdom other than to qualified investors (within the meaning of 586(7) of the Financial Services and Markets Act 2000, or FSMA, or otherwise in circumstances which do not comprise an offer of transferable securities to the public for the purposes of 585(1) FSMA;
- Ø it has only communicated and caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 ("FSMA")) received by it in connection with the issue or sale of any shares included in this offering in circumstances in which section 21(1) of the FSMA does not apply to us; and
- Ø it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares included in this offering in, from or otherwise involving the United Kingdom.

We have applied to have our common stock included for quotation on The Nasdaq National Market under the symbol "LUNA."

Underwriting

The following table shows the underwriting discount and commissions to be paid to the underwriters in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the over-allotment option.

	No Exercise	Full Exercise
Per share	$	$
Total to be paid by us	$	$

We estimate that the total expenses of this offering payable by us, excluding the underwriting discount and commissions, will be approximately $1.5 million. We have agreed to indemnify the underwriters against certain liabilities that may be based upon an untrue statement of material fact contained in this prospectus, including civil liabilities under the Securities Act, or to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have informed us that neither they, nor any other underwriter participating in the distribution of this offering, will make sales of our common stock offered by this prospectus to accounts over which they exercise discretionary authority without the prior specific written approval of the customer.

The offering of our shares of common stock is made for delivery when and if accepted by the underwriters and subject to prior sale and to withdrawal, cancellation, or modification of this offering without notice. The underwriters reserve the right to reject an order for the purchase of shares in whole or part.

Subject to certain exceptions, we and each of our officers, directors and security holders, have agreed not to offer to sell, sell, pledge, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right, or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock, whether any transaction is to be settled by delivery of common stock or other securities, in cash or otherwise, without the prior written consent of ThinkEquity Partners LLC for a period of 180 days after the date of this prospectus. Notwithstanding the foregoing, for the purpose of allowing the underwriters to comply with NASD Rule 2711(f)(4), if (1) during the last 17 days of the initial 180-day lock-up period, we release earnings results or material news or a material event relating to us occurs or (2) prior to the expiration of the initial 180-day lock-up period, we announce that we will release earnings results during the 16-day period beginning on the last day of the initial 180-day lock-up period, then in each case the initial 180-day lock-up period will be extended until the expiration of the 18-day period beginning on the date of release of the earnings results or the occurrence of the material news or material event, as applicable.

Prior to this offering, there has been no established trading market for our common stock. The initial public offering price for the shares of our common stock offered by this prospectus was negotiated between us and the underwriters immediately prior to this offering. Factors considered in determining the initial public offering price included:

- Ø the history of, and the prospects for, the markets in which we compete;
- Ø our past and present operations;
- Ø our historical results of operations;
- Ø our prospects for future earnings;
- Ø the recent market prices of securities of generally comparable companies; and
- Ø the general condition of the securities markets at the time of this offering and other relevant factors.

The initial public offering price of our common stock may not correspond to the price at which our common stock will trade in the public market subsequent to this offering, and an active public market for our common stock may never develop or, if it does develop, continue after this offering.

Underwriting

To facilitate this offering, the underwriters may engage in transactions that stabilize, maintain, or otherwise affect the price of our common stock during and after this offering. Specifically, the underwriters may over-allot or otherwise create a short position in our common stock for their own account by selling more shares of our common stock than have been sold to them by us. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. “Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares from us in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. “Naked” short sales are sales in excess of this option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

In addition, the underwriters may stabilize or maintain the price of our common stock by bidding for or purchasing shares of our common stock in the open market and may impose penalty bids. If penalty bids are imposed, selling concessions allowed to syndicate members or other broker-dealers participating in this offering are reclaimed if shares of our common stock previously distributed in this offering are repurchased, whether in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of our common stock to the extent that it discourages resales of our common stock. The magnitude or effect of any stabilization or other transactions is uncertain. These transactions may be effected on The Nasdaq National Market or otherwise and, if commenced, may be discontinued at any time.

Other than in connection with this offering, the underwriters have not performed investment banking and advisory services for us. The underwriters may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business.

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriters participating in this offering or by their affiliates. In those cases, prospective investors may view offering terms and this prospectus online and, depending upon the underwriter, prospective investors may be allowed to place orders online or through their financial advisor. The underwriters may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations.

Other than this prospectus in electronic format, the information on any underwriter’s website and any information contained in any other website maintained by the underwriters is not part of this prospectus or the registration statement of which the prospectus forms a part, has not been approved or endorsed by us or the underwriters in its capacity as underwriter and should not be relied upon by investors.

Legal matters

The validity of the shares of common stock offered hereby has been passed upon for Luna Innovations Incorporated by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Reston, Virginia. Various legal matters relating to the offering will be passed upon for the underwriters by DLA Piper Rudnick Gray Cary US LLP, New York, New York.

Experts

Grant Thornton LLP, an independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2004 and 2005, and for each of the three years during the period ended December 31, 2005, as set forth in their report. We have included our consolidated financial statements in this prospectus and elsewhere in the registration statement in reliance on Grant Thornton LLP's report, given on their authority as experts in accounting and auditing.

Brown, Edwards & Company, L.L.P., an independent registered public accounting firm, has audited the financial statements of Luna Technologies, Inc. at December 31, 2004, and for the year ended December 31, 2004 as set forth in their report. We have included the financial statements of Luna Technologies, Inc. in this prospectus and elsewhere in the registration statement in reliance on Brown, Edwards & Company, L.L.P.'s report, given on their authority as experts in accounting and auditing.

Where you can find more information

We have filed a registration statement on Form S-1 with the SEC for the stock we are offering by this prospectus. This prospectus does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document. When we complete this offering, we will also be required to file annual, quarterly and special reports, proxy statements and other information with the SEC.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's web site at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Index to financial statements

Luna Innovations Incorporated

Report of independent registered public accounting firm

Board of Directors and Shareholders

Luna Innovations Incorporated and Subsidiaries

We have audited the accompanying consolidated balance sheets of Luna Innovations Incorporated and Subsidiaries (the Company) as of December 31, 2004 and 2005, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for each year of the three years in the period ended December 31, 2005. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audits include consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Luna Innovations Incorporated and Subsidiaries as of December 31, 2004 and 2005, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2005, in conformity with accounting principles generally accepted in the United States of America.

/s/ Grant Thornton LLP

Vienna, Virginia
March 21, 2006

Luna Innovations Incorporated

Consolidated balance sheets

	December 31,		March 31,
	2004	2005	2006
			(unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$609,636	$12,514,839	$10,099,059
Accounts receivable	3,023,205	5,129,911	3,881,992
Refundable income taxes	876,802	514,797	514,797
Inventory	98,447	448,475	578,492
Other current assets	123,206	227,409	236,441
Total current assets	4,731,296	18,835,431	15,310,781
Property and equipment, net	2,045,648	2,972,287	3,033,360
Intangible assets, net	390,212	999,544	1,046,581
Deferred offering costs	—	710,018	1,015,053
Deferred tax asset	472,855	600,000	600,000
Other assets	107,459	16,550	15,514
Total assets	**$7,747,470**	**$24,133,830**	**$21,021,289**
Liabilities and stockholders' equity			
Current liabilities:			
Line of credit	$1,500,000	$—	$ —
Current portion of capital lease obligation	96,177	98,820	312,437
Accounts payable	519,284	3,647,505	2,579,426
Accrued liabilities	1,742,094	1,788,162	1,727,061
Deferred tax liability	30,106	—	—
Deferred credits	586,166	1,458,393	1,064,959
Total current liabilities	4,473,827	6,992,880	5,683,883
Long-term capital lease obligation	206,390	117,134	93,234
Long-term debt obligation	—	5,214,955	5,000,000
Deferred credits	900,000	450,000	450,000
Total liabilities	5,580,217	12,774,969	11,227,117
Redeemable Class B common stock, 308,216 shares at December 31, 2005 and March 31, 2006 (Note 9)	—	504,984	504,984
Stockholders' equity:			
Common stock; 54,245,588 shares authorized for the following classes:			
Class A voting Common Stock, par value $0.001; 2,834,809 shares, issued and outstanding at December 31, 2004 and 2005 and March 31, 2006 (Note 9)	2,835	2,835	2,835
Class B non-voting Common Stock, par value $0.001; 76,447, 734,427 and 863,060 shares issued and outstanding at December 31, 2004 and 2005 and March 31, 2006, respectively (Note 9)	76	734	863
Class C voting Common Stock, par value $0.001; 2,131,472 issued and outstanding at December 31, 2005 and March 31, 2006 (Note 9)	—	2,131	2,131
Additional paid-in capital	257,157	10,935,049	11,246,227
Retained earnings (deficit)	1,907,185	(86,872)	(1,962,868)
Total stockholders' equity	2,167,253	10,853,877	9,289,188
Total liabilities and stockholders' equity	**$7,747,470**	**$24,133,830**	**$21,021,289**

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

Luna Innovations Incorporated

Consolidated statements of operations

	Year Ended December 31,			Three Months Ended March 31,	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
Revenues:					
Contract research revenues	$10,358,044	$13,834,751	$15,379,667	$3,256,381	$3,920,939
Product and license revenues	7,233,799	8,752,155	1,074,221	—	595,298
Total revenues	17,591,843	22,586,906	16,453,888	3,256,381	4,516,237
Cost of revenues:					
Contract research costs	8,949,378	10,985,164	12,552,122	2,671,120	2,907,835
Product and license costs	1,543,098	2,880,606	409,772	—	266,051
Total cost of revenues	10,492,476	13,865,770	12,961,894	2,671,120	3,173,886
Gross profit	7,099,367	8,721,136	3,491,994	585,261	1,342,351
Operating expense	4,856,110	4,189,629	6,003,644	881,527	3,228,594
Operating income (loss)	2,243,257	4,531,507	(2,511,650)	(296,266)	(1,886,243)
Other income (expense):					
Other income (expense)	705	117	1,592	513	6,287
Interest income (expense), net	(86,800)	(90,304)	(41,251)	(39,768)	3,960
Loss from equity method investees	(150,271)	(256,904)	—	—	—
Total other income (expense)	(236,366)	(347,091)	(39,659)	(39,255)	10,247
Income (loss) before minority interests and income taxes	2,006,891	4,184,416	(2,551,309)	(335,521)	(1,875,996)
Minority interests	11,265	—	—	—	—
Income (loss) before income taxes	2,018,156	4,184,416	(2,551,309)	(335,521)	(1,875,996)
Income tax expense (benefit)	885,882	128,234	(557,252)	(73,283)	—
Net income (loss)	$1,132,274	$4,056,182	$(1,994,057)	(262,238)	(1,875,996)
Net income (loss) per share:					
Basic	$0.40	$1.40	$(0.53)	$(0.09)	$(0.31)
Diluted	$0.39	$1.14	$(0.53)	$(0.09)	$(0.31)
Weighted average shares:					
Basic (Note 9)	2,843,349	2,903,022	3,735,811	2,911,255	6,069,780
Diluted (Note 9)	2,905,849	3,561,788	3,735,811	2,911,255	6,069,780

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

Luna Innovations Incorporated

Consolidated statements of changes in stockholders' equity (deficit)

	Class A Common Stock		Class B Common Stock		Class C Common Stock		Additional Paid-in Capital	Retained Earnings (Deficit)	Total
	Shares	$	Shares	$	Shares	$			
Balance—December 31, 2002	2,834,809	$2,835	—	$ —	—	$ —	$190,503	$(3,281,271)	$(3,087,933)
Exercise of stock options	—	—	67,121	67	—	—	23,683	—	23,750
Net income	—	—	—	—	—	—	—	1,132,274	1,132,274
Balance—December 31, 2003	2,834,809	2,835	67,121	67	—	—	214,186	(2,148,997)	(1,931,909)
Exercise of stock options	—	—	9,326	9	—	—	3,291	—	3,300
Employee stock-based compensation	—	—	—	—	—	—	39,680	—	39,680
Net income	—	—	—	—	—	—	—	4,056,182	4,056,182
Balance—December 31, 2004	2,834,809	2,835	76,447	76			257,157	1,907,185	2,167,253
Exercise of stock options	—	—	238,173	238	—	—	84,037	—	84,275
Exercise of warrants	—	—	103,506	104	—	—	79	—	183
Issuance of common stock in Carilion financing transaction, net	—	—	—	—	2,131,472	2,131	9,910,337	—	9,912,468
Issuance of common stock in conjunction with Luna Technologies acquisition	—	—	316,301	316	—	—	514,513	—	514,829
Share based payment expense	—	—	—	—	—	—	168,926	—	168,926
Net loss	—	—	—	—	—	—	—	(1,994,057)	(1,994,057)
Balance—December 31, 2005	2,834,809	2,835	734,427	734	2,131,472	2,131	10,935,049	(86,872)	10,853,877
Exercise of stock options (unaudited)	—	—	128,633	129	—	—	45,387	—	45,516
Issuance of warrants in connection with Luna Technologies acquisition (unaudited)	—	—	—	—	—	—	70,519	—	70,519
Share-based payment expense (unaudited)	—	—	—	—	—	—	195,272	—	195,272
Net loss (unaudited)	—	—	—	—	—	—	—	(1,875,996)	(1,875,996)
Balance—March 31, 2006 (unaudited)	2,834,809	$2,835	863,060	$863	2,131,472	$2,131	$11,246,227	$(1,962,868)	$9,289,188

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

Luna Innovations Incorporated

Consolidated statements of cash flows

	Year Ended December 31,			Three Months Ended March 31,	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
Cash flows from (used in) operating activities:					
Net income (loss)	$1,132,274	$4,056,182	$(1,994,057)	$(262,238)	$(1,875,996)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:					
Depreciation and amortization	346,937	381,052	540,145	91,826	250,374
Deferred income taxes	1,192,119	957,898	(157,251)	(30,106)	—
Loss on investments in and advances to affiliates	150,271	256,904	—	—	—
Minority interests	(11,265)	—	—	—	—
Share based compensation	—	39,680	168,926	15,834	195,273
Change in assets and liabilities:					
Accounts receivable	53,057	(1,232,336)	(1,314,485)	480,359	1,247,919
Refundable income taxes	(272,873)	(603,929)	362,005	(43,177)	—
Other assets	(70,857)	21,181	(26,194)	(78,520)	(138,015)
Accounts payable and accrued expenses	(592,299)	928,611	1,911,095	(691,347)	(1,434,214)
Deferred credits	(2,041,248)	(3,323,086)	422,227	181,264	(393,434)
Net cash from (used in) operating activities	(113,884)	1,482,157	(87,589)	(336,105)	(2,148,093)
Cash flows from (used) in investing activities:					
Acquisition of property and equipment	(158,016)	(1,376,402)	(877,144)	(233,382)	(211,668)
Intangible property costs	(156,906)	(192,101)	(430,847)	(93,999)	(76,297)
Net cash from acquisition of Luna Technologies	—	—	33,676	—	—
Investments in and advances to affiliates	(180,000)	(378,000)	—	—	—
Capitalized software development costs	—	—	(122,642)	—	—
Net cash used in investing activities	(494,922)	(1,946,503)	(1,396,957)	(327,381)	(287,965)
Cash flows from (used in) financing activities:					
Net (payments) borrowings on line of credit	(2,331)	500,000	(1,500,000)	180,000	—
Payments on capital lease obligation	(63,871)	(71,495)	(107,177)	(5,459)	(25,238)
Proceeds from convertible debt	—	—	5,000,000	—	—
Proceeds from the issuance of common stock, net	—	—	9,912,468	—	—
Proceeds from the exercise of options and warrants	23,750	3,300	84,458	—	45,516
Net cash from (used in) financing activities	(42,452)	431,805	13,389,749	(174,541)	20,278
Net change in cash	(651,258)	(32,541)	11,905,203	(488,945)	(2,415,780)
Cash—beginning of period	1,293,435	642,177	609,636	609,636	12,514,839
Cash—end of period	$642,177	$609,636	$12,514,839	$120,691	$10,099,059
Supplemental disclosure of cash flow information					
Cash paid for interest	$87,494	$95,967	$108,211	$22,126	$13,403
Cash paid for income taxes	444,043	30,000	—	—	—
Property and equipment financed by capital leases	$380,354	$319,768	$11,700	$11,700	—

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

Luna Innovations Incorporated

Notes to consolidated financial statements

1. Organization and Summary of Significant Accounting Policies

Luna Innovations Incorporated (“Luna Innovations”) was incorporated in the Commonwealth of Virginia in 1990 and subsequently reincorporated in the State of Delaware in April 2003. We are engaged in the research, development and commercialization of innovative technologies in the areas of molecular technology solutions and sensing solutions. We are organized into three main groups, which work closely together to turn ideas into products: our Contract Research Group, our Commercialization Strategy Group and our Products Group. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative technologies to market. We identify technology that can fulfill identified market needs. We then take these solutions from the applied research stage through commercialization.

Unaudited Interim Financial Information

The accompanying unaudited consolidated financial statements as of March 31, 2006 and for the three months ended March 31, 2005 and 2006 have been prepared in accordance with accounting principles generally accepted in the United States (US GAAP) and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by US GAAP for audited financial statements. The unaudited consolidated financial statements have been prepared on the same basis as the annual financial statements and in the opinion of management, reflect all adjustments, consisting of only normal recurring accruals, considered necessary to present fairly our financial position as of March 31, 2006 and results of operations and cash flows for the three months ended March 31, 2005 and 2006. The results of the operations for the three months ended March 31, 2006 are not necessarily indicative of the results that may be expected for the year ending December 31, 2006.

Basis of Presentation and Consolidation

Our consolidated financial statements are prepared in accordance with US GAAP and include our accounts, our wholly owned subsidiaries and other entities in which we have a controlling financial interest. We consolidate all entities in which we own more than 50% of the outstanding voting stock unless we do not control the entity. In accordance with Financial Accounting Standards Board Interpretation No. 46 revised, *Consolidation of Variable Interest Entities*, (FIN 46R), we also consolidate any variable interest entities for which we are deemed to be the primary beneficiary.

We use the equity method to account for our investments for which we have the ability to exercise significant influence over operating and financial policies. Consolidated net income or loss includes our share of the net earnings or losses of the investees. Our share of losses in the investees is limited to our investment and advances unless we have guaranteed certain obligations of the investee or are otherwise committed to provide financial support to such investee.

In those cases where the our investment is less than 20% and significant influence does not exist, such investments are carried at cost

We eliminate from our financial results all significant intercompany transactions.

Use of Estimates

The preparation of our consolidated financial statements in accordance with US GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may differ from such estimates and assumptions.

Contract Research Revenues

We perform research and development for U.S. Federal government agencies, educational institutions and commercial organizations. We recognize revenues under research contracts when a contract has been executed, the contract price is fixed and determinable, delivery of services or products has occurred and collectibility of the contract price is considered probable. Revenues are earned under cost reimbursable, time and materials and fixed price contracts. Direct contract costs are expensed as incurred.

Under cost reimbursable contracts, we are reimbursed for allowable costs and paid a fixed fee. Revenues on cost reimbursable contracts are recognized as costs are incurred plus a portion of the fee earned. Revenues on time and materials contracts are recognized based on direct labor hours expended at contract billing rates plus other billable direct costs.

Revenue for fixed price research contracts that involve the delivery of services and a protoype model are recognized under the percentage of completion method in accordance with Statement of Position (SOP) 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*. Fixed price arrangements that involve the delivery of research reports are recognized under the proportional performance method based upon the ratio of costs incurred to total estimated cost as this method more accurately measures performance under these arrangements. Losses on contracts, if any, are recognized in the period in which they become known.

For the years ended December 31, 2003, 2004 and 2005 and the three months ended March 31, 2006, contract research revenues from agencies of the U.S. government accounted for approximately 51%, 51%, 70% and 76% respectively, of total revenues for the same period. See Note 15 for additional details concerning our relationship with major customers.

Intellectual Property License Revenues

Amounts received from third parties for licenses to our intellectual property are recognized when earned under the terms of the agreements. Revenues are recognized upon transfer of the license unless we have continuing obligations for which fair value cannot be established, in which case the revenues are recognized over the period of the obligation. If there are extended payment terms, license fee revenues are recognized as these payments become due and collectibility is probable. We consider all arrangements with payment terms extending beyond 12 months not to be fixed and determinable.

Certain of our license arrangements have also required us to enter into research and development agreements. We apply the guidance from the Emerging Issues Taskforce Consensus on Issue 00-21, *Revenue Arrangements with Multiple—Deliverables* (EITF 00-21). Accordingly, we will allocate our arrangement fees to the various elements based upon objective reliable evidence of fair value, if available. For those arrangements in which evidence of fair value is not available, we will defer revenues from any up-front payments and recognize them over the service period in the arrangement. Certain of these arrangements also include the payment of performance bonuses based upon the achievement of specific milestones. Generally, there are no assurances at the onset of these arrangements that the milestones will be achieved. As such, fees related to such milestones are excluded from the initial allocation of the arrangement fee in accordance with EITF 00-21 and are recognized upon achievement of the milestone provided that such fees are non-refundable and collection is probable.

Revenues derived from our arrangement with Baker Hughes Oilfield Operations, Inc. (BHI) accounted for 37% and 35% total revenues for the years ended December 31, 2003 and 2004. As discussed in Note 5 our arrangement with BHI ended in 2004.

Product Sales Revenues

Revenues from product sales are generated by the sale of commercial products and services under various sales programs to the end user and through distribution channels. We sell fiber optic sensing systems to end users for use in numerous fiber-optic based measurement applications.

Revenues from product sales that require no ongoing obligations are recognized as revenues when shipped to the customer, title has passed and collection is reasonably assured. In transactions where a right-of-return exists, revenues are deferred until acceptance has occurred and the period for the right-of-return has lapsed. As of December 31, 2003, 2004 and 2005 and March 31, 2006, we have not entered into sales transactions where rights of return exist.

Allowance for Uncollectible Receivables

We review the status of our uncollected receivables on a regular basis. In determining the need for an allowance for uncollectible receivables, we consider our customers financial stability, past payment history and other factors that bear on the ultimate collection of such amounts. Given our favorable collection history, we have not considered it necessary to establish an allowance for uncollected receivables.

Cash Equivalents

We consider all highly liquid investments purchased with maturities of three months or less to be cash equivalents.

Fair Value of Financial Instruments

Our financial instruments include cash and cash equivalents, accounts receivables, accounts payable, a line-of-credit and accrued liabilities. The carrying amounts of financial instruments approximate fair value due to their short maturities. Additionally, the line-of-credit is subject to a variable interest rate based upon the prime rate as published by the Wall Street Journal.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. We record depreciation using the straight-line method over the following estimated useful lives:

Equipment	3 – 7 years
Furniture and fixtures	7 years
Software	3 years
Leasehold improvements	Lesser of lease term or life of improvements

Goodwill and Intangible Assets

Intangible assets consist of goodwill and patents related to certain intellectual property that we have developed or acquired. Goodwill represents the excess of the cost of an acquired entity over the net amounts assigned to tangible and intangible assets acquired and liabilities assumed. Intangible assets are carried at cost and are amortized over a period of five years. The Company applies the provisions of Statement of Financial Accounting Standards No. 142 *Goodwill and Other Intangible Assets*, which requires allocating goodwill to each reporting unit and testing for impairment using a two-step approach. The Company will perform a goodwill impairment test annually or whenever an event has occurred that would more likely than not reduce the fair value of a reporting unit below its carrying amounts.

Research and Development

Research and development costs not related to contract performance are expensed as incurred. For the years ended December 31, 2003, 2004 and 2005, non-contract related research and development costs were not significant. The Company expensed $120,901 of non-contract related research and development in the three months ended March 31, 2006.

Capitalized Software Costs

The Company capitalized costs of $122,642 for the year ended December 31, 2005 and $4,229 for the three months ended March 31, 2006 related to new software products. Costs related to the development of new software products

and significant enhancements to existing software products are expensed as incurred until technological feasibility has been established and are amortized over three years. There were no capitalized costs during the years ended December 31, 2004 and 2003.

Valuation of Long-Lived Assets

We account for long-lived assets in accordance with the provisions of Statement of Financial Accounting Standards (SFAS) No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*. SFAS No. 144 requires that long-lived assets and certain identifiable intangibles be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets is measured by comparing the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds their fair value. Assets to be disposed of by sale are reflected at the lower of their carrying amount or fair value less cost to sell.

Inventory

Inventory consists of finished goods and parts valued at the lower of cost (determined on the first-in, first-out basis) or market. We provide reserves for estimated obsolescence or unmarketable inventory equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about future demand and market conditions.

Net Income (Loss) Per Share

We compute net income (loss) per share in accordance with SFAS No. 128, *Earnings Per Share*. Basic per share data is computed by dividing income (loss) available to common stockholders by the weighted average number of shares outstanding during the period. Diluted per share data is computed by dividing income (loss) available to common stockholders by the weighted average shares outstanding during the period increased to include, if dilutive, the number of additional common share equivalents that would have been outstanding if potential common shares had been issued using the treasury stock method. Diluted per share data would also include the potential common share equivalents relating to convertible securities by application of the if-converted method.

As discussed in Note 9, in connection with our proposed initial public offering the Company will effect a 1.7691911:1 reverse stock split. The following information presents the proforma effect of such split on basic and diluted net income (loss) per share.

	December 31,			March 31,	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
Net income (loss)	$1,132,274	$4,056,182	($1,994,057)	($262,238)	($1,875,996)
Weighted average shares—basic	2,843,349	2,903,022	3,735,811	2,911,255	6,069,780
Dilutive effect of common stock equivalents:					
Shares issued upon assumed exercise of stock options and warrants	62,500	658,766	—	—	—
Weighted average shares—diluted	2,905,849	3,561,788	3,735,811	2,911,255	6,069,780
Net income (loss) per share—basic	.40	1.40	(.53)	(.09)	(.31)
Net income (loss) per share—diluted	.39	1.14	(.53)	(.09)	(.31)

The effect of 2,508,548 and 3,925,346 common stock equivalents are ignored for the year ended December 31, 2005 and the three months ended March 31, 2006, as they are antidilutive to earnings per share. In addition, the conversion of the $5.0 million in senior convertible promissory notes would have been antidilutive. The effect of 19,892,454 common stock equivalents are ignored for the year ended December 31, 2003, as they are antidilutive to earnings per share.

Stock-Based Compensation

We have a stock-based compensation plan, which is described further in Note 9. Effective January 1, 2006, we adopted Financial Accounting Standards No. 123R, *Share Based Payment* (SFAS No. 123R) using the modified prospective transition method. Under this transition method, our financial statements for periods prior to January 1, 2006 have not been restated. However, new awards and awards modified, repurchased or cancelled after January 1, 2006 trigger compensation expense based on the fair value of the stock option as determined by the Black-Scholes option pricing model. We amortize stock-based compensation for such awards on a straight-line method over the related service period of the awards taking into account the effects of the employees' expected exercise and post-vesting employment termination behavior.

The adoption of SFAS No. 123(R) increased the net loss by approximately $28 thousand for the three months ended March 31, 2006, as compared to what our net loss would have been if we had continued to account for share-based compensation under APB No. 25, Accounting For Stock Issued to Employees.

For the periods prior to 2006, we accounted for stock-based employee compensation arrangements using the intrinsic value method in accordance with the provisions of Accounting Principles Board Opinion (APB) No. 25, *Accounting for Stock Issued to Employees* and related amendments and interpretations. We complied with the disclosure provisions of Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-based Compensation,* as amended by SFAS No. 148, *Accounting for Stock Based Compensation—Transition and Disclosure*, which requires fair value recognition for employee stock-based compensation. We account for equity instruments issued to non-employees in accordance with the provisions of SFAS 123 and Emerging Issues Task Force (EITF) Issue No. 96-18.

Generally, we award options to employees and directors with exercise prices equal to or greater than the estimated fair value of our common stock on the date of grant. As more fully described in Note 9, we entered into an option exchange with our employees in September 2003 that resulted in the new option grant being considered a re-pricing in accordance with FASB Interpretation No. 44, *Accounting for Certain Transactions Involving Stock Compensation* (FIN 44). We apply variable plan accounting to outstanding options related to this award and measure compensation expense at each reporting period equal to an amount that reflects the change in the fair value of the underlying security.

Had compensation expense been measured under the fair value method prescribed by SFAS No. 123, our pro forma net income (loss), and pro forma net income (loss) per share would have been as follows:

	Years Ended December 31,		
	2003	2004	2005
Net income (loss):			
As reported	$1,132,274	$4,056,182	($1,994,057)
Add - stock based employee compensation expense in reported net income (loss), net of related tax effects	—	39,680	133,901
Deduct - total stock based employee compensation (expense) benefit determined under Black-Scholes method for all awards, net of related tax effects	629,508	(114,553)	(386,108)
Pro forma net income (loss)	$1,761,782	$3,981,309	(2,246,264)
Basic net income (loss) per common share:			
As reported	$0.40	$1.40	($0.53)
Pro forma	$0.62	$1.37	($0.60)
Diluted net income (loss) per common share:			
As reported	$0.39	$1.14	($0.53)
Pro forma	$0.61	$1.12	($0.60)

The $629,508 benefit in 2003 resulted from 285,665 unvested options being forfeited during the period.

The fair value of each option granted is estimated as of the grant date using the Black-Scholes option pricing model with the following assumptions:

	2003	2004	2005	2006
Risk-free interest rate range	3.52%	3.87%	3.9-4.6%	4.55%
Expected life of option-years	7	7	4.5-7	7
Expected stock price volatility	66%	63%	64%	64%
Expected dividend yield	—	—	—	—

The risk-free interest rate is based on US Treasury interest rates, the terms of which are consistent with the expected life of the stock options. Expected volatility is based upon an average volatility of comparable public companies. The expected life and estimated post employment termination behavior is based upon historical experience of homogeneous groups within our company.

During the quarter ended March 31, 2006 we granted 981,946 options to purchase shares of our common stock. We recognized $36,655 in share-based payment expense, and will recognize $1,554,921 over the remaining requisite service period.

Advertising

We charge the cost of advertising to expense as incurred. Such amounts have not been significant to our operations.

Income Taxes

We account for income taxes using the liability method. Deferred tax assets or liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities as measured by the enacted tax rates,

which will be in effect when the differences reverse. A valuation allowance against net deferred assets is provided unless we conclude it is more likely than not that the deferred tax assets will be realized.

Recent Accounting Pronouncements

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs,* which is an amendment of ARB No. 43 *Inventory Pricing*, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage). This statement is effective for inventory costs incurred during fiscal year beginning after June 15, 2005. We do not believe that the effect of SFAS No. 151 will have a significant effect on our consolidated financial statements.

In May 2005, the FASB issued SFAS No. 154, *Accounting Changes and Error Corrections*, which replaces APB Opinion No. 20, *Accounting Changes* and SFAS No. 3, *Reporting Accounting Changes in Interim Financial Statement*. SFAS No. 154 requires that a voluntary change in accounting principle be applied retrospectively with all prior period financial statements presented on the new accounting principle. SFAS No. 154 also requires that a change in method of depreciating or amortizing a long-lived non-financial asset be accounted for prospectively as a change in estimate, and correction of errors in previously issued financial statements should be termed a “restatement.” SFAS No. 154 is effective for accounting changes and correction of errors made in fiscal years beginning after December 15, 2005. The adoption of SFAS No. 154 is not expected to have a material impact on our consolidated financial statements.

Reclassifications

Certain amounts in prior years have been reclassified to conform to the current year presentation.

2. Accounts Receivable—Trade

Accounts receivable consist of the following at:

	December 31,		March 31,
	2004	2005	2006
			(unaudited)
Billed	$1,755,600	$3,359,045	$2,909,521
Unbilled	1,199,843	1,757,263	947,454
Other	67,762	13,603	25,017
	$3,023,205	$5,129,911	$3,881,992

Unbilled receivables result from contract retainages and revenues that have been earned in advance of billing and can be invoiced at contractually defined intervals or milestones, or at completion of the contract. Advance payments on uncompleted contracts amounts to $420,652, $744,056 and $372,622 for the periods ended December 31, 2004, 2005 and March 31, 2006, respectively. Such amounts are included in deferred revenues in our accompanying balance sheet.

3. Property and Equipment

Property and equipment consists of the following at:

	December 31,		March 31,
	2004	2005	2006
			(unaudited)
Equipment	$1,368,855	$2,799,703	$2,950,980
Furniture and fixtures	127,421	189,285	189,285
Software	521,590	791,440	795,739
Leasehold improvements	1,380,634	1,896,278	1,952,371
	3,398,500	5,676,706	5,888,375
Less—accumulated depreciation	(1,352,852)	(2,704,419)	(2,855,015)
	$2,045,648	$2,972,287	$3,033,360

Depreciation for the periods ended December 31, 2003, 2004 and 2005 and March 31, 2006, was approximately $330,000, $353,000, $380,000 and $151,000, respectively.

4. Intangible Assets

The following is a summary of intangible assets:

	December 31,		March 31,
	2004	2005	2006
			(unaudited)
Goodwill	$—	$—	$70,519
Patent costs	439,498	1,205,621	1,281,918
Accumulated amortization	(49,286)	(206,077)	(305,856)
	$390,212	$999,544	$1,046,581

Amortization for the periods ended December 31, 2003, 2004 and 2005 and March 31, 2006, was approximately $17,000, $28,000, $160,000 and $100,000, respectively**.** No impairment loss was recognized for the period ending March 31, 2006.

Estimated aggregate amortization for each of the next five years is as follows:

Year Ended December 31,	
2006	$314,346
2007	245,225
2008	212,310
2009	144,058
2010	83,605
Thereafter	—
	$999,544

5. Investment in Affiliates

We had investments in two affiliates, Luna Technologies, Inc. (“Luna Technologies”) and Luna Energy, LLC (“Luna Energy”), which were accounted for using the equity method of accounting. As discussed in Note 1, our consolidated statements of operations includes our share of net earnings or losses of these companies to the extent of investments in and advances to such companies.

Luna Technologies

Luna Technologies, formerly a wholly-owned subsidiary until 2000, is engaged in the development and production of optical fiber test equipment and data acquisition systems. In fiscal year 2000, the Board of Directors of Luna Technologies approved a plan to spin-off Luna Technologies and raise additional equity financing in order for management to more fully execute Luna Technologies’ business plan. We retained a minority interest in Luna Technologies of approximately 23.0% subsequent to the spin-off. Between December 2000 and March 2003, Luna Technologies had received additional equity financing from non-affiliated investors which diluted our ownership percentage to approximately 7.0%. As our Chief Executive Officer and certain members of management maintained representation at the board level, allowing us to exercise significant influence over the operations of Luna Technologies. We accounted for our interest under the equity method during 2003 and 2004 and for the nine month period ended September 30, 2005.

Our share of losses in Luna Technologies for the years ended December 31, 2003, 2004, and for the nine months ended September 30, 2005 were $150,271, $58,904 and $0, respectively. We also recognized $32,000, $3,000 and $13,500 in revenues from Luna Technologies for various administrative and consulting services in these periods.

Luna Innovations Incorporated

Following is a summary of financial position and results of operations of Luna Technologies as of and for the years ended December 31, 2003 and 2004 and for the period from January 1 through September 29, 2005.

	December 31,		September 29,
	2003	2004	2005
Current assets	$1,079,665	$1,567,988	$1,343,341
Non-current assets	597,191	309,676	457,664
Total assets	1,676,856	1,877,664	1,801,005
Current liabilities	632,200	406,321	553,176
Non-current liabilities	265,115	214,953	214,953
Total liabilities	897,315	621,274	768,129
Stockholders' equity and redeemable preferred stock	779,541	1,256,390	1,032,876
Total liabilities and stockholders' equity	$1,676,856	$1,877,664	$1,801,005
Revenues	$1,428,965	$1,775,082	2,204,196
Gross profit	434,348	958,011	1,129,842
Net loss	(2,372,027)	(959,632)	(390,239)

On September 30, 2005, we entered into an Agreement and Plan of Merger with Luna Technologies to acquire 100.0% of its outstanding capital stock through an exchange of our Class B common stock. We exchanged 582,884 of Class B common stock valued at $1.63 per share or $948,735 as determined by a third party appraisal firm, for all of the issued and outstanding shares of common and preferred stock of Luna Technology. An additional 109,365 shares of Class B common stock were placed in escrow and are issuable upon achievement of certain conditions as defined in the agreement. On December 30, 2005, 41,634 shares of Class B common stock valued at approximately $68,000 were released from escrow. Additionally, we exchanged 2,035 warrants with an aggregate value of approximately $3,300 and incurred direct costs of approximately $81,000 to arrive at an initial purchase price of approximately $1,101,000.

Luna Technologies produces test and measurement equipment which monitor the integrity of fiber optic network components and subassemblies. The acquisition of Luna Technologies will enable us to expand our sale of fiber optic testing equipment beyond the telecommunications industry into avionics, defense and academic research laboratories.

This transaction was accounted for as a purchase business combination in accordance with SFAS No. 141 *Business Combinations*. As such, the net assets acquired were recorded at fair value. The results of operations for Luna Technologies have been included in the accompanying statement of operations from the acquisition date, September 30, 2005, through December 31, 2005.

The following table summarizes the estimated fair value of assets and liabilities assumed at the acquisition date:

	September 30, 2005
Current assets	$1,343,341
Property and equipment, net	286,134
Other assets	4,804
Intangible assets	166,726
Current liabilities	(553,176)
Long-term liabilities	(214,953)
Net Assets	$1,032,876

Intangible assets acquired in the transaction relate primarily to intellectual property rights which will be amortized over an estimated life of 5 years.

The following unaudited pro forma combined condensed statements of operations set forth the consolidated results of our operations for the years ended December 31, 2004 and December 31, 2005 as if the above described acquisition of Luna Technologies had occurred at the beginning of each period presented. This unaudited pro forma information does not purport to be indicative of the actual results that would actually have occurred if the combination had been in effect for the years ended December 31, 2004 and December 31, 2005.

	Years Ended	
	December 31, 2004	**December 31, 2005**
Revenue	$24,315,810	$18,642,213
Net income	$ 3,082,354	$ (2,421,464)
Diluted earnings per share	$0.87	$ (0.65)

Luna Energy

We formed Luna Energy on February 12, 2002, for the purpose of transferring certain intellectual property rights related to technology to be used in the oil and gas industry. On February 19, 2002, we entered into a Purchase and Sale agreement with a subsidiary of Baker Hughes Oilfields Operations, Inc. (BHI) for the purchase of a 40% interest in Luna Energy. BHI paid us an up-front payment of $10 million for the 40% equity interest as well as licensing rights to use the intellectual property transferred to Luna Energy. In connection with this agreement, we were also required to enter into a Research and Development Agreement with Luna Energy for the development of certain new technology for the benefit of BHI. BHI committed to pay us an additional $8 million upon achievement of certain milestones which were tied to the development of the new technology. Additionally, BHI committed to provide Luna Energy with $12 million in financing over an estimated collaboration period of three years.

As there was no objective and reliable evidence of fair value for deliverables in this arrangement, consistent with the revenue recognition provisions of Staff Accounting Bulletin No. 104 *Revenue Recognition* and the multi-element arrangement provisions of EITF 00-21, the proceeds from the $10 million payment were recognized ratably over the expected three year collaboration period as license revenues.

As previously discussed, BHI agreed to provide substantially all of the working capital required to fund Luna Energy's operations for three years. Additionally, in accordance with Luna Energy's Amended and Restated LLC agreement, BHI was provided certain approval rights which gave them substantive participation in the operations of Luna Energy. These rights included, but were not limited to, approval over the adoption or amendment of annual and period operating and capital budgets, approval over any single material expenditure by Luna Energy in excess of $10,000, approval over any action by Luna Energy to cease the operations of Luna Energy or to change its business focus, and approval over the election or re-election of officers of Luna Energy. Accordingly, consistent with the provisions of EITF Issue No. 96-16, *Investor's Accounting for an Investee when the Investor Has a Majority of the Voting Interest but the Minority Shareholder or Shareholder Have Certain Approval or Veto Rights*, we did not consolidate Luna Energy but accounted for our interest under the equity method. We were not required to provide any capital financing to Luna Energy from inception through the three-year collaboration period, nor was there any carrying value for the intellectual property transferred to Luna Energy. Therefore, we had no basis to record losses from Luna Energy until 2004 when we advanced it $198,000. Luna Energy's operating results did not have a material effect on our financial position or our results of operations. As such, condensed financial information on Luna Energy has not been presented.

In December 2004, BHI acquired all of our remaining equity interest in Luna Energy for a non-refundable payment of $990,000. Such amount was recognized as revenue at that date as we had no further obligation to Luna Energy or BHI.

In addition to our licensing and development arrangement, we also performed subcontract services on certain research contracts for Luna Energy. Total revenues earned from such contracts for the years ended December 31, 2003 and 2004 were $628,050 and 176,802, respectively.

6. Accrued Liabilities

Accrued liabilities consist of the following at:

	December 31,		March 31,
	2004	2005	2006
			(unaudited)
Accrued compensation and related liabilities	$594,856	$646,657	$633,593
Accrued professional fees	179,621	448,634	570,834
Accrued severance and bonuses	508,946	401,095	258,161
Accrued settlement costs	165,335	—	—
Accrued Royalty	—	120,000	21,257
Deferred Rent	81,324	72,048	69,486
Accrued interest	—	—	74,795
Other	212,012	99,728	98,935
	$1,742,094	$1,788,162	$1,727,061

7. Debt Agreements

Working Capital Facility

We entered into a line of credit agreement with First National Bank (FNB) in December 2001. This agreement, as amended, enabled us to borrow up to $3,000,000, subject to an eligible borrowing base, with interest payable monthly based upon the Wall Street Journal prime rate (5.0% at December 31, 2004). The line of credit is collateralized by a blanket interest in our assets. As of December 31, 2004, the line of credit was subject to certain financial covenants.

We received a modified commitment for renewal of the line of credit in May 2005. Under the May 2005 commitment, we may draw up to $2,500,000 for working capital needs. Interest accrues on any outstanding balance at the Wall Street Journal prime rate (7.25% at December 31, 2005). Any outstanding principal balance is payable in full on demand or at maturity, May 30, 2006. Outstanding borrowings on the line of credit were $1,500,000 at December 31, 2004. There were no outstanding borrowings for the periods ended December 31, 2005 and March 31, 2006.

Milestone Credit Facility

In connection with the BHI transaction discussed in Note 5, we entered into a “Milestone” working capital line of credit with FNB on May 16, 2003 for $1,500,000. Interest was payable monthly at the Wall Street Journal prime rate plus 3.0%. Advances under the line of credit were governed by us providing FNB written evidence of BHI’s acceptance and approval of payment for milestone payments under the contract with BHI. In connection with acceptance and approval for Milestone 3, we were able to borrow $1,500,000 against the line of credit. The line of credit was collateralized by a blanket interest in our assets, as well as 40.0% of the payments for Milestones 3 and 4 under the Purchase and Sale Agreement. Additionally, the line of credit was guaranteed by an officer and stockholder and was subject to certain financial covenants. The line of credit expired on March 15, 2004 and was not renewed.

Virginia Tech Foundation Note

In connection with the Luna Technologies acquisition discussed in Note 5, the Company assumed a promissory note due to the Virginia Tech Foundation for $214,955. The principal amount is due on January 31, 2007. Interest is payable

monthly and accrues at 5.0% per annum. The note is collateralized by a blanket interest in the assets of Luna Technologies.

The following table presents a summary of debt at December 31, 2004 and 2005 and March 31, 2006.

	December 31		March 31
	2004	2005	2006
			(unaudited)
Line of credit	1,500,000	—	—
Carilion Health Systems financing (see note 14)	$—	$5,000,000	$ 5,000,000
Virginia Tech Foundation	—	214,955	214,955
	1,500,000	5,214,955	5,214,955
Less: current payable	(1,500,000)	—	(214,955)
	$—	$5,214,955	$ 5,000,000

Future maturities of long-term debt as of December 31, 2005 are as follows:

	Amount
Year ending December 31,	
2006	$—
2007	214,955
2008	—
2009	5,000,000
Total debt	$ 5,214,955

8. Income Taxes

Deferred tax assets and liabilities consist of the following components:

	December 31,	
	2004	2005
Research and development credits	$623,181	$1,325,105
Net operating loss carryforwards	19,064	800,565
Deferred revenues	370,498	—
Accrued liabilities	151,675	132,759
Stock-based compensation	76,943	141,067
Depreciation and amortization	(126,260)	(128,804)
Change in tax return accounting method - current (liability)	(30,106)	—
	1,084,995	2,270,692
Valuation allowance	(642,246)	1,670,692
Net deferred tax asset	$442,749	600,000

The reconciliation of expected income tax expense (benefit) to actual income tax expense (benefit) was as follows:

	December 31,		
	2003	2004	2005
Statutory federal rate	34.0%	34.0%	34.0%
State tax net of federal benefit	3.9%	3.9%	3.9%
Research and development credit and carryforwards	(10.2%)	(0.6%)	22.9%
Change in valuation allowance	3.9%	(19.5%)	(42.4%)
Capital loss deduction	—	(18.3%)	—
Permanent differences and other	3.7%	3.5%	3.4%
Income tax expense (benefit)	35.3%	3.0%	21.8%

The income tax provision (benefit) consists of the following for:

	December 31,		
	2003	2004	2005
Current:			
Federal	$(397,722)	$(746,343)	$—
State	91,485	(83,321)	—
Deferred Federal	1,068,139	852,276	(523,817)
Deferred State	123,980	105,622	(33,435)
Income tax expense (benefit)	$885,882	$128,234	(557,252)

Realization of deferred income tax assets is dependent upon sufficient future taxable income during the period that deductible temporary differences are expected to be available to reduce taxable income. In assessing the realizability of deferred tax assets, we consider whether it is more likely than not, that some portion, or all of the deferred tax asset will be realized. We consider scheduled reversals of deferred tax liabilities, projected future taxable income, and tax planning strategies that can be implemented by us in making this assessment of the realizability of such assets. We have net operating loss carryforward available at December 31, 2005 of approximately $3.0 million that expire at varying dates through 2025. We have recorded a refundable income tax receivable, of approximately $400 thousand, representing net operating losses that we plan to carry back to recover income taxes previously paid. This results in remaining net operating loss carryforwards that we anticipate using in the future of approximately $800 thousand. The Company also has R&D tax credits of approximately $1.3 million which expire at varying dates through 2025.

A tax benefit of $600,000 was recorded at December 31, 2005 and March 31, 2006, based upon management's assessment that more likely than not the benefit will be realized in future periods.

9. Stockholders' Equity

Stock split

On September 22, 2003, we effected a 58:1 stock split in the form of a stock dividend on the Class A Common Stock. All prior period common stock and applicable share and per share amounts have been retroactively adjusted to reflect the stock split.

Reverse Stock split

Upon effectiveness of our initial public offering, we will effect a 1.7691911:1 reverse stock split of our common stock. All applicable share and per share amounts in the financial statements give proforma effect to such split.

Redeemable Class B Common Stock

In connection with our acquisition of Luna Technologies on September 30, 2005, we gave the shareholders of Luna Technologies a right to put 310,253 of their shares of Class B Common Stock back to us in the event we are unsuccessful in completing an initial public offering of our common stock by December 31, 2006. Such shares have been classified as Redeemable Class B Common Stock on our December 31, 2005 consolidated balance sheet.

Warrants

Warrants to purchase 103,505 shares of our Class B Common Stock for $0.001 per share were exercised in November 2005.

In February 2006, we issued 57,525 warrants for Class B Common Stock at an exercise price of $1.77 per share to former Luna Technologies shareholders to prevent dilution by a concurrent stock option grant. The warrants were valued using a Black-Scholes option pricing model with the following assumptions: risk-free rate of 4.55%, expected volatility of 64%, and an expected life of 10 years, which equaled the contractual term. The aggregate fair value of the warrant was $70,519, and this amount has been recorded as additional purchase price for the Luna Technologies acquisition.

Common Stock

Upon the completion of our initial public offering all of the outstanding shares of Class A Common Stock, Class B Common Stock and Class C Common Stock will convert into one class of common stock on a one-for-one basis.

Incentive Stock Option Plan

On August 20, 1999, we adopted the Luna Innovations Incorporated Stock Purchase Plan (the 1999 Plan) which permitted our Board of Directors to grant options to officers, directors and employees of our Company. There was no pre-established number of shares of common stock reserved for issuance under this plan. Options granted under the 1999 Plan generally had a life of 5 years and an exercise price equal to the estimated fair value of the Company as determined by the Board of Directors.

In connection with our reincorporation in April 2003, we adopted the Luna Innovations Incorporated 2003 Stock Plan (the 2003 Plan). Under the 2003 Plan, our Board of Directors is authorized to grant both incentive and nonstatutory stock options to employees, directors and consultants of our Company to purchase Class B shares of Common Stock. Options generally have a life of 10 years and exercise price equal to or greater than the fair market value of the Class B Common Stock as determined by the Board of Directors. A total of 5,000,000 shares of Class B Common Stock were reserved for issuance under the 2003 Plan. On March 16, 2004, our Board of Directors increased the number of shares reserved under the Plan to 8,000,000. The expiration date of the options cannot be more than 10 years from date of grant. A total of 5,757,420 and 4,024,446 were available for future grant as of December 31, 2004 and 2005, respectively.

On February 4, 2006, our Board of Directors increased the number of shares reserved under the 2003 Plan to 9,715,000. A total of 4,888,690 are available for future grant as of March 31, 2006.

In August 2003, our Board of Directors authorized an option exchange program expiring on September 19, 2003 whereby option holders of Class A Common Stock issued under the 1999 plan were given the opportunity to exchange their options for options to purchase Class B Common Stock on a one for one basis. The new option grants were immediately vested on the date of exchange, September 29, 2003, had an exercise price of $0.35 and a life of 10 years from the date of grant. Upon completion of the option exchange program, the 1999 plan was terminated.

All of the outstanding options from the 1999 Plan had exercise prices in excess of the fair value of our Class A Common Stock as of the date of the exchange. As such, the option exchange was accounted for as a repricing in accordance with FIN 44. We are required to apply variable plan accounting to the replacement grant and measure compensation based on the change in fair value of the Class B Common Stock at each reporting period. A total of

172,525 options were exchanged in connection with this transaction, of which 39,596 and 27,107 were outstanding at December 31, 2005 and March 31, 2006, respectively.

There was no non-cash stock option expense related to employee and director awards for the year ended December 31, 2003. Total non-cash stock option expense for the years ended December 31, 2004 and 2005 and the three months ended March 31, 2006 was $39,680, $133,901 and $195,273, respectively.

The following table sets forth the activity of our stock options to purchase class A and class B common stock and gives proforma effect to the reverse stock split discussed in Note 9.

	Class A Common Stock		Class B Common Stock	
	Number of Options	Exercise Price	Number of Options	Exercise Price
Balance at December 31, 2002	27,171,852	$0.16		
Cancelled pursuant to the exchange offer	(28,307,794)	0.16		$0.35
Issued pursuant to the exchange offer	—		207,736	0.35
Forfeited	—		(208,660)	0.35
Exercised	—		(67,121)	0.35
Granted	1,135,942	0.16	2,325,645	0.35
Balance at December 31, 2003	—		2,257,600	
Forfeited	—		(149,827)	0.35
Exercised	—		(9,326)	0.35
Granted	—		144,134	0.35
Balance at December 31, 2004	—		2,242,581	
Forfeited	—		(603,687)	0.35
Exercised	—		(238,173)	0.35
Granted	—		2,574,834	0.35 – 1.77
Balance at December 31, 2005	—		3,975,555	
Forfeited (unaudited)	—		(2,557)	0.35
Exercised (unaudited)	—		(128,633)	0.35
Granted (unaudited)	—		981,946	1.77
Balance at March 31, 2006 (unaudited)	—		4,826,311	

As noted above, on September 22, 2003, the Company forward split its Class A common stock on a 58 to 1 basis. This stock split occurred chronologically after the exchange offer was made to exchange options to purchase shares of Class A common stock for options to purchase Class B common stock on a one-for-one basis (pre-split). As shown in the above table, the Company cancelled 28,307,794 shares of Class A common stock (863,481 shares prior to the stock splits noted above) in exchange for the option to purchase 207,454 shares of Class B common stock. Options representing the right to purchase 280,612 shares of Class A common stock held by certain founding stockholders were not exchanged and were cancelled without any compensation to the holder.

On the date of the exchange, the pre-split exercise price of the Class A common stock was $5.22 (post-split exercise price at $0.16 per share). Management determined that prior to the exchange offer, since the options to purchase

Class A common stock exceeded its market value that it was in the best interest to effectuate the exchange offer, and offer the Class A option holders the right to receive a similar number of options to purchase Class B common shares at the new market price.

		Options Outstanding			Options Exercisable	
	Range of Exercise Prices	Options Outstanding	Weighted Average Remaining Life in Years	Weighted Average Exercise Price	Options Exercisable	Weighted Average Exercise Price of Options Exercisable
Year ended December 31, 2003	$0.35	2,257,600	9.7	$0.35	1,179,359	$0.35
Year ended December 31, 2004	$0.35	2,242,580	8.8	0.35	1,594,885	0.35
Year ended December 31, 2005	$0.35-$1.77	3,975,554	8.9	0.67	1,519,397	0.35
Three months ended March 31, 2006	$0.35-$1.77	4,826,310	8.9	0.90	1,505,850	0.35

Weighted average grant date fair value for December 31, 2003, 2004, and 2005 was $0.23, $0.23 and $0.39, respectively.

10. Commitments and Contingencies

Obligation Under Operating Leases

We lease our facilities in Blacksburg, Charlottesville, Danville and Hampton, Virginia under non-cancellable operating leases that expire between July 2005 and May 2009. Certain of the leases are subject to fixed escalations. We recognize rent expense on such leases on a straight-line basis over the lease term. Rent expense under these leases was approximately $406,000, $560,000 and $600,000 for the years ended December 31, 2003, 2004 and 2005, respectively.

Minimum future rentals, as of December 31, 2005, under the aforementioned operating leases for each of the next five periods ending are:

2006	$650,469
2007	771,191
2008	683,330
2009	527,762
2010	502,721
Thereafter	339,587
	$3,475,060

New Facility Lease

We have entered into an agreement with Carilion Medical Center to lease 20,000 square feet of office space at the Riverside Centre in Roanoke, Virginia that will serve as our headquarters. The landlord of this property, Carilion

Medical Center, is an affiliate of Carilion Health System, currently our second largest stockholder. Dr. Edward Murphy, Chairman and Chief Executive Officer of Carilion Health System became a member of our board of directors in connection with the investment of $7.0 million by Carilion Health System in August 2005. The lease has a five year term commencing on the later of September 1, 2006 or the date Carilion Medical Center provides us with a certificate of occupancy. Base rent will be $480,000 per year, subject to annual escalations of two percent. As of December 31, 2005, we had not received a certificate of occupancy.

Obligation Under Capital Leases

We are obligated under capital leases covering certain equipment and software that expire at various dates during the next four years. Minimum lease payments as of December 31, 2005 were as follows:

2006	$105,947
2007	91,635
2008	24,060
2009	4,643
	226,285
Less—amount representing interest	10,331
Present value of net minimum obligation	215,954
Less—current obligation	98,820
Long-term obligation	$117,134

The gross amount of property and equipment and related accumulated amortization recorded under capital leases were as follows at December 31:

	2004	2005
Equipment	$292,580	$458,035
Software	164,085	514,121
	456,665	972,156
Less—accumulated amortization	(92,528)	(363,040)
	$364,137	$609,116

Governor's Opportunity Fund

In March 2004, we received a $900,000 grant (the "Grant") from the City of Danville, Virginia (the "City") to be used for the expansion of economic and commercial growth within the City. Specifically, $450,000 of the grant will be used to offset certain capital expenditures for leasehold improvements being made at our Danville facility, and the remaining $450,000 is to be used for our creation of new jobs upon satisfaction of the conditions described below.

The Grant stipulates that we must make estimated capital expenditures of at least $6,409,000 and create 54 new full time jobs at our Danville facility, at an average wage of at least $39,000 plus benefits within 30 months of the award, and then maintain such employment levels for an additional 30 months. We could be required to repay the grant funds on a pro-rata basis should we fail to satisfy the conditions stipulated in this agreement by September 25, 2006 at the

earliest. As such, since we have not yet met the stipulations of the grant, we have included the $900 thousand in deferred revenue and other credits in the accompanying consolidated balance sheets as of December 31, 2004 and 2005.

Purchase Order

In March 2006, our Luna Technologies Division executed a non-cancellable, non-reschedulable $1.2 million purchase order for multiple shipments of tunable lasers to be delivered over an 18-month period beginning in July 2006.

11. Employee Profit Sharing Plan

We maintain a salary reduction/profit-sharing plan under provisions of Section 401(k) of the Internal Revenue Code. The plan is offered to employees who have completed three months of service with us. We contribute 50% of the salary deferral elected by each employee up to a maximum deferral of 10% of annual salary.

We may, at our option, contribute additional amounts to the plan. We contributed approximately $165 thousand, $156 thousand and $213 thousand to the plan for the years ended December 31, 2003, 2004 and 2005, respectively, and approximately $53 thousand and $60 thousand for the three months ended March 31, 2005 and 2006.

12. Transfers of Intellectual Property

Luna i-Monitoring

We formed Luna i-Monitoring, Inc., in February 2002, to focus on the commercialization of integrated wireless telesensing systems for managing remote assets. On October 1, 2003, we, along with our individual stockholders, agreed to the terms of a share purchase and asset transfer agreement with IHS Energy Group, Inc. and for the sale of all of the issued and outstanding capital stock of Luna i-Monitoring Inc., as well as the rights, title and interest in its intellectual property. Total consideration received at closing was approximately $700,000.

Luna i-Monitoring had no substantial assets or operations from inception through the date of the sale of IHS Energy Group, Inc., but did hold the rights to intellectual property. We recorded the payment of $700,000 upon the sale of Luna i-Monitoring and intellectual property in accordance with SAB 104 since we had no further obligations to IHS Energy Group, Inc.

Biotechnology Company

On December 1, 2003, our subsidiary, Luna Analytics, entered into a license agreement with a biotechnology company granting a worldwide exclusive license for the use of certain patents and technology subject to the terms of the agreement for work in the field of life sciences research applications. We also entered into a research and development agreement with the licensee to develop additional technology. In exchange for the license rights, we were paid a one-time technology access fee of $1.0 million. The agreement also called for additional payments aggregating to $1.5 million each upon achievement of certain milestones.

Since there was no objective and reliable evidence of fair value for deliverables in this arrangement, we deferred the up-front payment of $1.0 million and were recognizing it ratably over the 10 year collaboration period. In October 2004, this biotechnology company notified us of its desire to terminate the research and development agreement. Since we had no further obligations to this biotechnology company under this arrangement, we recognized the remaining revenues upon the termination of the agreement.

13. Litigation and Other Contingencies

We are not party to any material legal proceedings, nor are we currently aware of any threatened material proceedings. From time to time, we may become involved in litigation in relation to claims arising out of our operations in the normal course of business. While management currently believes the amount of ultimate liability, if any, with respect to these actions will not materially affect our financial position, results of operations, or liquidity, the ultimate outcome of any

litigation is uncertain. Were an unfavorable outcome to occur, or if protracted litigation were to ensue, the impact could be material to us.

In March 2003, the Office of Inspector General of the Department of Commerce advised us that the government was investigating anonymous allegations of contract improprieties. We have cooperated fully and extensively with that investigation through interviews and document production. In April 2003, the government advised our regulatory counsel that to date no wrongdoing had been identified, although the government indicated that we may not have fully complied with contractual reporting requirements in one or two instances, which the government did not specify. We believe that the investigation has been resolved favorably, based on statements by the government investigator to our employees in June 2003, and that this matter effectively is at an end absent any advice or communication from the government to the contrary. However, there can be no assurance as to how or whether our relationships, business, financial condition or results of operations will ultimately be affected, if at all, by the investigation.

On November 9, 2004, we received a subpoena from the Department of Defense's Office of the Inspector General covering certain government research contracts awarded to us between January 1, 1998 and November 9, 2004 to determine if we had duplicated work in our submission of project reports to the government. In connection with the investigation, the government alleged that duplication occurred in three research reports that we prepared under the contracts. We submitted a response to the Inspector General in September 2005 challenging the government's findings. On November 15, 2005, we entered into a settlement agreement with the government and received a general release with respect to this matter in return for a payment of $165,333. Such amount has been accrued for in the December 31, 2004 and 2005 balance sheets.

In July 2005, we received a letter from legal counsel retained by a former employee that such law firm is investigating whether such former employee has any claims against us, including breaches of contract, fiduciary duty, implied covenants of good faith and fair dealing as well as potential violations of minority stockholder rights that such former employee may have as a stockholder in one of our subsidiaries. In 2006, we responded to additional inquiries from counsel for such former employee seeking information about the relationship between us and the subsidiary in which the employee holds stock. Although we believe none of these potential claims has merit, we cannot currently predict whether such former employee will file litigation against us or the ultimate outcome of any such potential litigation.

We have made, and will continue to make, efforts to comply with current and future environmental laws. We anticipate that we could incur additional capital and operating costs in the future to comply with existing environmental laws and new requirements arising from new or amended statutes and regulations. In addition, because the applicable regulatory agencies have not yet promulgated final standards for some existing environmental programs, we cannot at this time reasonably estimate the cost for compliance with these additional requirements. The amount of any such compliance costs could be material. We cannot predict the impact that future regulations will impose upon our business.

14. Carilion Transactions

In August 2005, we entered into a Class C Common Stock Financing Agreement with Carilion Health System (Carilion) whereby Carilion committed to providing approximately $15.0 million in equity financing in three tranches subject to certain conditions outlined in the agreement. Carilion purchased 2,639,688 shares of our Class C Common Stock (the first tranche) for an aggregate purchase price of $7.0 million at closing.

In connection with the agreement, we also entered into an investor rights agreement with Carilion giving them certain registration rights in the event that we are successful in completing an initial public offering of our common stock.

On December 30, 2005, we reached an agreement with Carilion to terminate the August 2005 equity Financing Agreement and enter into a new Class C Common Stock Financing Agreement (the "New Agreement"). Under the New Agreement, Carilion agreed to provide $5.0 million in exchange for five $1.0 million convertible promissory notes, and $3.0 million in exchange for 1,131,294 shares of Class C Common Stock, subject to certain conditions.

The notes are convertible into Class C Common Stock at a fixed rate of $2.65183 per share. These notes accrue simple interest at a rate of 6.0% per year and are due and payable on December 30, 2009 or a later date if extended by the holders of a majority of the aggregate principal amount of the notes, absent acceleration due to an event of default. The holders of a majority of the aggregate principal amount of the notes may also extend the maturity date of these notes for one additional year by providing notice to us and may further extend the maturity date for up to an additional three consecutive one year periods if we are not eligible for or have elected not to pursue SBIR funding. After the first extension, if any, we will have the right to repay any accrued interest in cash rather than common stock. The holders of these notes have the option to convert their notes (subject to certain limitations) into shares of our common stock at maturity or upon the occurrence of certain events prior to this offering. In addition, the holders may convert their notes (subject to certain limitations) into shares of common stock if we are no longer eligible for SBIR grants or have not applied for an SBIR grant within the preceding 12 months.

In connection with the New Agreement, we amended and restated the investor rights agreement granting Carilion and certain other shareholders the rights to require us to register their shares of Common Stock for resale. Although we could be required to register shares held by these shareholders, there is no liquidated damages provision in the event such shares are not registered and the conversion of such debt can be satisfied with unregistered shares of Class C Common Stock.

15. Relationship With Major Customers

During the years ended December 31, 2003, 2004 and 2005 and the three months ended March 31, 2006, approximately 51%, 51%, 70% and 76%, respectively, of our consolidated revenues were attributable to prime contracts with the U.S. government. In addition, during the years ended December 31, 2003, 2004 and 2005, two of our non-government customers accounted for approximately 37%, 35% and 14% of our consolidated revenues, respectively, although these customers are not expected to be an ongoing source of revenues of that amount in the future. Our revenues from these major customers are as follows:

	Year ended December 31,			Three Months Ended March 31,	
	2003	2004	2005	2005	2006
U.S. Government	$8,969,004	$11,509,964	$11,471,447	$2,263,869	$3,444,636
Non-Government Customer	6,428,571	7,918,571	2,245,762	576,543	—

Luna Technologies, Inc.

Report of independent registered public accounting firm

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Luna Technologies, Inc.
Blacksburg, Virginia

We have audited the accompanying balance sheet of Luna Technologies, Inc. as of December 31, 2004, and the related statements of operations, changes in stockholders' equity (deficit), and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Luna Technologies, Inc. as of December 31, 2004, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Brown, Edwards & Company, L. L. P.
CERTIFIED PUBLIC ACCOUNTANTS

Christiansburg, Virginia
September 22, 2005

Luna Technologies, Inc.

Balance sheets

	December 31, 2004	September 29, 2005 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$624,552	$109,541
Receivables, net of allowance for doubtful accounts of $552 and $2,052 at December 31, 2004 and September 29, 2005, respectively	680,591	707,688
Due from related party	9,268	7,533
Inventories, net	212,722	422,241
Other current assets	40,855	53,625
Total current assets	1,567,988	1,300,628
Property and equipment, net	300,947	286,565
Other assets	8,729	4,804
Total Assets	**$1,877,664**	**$1,591,997**
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$74,978	$279,215
Accrued liabilities	331,343	267,462
Total current liabilities	406,321	546,677
Long term debt payable, net of current portion	214,953	214,953
Total liabilities	621,274	761,630
Redeemable Convertible Series B Preferred Stock, $0.001 par value per share; 64,600,000 shares authorized; 52,600,255 shares issued and outstanding at December 31, 2004 and September 29, 2005	3,200,565	3,373,165
Redeemable Convertible Series A and Series A-1 Preferred Stock, $0.001 par value per share; 26,000,000 shares authorized; 12,798,685 shares issued and outstanding at December 31, 2004 and September 29, 2005	11,960,763	12,511,681
Stockholders' equity:		
Common stock, $0.001 par value; 160,000,000 shares authorized at December 31, 2004 and September 29, 2005; 5,923,844 shares issued and outstanding at December 31, 2004 and September 29, 2005	5,924	5,924
Retained earnings (deficit)	(13,910,862)	(15,060,403)
Total stockholders' equity	(13,904,938)	(15,054,479)
Total liabilities and stockholders' equity	**$1,877,664**	**$1,591,997**

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

Luna Technologies, Inc.

Statements of operations

	Year ended December 31, 2004	Period Ended September 30, 2004	Period Ended September 29, 2005
		(unaudited)	(unaudited)
Revenues	$1,775,082	$1,049,299	$2,122,196
Cost of revenues	817,071	517,152	1,035,082
Gross profit	958,011	532,147	1,087,114
Operating expenses	1,884,606	1,416,386	1,500,933
Loss from operations	(926,595)	(884,239)	(413,819)
Other income (expense):			
Interest expense	(30,730)	(26,079)	(12,202)
Loss on disposal of fixed assets	(2,813)	(1,327)	—
Miscellaneous income (expense)	506	—	—
Total other income (expense)	(33,037)	(27,406)	(12,202)
Net loss	$(959,632)	$(911,645)	$(426,021)

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

Luna Technologies, Inc.

Statements of changes in stockholders' equity (deficit)

	Shares	Common Stock	Retained Earnings (Deficit)	Total
Balance—December 31, 2003	6,127,727	$ 6,128	$(11,849,413)	$(11,843,285)
Net loss	—	—	(959,632)	(959,632)
Conversion of Common Stock to Series A	(203,883)	(204)	(147,040)	(147,244)
Accretion of Preferred Stock	—	—	(962,277)	(962,277)
Gain on redemption of Series B Preferred Stock	—	—	7,500	7,500
Balance—December 31, 2004	5,923,844	5,924	(13,910,862)	(13,904,938)
Net loss (unaudited)	—	—	(426,021)	(426,021)
Accretion of Preferred Stock (unaudited)	—	—	(723,520)	(723,520)
Balance—September 29, 2005 (unaudited)	5,923,844	$ 5,924	$(15,060,403)	$(15,054,479)

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

Luna Technologies, Inc.

Statements of cash flows

	Year Ended December 31, 2004	For the Period From January 1 through September 30, 2004	For the Period From January 1 through September 29, 2005
		(unaudited)	(unaudited)
Cash flows from (used in) operating activities:			
Net loss	$(959,632)	$(911,645)	$(426,021)
Adjustments to reconcile to net loss to net cash used in operating activities:			
Depreciation and amortization	252,933	171,826	111,751
Provision for doubtful accounts	(26,839)	(26,839)	1,500
Amortization of deferred financing costs	21,064	—	—
Loss on disposal of property and equipment	2,813	1,327	—
Change in current assets and liabilities:			
(Increase) decrease in:			
Accounts receivable	(386,081)	(109,744)	(56,784)
Due from related party	18,998	—	1,735
Inventories	106,270	52,626	(209,519)
Note receivable	51,484	25,743	28,187
Prepaid expenses and other current assets	24,804	15,388	(12,770)
Other assets	(15,827)	(19,752)	—
(Decrease) increase in:			
Accounts payable	(101,826)	75,023	208,097
Accrued compensation	108,514	—	—
Accrued liabilities	(7,509)	(164,578)	(67,742)
Deferred revenues	(79,671)	—	—
Net cash flows used in operating activities	(990,505)	(890,625)	(421,566)
Cash flows from (used in) investing activities:			
Purchase of property and equipment	(11,430)	(9,744)	(93,445)
Proceeds from sale of property and equipment	6,000	6,000	—
Net cash (used in) investing activities	(5,430)	(3,744)	(93,445)
Cash flows from financing activities:			
Proceeds (repayments) from issuance of notes payable	(195,549)	(195,549)	—
Proceeds from the issuance of preferred stock	1,441,481	1,441,481	—
Repurchase of preferred stock	(5,000)	(5,000)	—
Net cash provided by financing activities	1,240,932	1,240,932	—
Increase (decrease) in cash and cash equivalents	244,997	346,563	(515,011)
Cash and cash equivalents:			
Beginning	379,555	379,555	624,552
Ending	$624,552	$726,118	$109,541
Supplemental disclosure of cash flow information			
Interest paid	$30,730	$26,079	$12,202
Schedule of non-cash investing and financing activities			
Accretion of preferred stock and related dividends	$962,277	$717,531	$723,520
Conversion of common stock to Series A preferred stock	$147,040	$147,040	—

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

Notes to financial statements

(Information for the nine months ended September 30, 2004 and September 29, 2005 is unaudited)

1. Organization and Nature of Business

Luna Technologies, Inc. (the “Company”) was originally incorporated on July 24, 1998 in the Commonwealth of Virginia as a wholly-owned subsidiary of Luna Innovations Incorporated (“Luna Innovations”). On December 11, 2000, we were reincorporated in the State of Delaware.

We develop and sell test instruments to measure the integrity of fiber optic network components and modules. Due to the nature of our products, the volume of sales transactions tends to be very low with relatively high average revenues per sale. Although we have repeat customers, we depend primarily on sales to new customers each year to maintain and increase revenues.

2. Summary of Significant Accounting Policies

Basis of Presentation

Our audited financial statements have been prepared in accordance with accounting principles generally accepted in the United States (US GAAP). Our unaudited financial statements have been prepared in accordance with US GAAP for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required to be presented for complete financial statements. The accompanying financial statements include all adjustments (consisting only of normal recurring accruals), which are, in the opinion of our management, necessary for a fair presentation of the results for the interim periods presented. The results of operations for the period from January 1 through September 29, 2005 are not necessarily indicative of the results that may be expected for the year ended December 31, 2005.

The unaudited financial statements and related disclosures have been prepared with the presumption that users of the interim financial information have read or have access to the audited financial statements for the preceding fiscal year. Accordingly, these financial statements should be read in conjunction with the audited financial statements and the related notes included for 2004. The unaudited financial statements as of and for the nine months ended September 29, 2005 do not include the effects of the acquisition of the Company by Luna Innovations, which is discussed in Note 16.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid investments with an original maturity of three months or less.

We maintain our cash in bank deposit accounts which, at times, may exceed federally insured limits. We have not experienced any losses in such account. We believe we are not exposed to any significant credit risk on cash and cash equivalents.

Financial Instruments

Our balance sheet includes various financial instruments (primarily cash and cash equivalents, accounts receivable, note receivable, accounts payable, accrued compensation and accrued liabilities). The fair values of these financial instruments approximate the carrying values due to their short maturities. The fair value of debt approximated its

carrying amount as of December 31, 2004 and September 29, 2005 based on rates currently available to us for debt with similar terms and remaining maturities.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable, and notes receivable. We deposit our cash with financial institutions in the United States that we consider to be of high credit quality.

Accounts Receivable

With respect to accounts receivable and notes receivable, we perform ongoing credit evaluations of our customers, generally do not require collateral, and maintain an allowance for doubtful accounts based on historical experience and management's expectations.

Inventories

Inventory consists of component parts, work-in-progress, and finished goods. Inventory is stated at the lower of cost, determined on the first-in, first-out (FIFO) basis, or market.

Property and Equipment

Property and equipment are recorded at cost. Depreciation and amortization are calculated on the straight-line method over the following estimated useful lives of the assets:

Computer and sale demo equipment	3 – 7 years
Furniture and equipment	3 – 7 years
Software	3 – 7 years
Leasehold improvements	Lesser of lease term or life of improvements
Vehicles	5 years

Depreciation expense for the year ended December 31, 2004 and the nine months ended September 30, 2004 and September 29, 2005 was $252,933, $171,826 and $111,751, respectively.

Certain equipment held under capital leases is classified as property and equipment and is amortized using the straight-line method over the term of the lease. The related obligations are recorded as liabilities. Lease amortization expense is included in depreciation and amortization expense. Maintenance and repairs are charged to expense as incurred.

Impairment of Long-Lived Assets

We evaluate our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of any asset to future net undiscounted cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by future discounted cash flows compared to the carrying amount of the assets. No such indicators existed as of December 31, 2004 and as of September 29, 2005.

Revenue Recognition

Revenues are derived from product sales. We recognize revenues when all the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred, (iii) the fee is fixed or determinable, and (iv) collectibility is probable.

We accrue for warranty costs, sales returns and other allowances on our best estimate of costs that will be incurred on the delivered product.

Stock-Based Compensation

We have a stock-based employee compensation plan, which is more fully described in Note 11. We account for stock-based employee compensation arrangements in accordance with Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and comply with the disclosure provisions of Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123). Awards under our current plan vest over a period of up to five years. We account for equity instruments issued to nonemployees in accordance with SFAS No. 123 and EITF 96-18, *Accounting for Equity Instruments that are Issued to Others than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. For the year ended December 31, 2004 and the nine months ended September 30, 2004 and September 29, 2005, applying the value-based method under SFAS 123 to all outstanding and unvested options would have not have a material impact on the net loss as reported by us.

The fair value of each option grant is estimated on the date of grant using the Minimum Value option-pricing model with the following assumptions: dividend yield of 0.00%; riskfree interest rate of 5.00%; and an expected life of five years. In determining the value of the options, management also considers the fundamentals of Luna Technologies, including earnings performance, liquidation performances, and dilution of common stock by preferred stock conversion rights. The effect of applying SFAS No. 123 to the calculation of the pro forma net loss as stated above is not necessarily representative of the effects on reported net loss for future years due to, among other things, (1) the vesting period of the stock options and (2) the fair market value of additional stock options in future years.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*, which is a revision of SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123R). SFAS No. 123R supersedes APB Opinion No. 25, *Accounting for Stock Issued to Employees*, and amends SFAS No. 95, *Statement of Cash Flows*. Generally, the approach in SFAS No. 123R is similar to the approach described in SFAS No. 123. However, SFAS No. 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. Publicly traded companies are required to adopt SFAS No. 123R on January 1, 2006.

On September 30, 2005, all outstanding options were cancelled in conjunction with the acquisition by Luna Innovations as discussed in Note 16.

Advertising Costs

We expense all advertising costs as incurred. We incurred approximately $44,000, $13,325 and $73,490 of advertising expense during the year ended December 31, 2004 and the nine months ended September 30, 2004 and September 29, 2005, respectively.

Research and Development Costs

Expenditures relating to the development of new products and processes, including significant improvements to existing products, are expensed as incurred. Software development costs are subject to capitalization beginning when a product's technological feasibility has been established and ending when a product is available for release to customers. Our products are released soon after technological feasibility has been established. As a result, the costs subsequent to achieving technological feasibility have been insignificant and all software development costs have been expensed.

Income Taxes

We provide for income taxes in accordance with the liability method required by Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* (SFAS 109). Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

3. Inventories

Inventories consist of the following at:

	December 31, 2004	September 29, 2005
Finished goods	$30,000	$39,272
Raw materials	76,494	384,473
Work-in-process	116,228	10,198
	222,722	443,943
Obsolescence reserve	(10,000)	(11,702)
	$212,722	$422,241

4. Note Receivable

As partial payment for a product sale, we accepted a promissory note payable for 36 equal installments of $4,290 beginning on August 1, 2002. The note bears interest at a rate of 6.5% per annum, with the product as collateral. The revenues on the remaining balance of the note receivable were $79,671 as of December 31, 2003. We recognized the remaining revenues related to the sale in 2004 because the maker of the note was purchased by a third party and our management believes there is minimal risk of default on the note and repossession of the equipment.

5. Property and Equipment

Property and equipment, at cost, including equipment under capital lease obligations, consist of the following at December 31, 2004:

Computer and sales demo equipment	$53,309
Furniture and equipment	801,146
Computer software	270,154
Leasehold improvements	43,020
	1,167,629
Less accumulated depreciation and amortization	866,682
	$300,947

6. Debt

On August 31, 2001, we entered into an equipment term note (the “Term Note”) with a financial institution that provides for borrowings up to $800,000. At December 31, 2004, no balance was outstanding under the Term Note.

In conjunction with the execution of the Term Note, we issued warrants to purchase 88,642 shares of Series A Preferred Stock at $0.7222 per share. The warrants were fully vested upon issuance and expire on August 31, 2007. The fair value of the warrants was calculated using the Black-Scholes option-pricing model using the following assumptions: (a) 73% expected volatility; (b) 44 month expected life; (c) 0% expected dividend yield; and (d) 5.0% risk-free interest rate. We recorded deferred financing costs of $51,803, of which $46,094 related to the fair value of the warrants issued to the financial institution. The deferred financing costs are being amortized to interest expense using the effective interest method over the period the related debt is expected to be outstanding (three years). During the year ended December 31, 2004, we recognized additional interest expense of $15,828.

On August 31, 2003, we refinanced two previous loans totaling $214,953 with an affiliated organization in return for an interest only note payable beginning September 30, 2003 and bearing interest of 5% per annum. The note calls for 23 interest payments of $897, with a balloon payment of $214,953 due on August 1, 2005. At December 31, 2004, $214,953 was outstanding under this term note. In April 2005, the maker of the note extended the term until July 31, 2007. Consequently, the balance of the note is presented as a non-current liability.

On September 1, 2002, we agreed to borrow an aggregate of $105,060 from an affiliated organization in return for (i) a promissory note and (ii) warrants to purchase 36,364 shares of Series A Preferred Stock at $0.7222 per share. The warrants were fully vested upon issuance and expire on September 1, 2007. The fair value of the warrants was calculated using the Black-Scholes option-pricing model using the following assumptions: (a) 77% expected volatility; (b) five-year expected life; (c) 0% expected dividend yield; and (d) 5.0% risk-free interest rate. We recorded deferred financing costs of $26,182 related to the fair value of the warrants issued to the financial institution. The deferred financing costs are being amortized to interest expense using the effective interest method over the original four year term of the note. During the year ended December 31, 2004, we recognized additional interest expense of $5,236 per year. This note was refinanced as part of the interest only loan described above.

Annual maturities of all long-term debt are as follows:

Year ended December 31:

2005	$ —
2006	—
2007	214,953
	$214,953

7. Related Party Transactions

During the year ended December 31, 2004, we incurred approximately $1,966 of administrative fees paid to a stockholder.

During the year ended December 31, 2004, we sold products and services to the same stockholder valued at approximately $46,178.

Luna Technologies, Inc.

8. Income Taxes

Significant components of the provision for (benefit from) income taxes attributable to operations consist of the following at December 31, 2004:

Current	$—
Deferred	(316,637)
Valuation allowance	316,637
	$—

The difference between the tax provision and the amount that would be computed by applying the statutory federal income tax rate to income before taxes is primarily attributable to the valuation allowance for deferred tax assets.

Temporary differences and carryforwards, which give rise to a significant portion of deferred tax assets and liabilities, are as follows at December 31, 2004:

Deferred tax assets:	
Net operating loss carryforwards	$3,937,451
Depreciation	(18,098)
Accrued other	34,706
Valuation allowance	(3,954,059)
Net deferred tax assets	$—

We have net operating loss carryforwards for federal income tax purposes of approximately $10,200,000, which expire, if unused, from the year 2019 through the year 2024. The timing and manner in which this net operating loss carryforward may be utilized in any year by us may be limited to our ability to generate future earnings and also be limited by certain provisions of the U.S. tax code. Realization of total deferred tax assets is contingent upon the generation of future taxable income. Due to the uncertainty of realization of these tax benefits, we have provided a valuation allowance for the full amount of its deferred tax assets.

9. Lease Commitments

We lease office facilities and office equipment under operating lease agreements. Rent expense for the year ended December 31, 2004 was approximately $96,400.

Future minimum rental payments associated with non-cancelable lease obligations are as follows at December 31, 2004:

2005	$104,431
2006	104,431
2007	8,703
	$217,565

10. Redeemable Preferred Stock

Series A

On December 22, 2000, we entered into the Series A Preferred Stock Purchase Agreement (Purchase Agreement). The sale of Series A Preferred Stock was effected in three closings occurring during 2001. The first closing occurred simultaneous with the execution of the Purchase Agreement whereby we issued 6,923,290 shares of Series A Preferred Stock at $0.7222 per share for gross proceeds of $5 million, less offering costs of $76,783. The second closing of the Purchase Agreement was executed on March 19, 2001, whereby we issued 1,841,591 shares of Series A Preferred Stock at $0.7222 per share for gross proceeds of $1,329,997, less offering costs of $14,630. The third closing of the Purchase Agreement was executed on October 10, 2001, whereby we issued 3,615,343 shares of Series A Preferred Stock at $0.7222 for gross proceeds of $2,611,001, less offering costs of $8,401.

The holders of Series A Preferred Stock are entitled to receive, when declared by our Board of Directors, cumulative dividends, accruing from the date of issuance at a rate of 8% per annum on each outstanding share of Series A Preferred Stock.

Each share of the Series A Preferred Stock is convertible into one share of common stock at the election of the holder, subject to certain anti-dilutive provisions. Conversions are automatic in the event of public offering of common stock in which the net proceeds to us are at least $25 million or upon the closing of an acquisition or asset transfer resulting in gross cash proceeds of at least $75.0 million. The holders of Series A Preferred Stock are entitled to one vote per share. Furthermore, the holders of Series A Preferred Stock are entitled to elect a certain number of members to the Board of Directors as well as vote on significant matters affecting us. In addition, the holders of Series A Preferred Stock have a liquidation preference in the event of our dissolution. The liquidation price is equal to the sum of the original issuance price per share of Series A Preferred Stock, plus any accrued and unpaid dividends. Holders of Series A Preferred Stock are entitled to redemption any time after the fifth anniversary of original issuance of the Series A Preferred Stock in two equal annual installments. The redemption price is equal to the sum of the original issuance price per share of Series A Preferred Stock, plus any accrued and unpaid dividends.

The difference between the redemption price of the Series A Preferred Stock and the carrying value of the Series A Preferred Stock is being accreted over the period from the issuance date to the redemption date using the effective-interest method.

In conjunction with the issuance of Series B shares described below, certain holders of common stock were entitled to convert shares of common stock to Series A Preferred Stock. The shares converted and the related carrying values of the common and preferred shares are as follows:

	Shares Converted	Par Value Common Stock	Series A Preferred Stock
2004	203,883	$(204)	$147,244

Series A-1

Pursuant to the issue of Series B Preferred Stock described below, we authorized 13,000,000 shares of Series A-1 Preferred Stock to convert the Series A Preferred Stock for stockholders who opted not to participate in the Series B Preferred Stock issue. Series A-1 Preferred Stock has the same dividend, redemption, and conversion features as Series A Preferred Stock, but is subordinated in liquidation. 214,631 shares of Series A Preferred Stock were converted to Series A-1 Preferred Stock during 2003.

Series B

On March 31, 2003, we entered into the Series B Preferred Stock Purchase Agreement (Purchase Agreement). The sale of Series B Preferred Stock was effected in two closings. The first closing occurred simultaneous with the execution of the Purchase Agreement whereby we issued 26,618,308 shares of Series B Preferred Stock at $0.055 per share for net proceeds of $1,464,007. The second closing occurred during 2004 whereby we issued 26,209,218 additional shares of Series B Preferred Stock at $0.055 per share for net proceeds of $1,441,481.

The holders of Series B Preferred Stock are entitled to receive, when declared by our Board of Directors, cumulative dividends, accruing from the date of issuance at a rate of 8% per annum on each outstanding share of Series B Preferred Stock.

Each share of the Series B Preferred Stock is convertible into one share of common stock at the election of the holder, subject to certain anti-dilutive provisions. Conversions are automatic in the event of public offering of common stock in which the net proceeds to us are at least $25 million or upon the closing of an acquisition or asset transfer resulting in gross cash proceeds of at least $75 million. The holders of Series B Preferred Stock are entitled to one vote per share. Furthermore, the holders of Series B Preferred Stock are entitled to elect a certain number of members to the Board of Directors as well as vote on significant matters affecting us. In addition, the holders of Series B Preferred Stock have a liquidation preference in the event of our dissolution. The liquidation price is equal to the sum of the original issuance price per share of Series B Preferred Stock, plus any accrued and unpaid dividends. Holders of Series B Preferred Stock are entitled to redemption any time after the fifth anniversary of original issuance of the Series B Preferred Stock in two equal annual installments. The redemption price is equal to the sum of the original issuance price per share of Series B Preferred Stock, plus any accrued and unpaid dividends.

The difference between the redemption price of the Series B Preferred Stock and the carrying value of the Series B Preferred Stock is being accreted over the period from the issuance date to the redemption date using the effective-interest method.

11. Stockholders' Equity (Deficit)

Common Stock

We have authorized 160 million shares of common stock with a $0.001 par value. Dividends may be declared and paid on the common stock, subject in all cases to the rights and preferences of the holders of Series A and Series B Preferred Stock and to authorization by the Board of Directors. In the event of liquidation or winding up of Luna Technologies and after the payment of all preferential amounts required to be paid to the holders of Series A and Series B Preferred Stock, any remaining funds shall be distributed among the holders of the issued and outstanding common stock.

Stock Options

On September 7, 2000, we adopted the Luna Technologies, Inc. 2000 Incentive Stock Option Plan (the Plan) to provide for the granting of stock awards, such as stock options, to employees, directors and other individuals as determined by the Board of Directors. We have reserved 9,900,000 shares of common stock under the Plan. Stock options granted under the Plan may be either incentive stock options (ISOs) as defined by the Internal Revenue Code, or nonqualified stock options. The Board of Directors determines who will receive options under the Plan and determines the vesting period, which is generally five years. Options may have a maximum term of no more than 10 years. The exercise price of ISOs granted under the Plan shall not be less than 100% of the fair market value of the common stock on the date of grant. The Board of Directors determines the exercise price of nonqualified options.

Additional information with respect to stock option activity is summarized as follows for the year ended December 31, 2004:

	Shares	Weighted Average Exercise Price
Outstanding, beginning	6,594,955	$0.02
Options granted	12,774,470	0.01
Options canceled or expired	(35,000)	0.01
Outstanding, ending	19,334,425	0.01
Options exercisable, ending	7,966,935	$0.01

The following table summarizes information about stock options outstanding at December 31, 2004:

Options Outstanding				Options Exercisable	
Exercise Price	Number Outstanding	Weighted-Average Remaining Contractual Life (In Years)	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$0.01	19,069,425	5.70	$0.01	7,757,379	$0.01
0.03	150,000	0.98	0.03	131,250	0.03
0.15	115,000	6.52	0.15	78,306	0.15
	19,334,425	5.67	0.02	7,966,935	0.01

12. Employee Benefit Plan

Employees of Luna Technologies participate in a 401(k) retirement plan administered by The Principal Inc. Eligible employees may elect to contribute, on a tax-deferred basis, up to 100% of their compensation, not to exceed annual maximums as defined in the Internal Revenue Code. We match one-half of a participant's contribution up to 10% of the participant's compensation. Our contributions to the plan were approximately $28,489, $25,196 and $33,385 for the year ended December 31, 2004 and for the period from January 1 through September 30, 2004 and for the period from January 1 through September 29, 2005 (unaudited), respectively.

13. Royalty Agreement

We license certain technology from the National Aeronautics and Space Administration, which is used with, and incorporated in, the manufacture of certain products. We pay a 4.0% royalty on the gross sales of all products sold which incorporate the technology and record such amount as a cost of revenue. Royalty expenses under the agreement were $61,905 for the year ended December 31, 2004 and $70,189 for the nine months ended September 29, 2005.

14. Employment Agreement

During 2003, we entered into an employment agreement with our current president. The agreement provides for payment of a quarterly bonus of 50.0% of base salary if certain revenue milestones are met. The agreement also provides for stock option grants to purchase 3,584,955 shares of common stock.

Additionally, the agreement provides for a severance payment of $45,752 in the event of a change of control of Luna Technologies.

15. Consulting Agreement

We entered into an agreement which requires us to pay up to 5.0% of the value of a sale of Luna Technologies. This requirement expires July 29, 2006 and applies to any purchaser except a current stockholder, Luna Innovations Incorporated or a company owned by Luna Innovations Incorporated.

16. Acquisition by Luna Innovations (unaudited)

On September 30, 2005, Luna Innovations Incorporated acquired us pursuant to an agreement and plan of merger. Our common and redeemable preferred stock outstanding at the time of the transaction was retired, and we replaced it with 1,000 shares of common stock, $0.001 par value, all of which is held by Luna Innovations Incorporated. The unaudited financial statements do not reflect the effects of the acquisition.

* * * * *

Luna Innovations Incorporated

Introduction to unaudited pro forma consolidated financial statement

The unaudited pro forma consolidated statement of operations for the year ended December 31, 2005 gives effect to our acquisition of all outstanding shares of Luna Technologies, Inc. (“Luna Technologies”) as if it had occurred on January 1, 2005, combining the consolidated statement of operations of Luna Innovations Incorporated for the year ended December 31, 2005 and the unaudited statement of operations of Luna Technologies for the period from January 1 through September 29, 2005.

The unaudited pro forma consolidated balance sheet as of December 31, 2005 has not been presented because the acquisition was consummated on September 30, 2005, and the balance sheet impact of the acquisition is therefore reflected in our consolidated balance sheet as of December 31, 2005.

As described in Note 5 to the Luna Innovations audited consolidated financial statements included elsewhere herein, we acquired all of the outstanding shares of Luna Technologies that we did not already own on September 30, 2005.

The pro forma consolidated statement of operations is unaudited and does not purport to represent the consolidated results that would have been obtained had the transaction occurred at the date indicated or the results which may be obtained in the future. The unaudited pro forma consolidated statement of operations does not represent the results which may be obtained in the future because, we believe that overhead and other operating costs will not continue at the same level as a result of integration efforts and synergies related to infrastructure and distribution channels, among other factors. Therefore, the results of operations reflected in the unaudited pro forma consolidated statement of operations for the period presented are not necessarily indicative of the results of operations which may be obtained in the future.

The unaudited pro forma consolidated statement of operations should be read in conjunction with: (i) our audited consolidated financial statements included in this prospectus and (ii) the audited and unaudited financial statements of Luna Technologies included in this prospectus.

Luna Innovations Incorporated

Unaudited pro forma consolidated statement of operations

	Luna Innovations (Year Ended December 31, 2005)	Luna Technologies (For the Period From January 1 through September 29, 2005)	Pro forma adjustments	Pro forma consolidated (Year Ended December 31, 2005)
		(unaudited)	(unaudited)	(unaudited)
Revenues	$16,453,888	$2,122,196	$(15,871)	$18,560,213
Cost of revenues	12,961,894	1,035,082	—	13,996,976
Gross profit	3,491,994	1,087,114	(15,871)	4,563,237
Operating expense	6,003,644	1,500,933	(14,485)	7,490,092
Operating income (loss)	(2,511,650)	(413,819)	(1,386)	(2,926,855)
Other income (expense)				
Interest income (expense), net	(41,251)	(12,202)	—	(53,453)
Miscellaneous (expense)	1,592	—	—	1,592
Total other (expense)	(39,659)	(12,202)	—	(51,861)
Income (loss) before income taxes	(2,551,309)	(426,021)	(1,386)	(2,978,716)
Income tax expense (benefit)	(557,252)	—	—	(557,252)
Net income (loss)	$(1,994,057)	$(426,021)	$(1,386)	$(2,421,464)
Net income (loss) per share:				
Basic	$(0.53)			$(0.65)
Diluted	$(0.53)			$(0.65)
Weighted average shares outstanding:				
Basic	3,735,811			3,735,811
Diluted	3,735,811			3,735,811

The accompanying notes are an integral part of this unaudited pro forma consolidated financial statement.

Luna Innovations Incorporated

Notes to unaudited pro forma consolidated financial statement

1. Basis of Presentation

Our unaudited pro forma consolidated financial statement has been prepared using the purchase method of accounting. The unaudited pro forma combined statement of operations for the year ended December 31, 2005 illustrates the effect of the merger of Luna Technologies, Inc. as if it had occurred on January 1, 2005, and includes the historical statement of operations for Luna Technologies for the period from January 1 through September 29, 2005, combined with our audited consolidated statement of operations for the year ended December 31, 2005.

Certain reclassifications have been made to the historical presentation of Luna Technologies, Inc. for conformity with the pro forma consolidated presentation.


LUNA
INNOVATIONS

PART II

Information not required in prospectus

ITEM 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than the underwriting discount and commissions, payable by Luna Innovations Incorporated in connection with the sale of the common stock being registered hereby. All amounts are estimates except the SEC Registration Fee, the NASD filing fee and the Nasdaq National Market listing fee.

	Amount to be Paid
Securities and Exchange Commission registration fee	$ 6,398.60
NASD filing fee	6,250.00
Nasdaq National Market listing fee	50,000
Blue Sky fees and expenses	20,000
Printing and engraving expenses	200,000
Legal fees and expenses	750,000
Accounting fees and expenses	350,000
Transfer agent and registrar fees	15,000
Miscellaneous	102,351.40
Total	$ 1,500,000

* To be filed by amendment

ITEM 14. Indemnification of Directors and Officers

Section 145(a) of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no cause to believe his or her conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if he or she acted under similar standards, except that no indemnification may be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Information not required in prospectus

Section 145 of the Delaware General Corporation Law further provides that: (i) to the extent that a former or present director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection therewith; (ii) indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and (iii) the corporation may purchase and maintain insurance on behalf of any present or former director, officer, employee or agent of the corporation or any person who at the request of the corporation was serving in such capacity for another entity against any liability asserted against such person and incurred by him or her in any such capacity or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liabilities under Section 145.

Article X of our amended and restated certificate of incorporation and Article VIII of our proposed amended and restated certificate of incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law.

Article VI of our proposed amended and restated bylaws provides for the indemnification of officers, directors and third parties acting on our behalf if such person acted in good faith and in a manner reasonably believed to be in and not opposed to our best interest and, with respect to any criminal action or proceeding, the indemnified party had no reason to believe his or her conduct was unlawful.

We have entered into indemnification agreements with our directors, executive officers and others, in addition to indemnification provided for in our bylaws, and intend to enter into indemnification agreements with any new directors and executive officers in the future.

We have purchased and intend to maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

See also the undertakings set out in response to Item 17 herein.

ITEM 15. Recent Sales of Unregistered Securities

In the past three years, we have issued and sold the following securities as adjusted for the 1-for-1.7691911 reverse stock split:

1. From September 22, 2003 through the date hereof, we have granted options to purchase 6,241,078 shares of our Class B Common Stock at a weighted average exercise price of $0.78 share, which included 4,248,784 shares of Class B Common Stock issuable upon exercise of options outstanding at an exercise price of $0.35 per share, 113,046 shares of Class B Common Stock issuable upon exercise of options outstanding at an exercise price of $0.37 per share, and 1,879,249 shares of Class B Common Stock issuable upon exercise of options outstanding at an exercise price of $1.77 per share. As of March 31, 2006, 443,253 of these options had been exercised at a price of $0.20 per share.
2. In May 2003, we issued warrants to purchase 103,505 shares of our Class B Common Stock at a price of $0.002 per share. Those warrants were exercised on November 22, 2005.
3. In August 2005, we issued and sold to an accredited investor 4,670,113 shares of our Class C Common Stock at a price of $4.69 per share.
4. In September 2005, we issued 693,897 shares of our Class B Common Stock (of which 196,403 shares were held in escrow as of the date of issuance) and warrants for 2,423 shares of our Class B Common Stock exercisable at $37.26 per share to accredited investors (of which 388 warrant shares were held in escrow as of the date of issuance) in consideration for the acquisition of Luna Technologies, Inc. In October 2005 we issued additional warrants for 1,490 shares of Class B Common Stock exercisable at $1.77 per share in connection with this transaction.

5. In December 2005, we issued and sold to an accredited investor 639,441 shares of our Class C Common Stock at a price of $4.69 per share. In connection with the transaction we issued to the same accredited investor a series of senior convertible promissory notes convertible into 1,065,736 shares of common stock upon the conversion of the principal amount outstanding under the convertible notes and, assuming we elect to convert all of the accrued interest on these notes into shares of common stock after these notes remain outstanding for eight years, up to an additional 511,553 shares of common stock.
6. In February 2006, we issued warrants to purchase 57,525 shares of our Class B Common Stock at an exercise price of $1.77 per share.

The sales of the above securities were deemed to be exempt from registration under the Securities Act with respect to items 1 through 6 above in reliance on Section 4(2) of the Securities Act, or Regulation D promulgated thereunder, and with respect to item 1 above also in reliance on, in full or in part, Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving a public offering or transactions pursuant to compensatory benefit plans and contracts relating to compensation as provided under such Rule 701. The recipients of securities in each such transaction represented their intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the share certificates and warrants issued in such transactions. All recipients had adequate access, through their relationships with us, to information about us.

ITEM 16. Exhibits and Financial Statement Schedules

(a) Exhibits.

A list of exhibits filed herewith is contained in the exhibit index that immediately precedes such exhibits and is incorporated herein by reference.

ITEM 17. Undertakings

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification by the Registrant for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 14 or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Signatures

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 3 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Roanoke, Commonwealth of Virginia, on the twenty-seventh day of April, 2006.

Luna Innovations Incorporated

By: /s/ KENT A. MURPHY
Kent A. Murphy, Ph.D.
President, Chief Executive Officer and Chairman

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 3 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ KENT A. MURPHY Kent A. Murphy, Ph.D.	President, Chief Executive Officer (Principal Executive Officer) and Chairman	April 27, 2006
/s/ SCOTT A. GRAEFF Scott A. Graeff	Chief Financial Officer (Principal Financial and Accounting Officer) and Executive Vice President, Corporate Development	April 27, 2006
* N. Leigh Anderson, Ph.D.	Director	April 27, 2006
* John C. Backus, Jr.	Director	April 27, 2006
* Barbara (Bobbie) Kilberg	Director	April 27, 2006

Signature	Title	Date
*	Director	April 27, 2006
Edward G. Murphy, M.D.		
*	Director	April 27, 2006
Paul E. Torgersen, Ph.D.		
*	Director	April 27, 2006
Richard W. Roedel		

*By: /s/ KENT A. MURPHY

Kent A. Murphy
Attorney-in-fact

Table of Contents

Exhibit Index

Exhibit Number	Description
1.1*	Form of Underwriting Agreement
2.1**	Agreement and Plan of Merger, dated as of September 30, 2005, by and among Luna Innovations Incorporated, Luna Technologies Acquisition Corp., Luna Technologies, Inc. and certain stockholders
3.1**	Amended and Restated Certificate of Incorporation of the Registrant as currently in effect
3.2**	Form of Amended and Restated Certificate of Incorporation of the Registrant to be effective upon closing of the offering
3.3**	Amended and Restated Bylaws of the Registrant as currently in effect
3.4**	Form of Amended and Restated Bylaws of the Registrant to be effective upon closing of the offering
4.1*	Specimen Common Stock certificate of the Registrant
4.2**	Form of Senior Convertible Promissory Note
4.3**	Warrant to Purchase 1,047 Shares of Class B Common Stock of Luna Innovations Incorporated, issued on September 30, 2005
4.4**	Warrant to Purchase 2,636 Shares of Class B Common Stock of Luna Innovations Incorporated, issued on November 11, 2005
4.5**	Warrant to Purchase 2,554 Shares of Class B Common Stock of Luna Innovations Incorporated, issued on September 30, 2005
4.6**	Form of Warrant to Purchase Shares of Common Stock of Luna Innovations Incorporated
4.7**	Form of Stock Option Agreement
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation
10.1**	Form of Indemnification Agreement for directors and executive officers
10.2**	Employment Letter between Scott A. Graeff and Luna Innovations Incorporated dated April 14, 2005
10.3**	Employment Letter between Robert Lenk and Luna Innovations Incorporated dated August 13, 2005
10.4**	Employment Letter between John Goehrke and Luna Innovations Incorporated dated September 20, 2005
10.5**	Employment Letter between Kenneth Ferris and Luna Innovations Incorporated dated October 24, 2005
10.6**	Loan Agreement, dated as of November 10, 2005, by and between Luna Innovations Incorporated and First National Bank
10.7**	2003 Stock Plan
10.8**	Amended and Restated Investor Rights Agreement, dated December 30, 2005, by and among Luna Innovations Incorporated, Carilion Health System and certain stockholders
10.9	2006 Equity Incentive Plan
10.10**	Warehouse and Office Lease, dated June 2003, between Georgia Anne Snyder-Falkinham and Luna Innovations Incorporated (2851 Commerce Street, Blacksburg, Virginia)
10.11**	Lease Agreement between William M. Sterrett, Jr. Family Limited Partnership and Luna Innovations Incorporated (2903-A Commerce Street, Blacksburg, Virginia)
10.12**	Lease Agreement between William M. Sterrett, Jr. Family Limited Partnership and Luna Innovations Incorporated (2903-B Commerce Street, Blacksburg, Virginia)

Exhibit Number	Description
10.13**	Lease Agreement, dated November 29, 1999, between William M. Sterrett, Jr. Family Limited Partnership and Luna Innovations Incorporated, as amended, November 27, 2001 (2903-C Commerce Street, Blacksburg, Virginia)
10.14**	Commercial Lease, dated March 17, 2003, between Canvasback Real Estate & Investments LLC and Luna Innovations Incorporated (705 Dale Avenue, Charlottesville, Virginia)
10.15**	Full Service Office Lease, dated August 2003, between Hampton R&D Properties, LLC and Luna Innovations Incorporated (130 Research Drive, Hampton, Virginia)
10.16**	Office Service Agreement, dated August 19, 2005, between Tysons Business Center, LLC and Luna Innovations Incorporated (8300 Greensboro Drive, McLean, Virginia)
10.17**	Lease, effective as of January 1, 2005, between the Industrial Development Authority of Danville and Luna Innovations Incorporated (521 Bridge Street, Danville, Virginia)
10.18**	Sublease, dated as of February 1, 2006, between Gryphon Capital Partners, LLC and Luna Innovations Incorporated (10 South Jefferson Street, Roanoke, Virginia)
10.19**	Lease, dated December 30, 2005, between Carilion Medical Center and Luna Innovations Incorporated (Riverside Center, Roanoke, Virginia)
10.20**	Modification of Lease, dated August 26, 2003, between Virginia Tech Foundation, Inc. and Luna Technologies, Inc. (2020 Kraft Drive, Blacksburg, Virginia)
10.21**	Grant Agreement, dated March 25, 2004, by and between the City of Danville, Virginia, and Luna Innovations Incorporated
10.22†**	License Agreement No. DN-982, dated June 10, 2002, by and between the National Aeronautics and Space Administration (NASA) and Luna Innovations Incorporated; Modification No. 1 to License Agreement No. DN-982, dated January 23, 2006, by and between NASA and Luna Innovations Incorporated
10.23†**	License Agreement No. DN-951, dated December 20, 2000, by and between NASA and Luna Technologies, Inc.
10.24†**	License Agreement No. DE-384, dated October 28, 2004, by and between NASA and Luna Technologies, Inc.
10.25†**	Fiber Optic Patent License, dated September 22, 2003, by and between United Technologies Corporation and Luna Innovations Incorporated
10.26†**	Amended and Restated License Agreement, dated March 19, 2004, by and between Virginia Tech Intellectual Properties, Inc. and Luna Innovations Incorporated
10.27**	Industrial Lease Agreement, dated March 21, 2006, by and between Luna Innovations Incorporated and the Industrial Development Authority of Montgomery County, Virginia (3150 State Street, Blacksburg, Virginia)
10.28**	Form of Stock Sale Restriction Letter Agreement
10.29**	Form of Employee Management Stock Sale Restriction Letter Agreement
10.30**	Joint Cooperation Agreement, dated June 6, 2005, by and between Luna Energy LLC and Luna Technologies, Inc.
10.31	Class C Common Stock and Note Purchase Agreement, dated December 30, 2005, by and between Luna Innovations Incorporated and Carilion Health System.
10.32	Member Interest Purchase Agreement, dated December 17, 2004, by and between Luna Innovations Incorporated and Baker` Hughes Oilfield Operations, Inc.
10.33	Share Purchase and Asset Transfer Agreement, dated October 1, 2003, by and among IHS Energy Group, Inc., IHS Energy Innovations, Inc. and certain selling stockholders.
21.1**	List of Subsidiaries
23.1	Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm
23.2	Consent of Brown, Edwards & Company, L.L.P.
23.3*	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (See Exhibit 5.1)
24.1**	Power of Attorney (See II-4)

* To be filed by amendment.
** Previously filed.
† Confidential treatment has been requested for certain provisions of this Exhibit pursuant to Rule 406 promulgated under the Securities Act.

EXHIBIT 10.9

LUNA INNOVATIONS INCORPORATED

2006 EQUITY INCENTIVE PLAN

1. Purposes of the Plan. The purposes of this Plan are:

- to attract and retain the best available personnel for positions of substantial responsibility,
- to provide additional incentive to Employees, Directors and Consultants, and
- to promote the success of the Company's business.

The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Restricted Stock, Stock Appreciation Rights, Performance Units and Performance Shares.

2. Definitions. As used herein, the following definitions will apply:

(a) "**Administrator**" means the Board or any of its Committees as will be administering the Plan, in accordance with Section 4 of the Plan.

(b) "**Affiliated SAR**" means an SAR that is granted in connection with a related Option, and which automatically will be deemed to be exercised at the same time that the related Option is exercised.

(c) "**Applicable Laws**" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan.

(d) "**Award**" means, individually or collectively, a grant under the Plan of Options, SARs, Restricted Stock, Performance Units or Performance Shares.

(e) "**Award Agreement**" means the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(f) "**Board**" means the Board of Directors of the Company.

(g) "**Change in Control**" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets;

(iii) A change in the composition of the Board occurring within a two-year period, as a result of which fewer than a majority of the directors are Incumbent Directors. "**Incumbent Directors**" means directors who either (A) are Directors as of the effective date of the Plan, or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the Incumbent Directors at the time of such election or nomination (but will not include an individual whose election or nomination is in connection with an actual or threatened proxy contest relating to the election of directors to the Company); or

(iv) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

(h) "**Code**" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(i) "**Committee**" means a committee of Directors appointed by the Board in accordance with Section 4 of the Plan.

(j) "**Common Stock**" means the common stock of the Company.

(k) "**Company**" means Luna Innovations Incorporated, a Delaware corporation, or any successor thereto.

(l) "**Consultant**" means any person, including an advisor, engaged by the Company or a Parent or Subsidiary to render services to such entity.

(m) "**Director**" means a member of the Board.

(n) "**Disability**" means total and permanent disability as defined in Section 22(e)(3) of the Code, provided that in the case of Awards other than Incentive Stock Options, the Administrator in its discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.

(o) "**Employee**" means any person, including Officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

(p) "**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

(q) "**Exchange Program**" means a program under which (i) outstanding Awards are surrendered or cancelled in exchange for Awards of the same type (which may have lower exercise prices and different terms), Awards of a different type, and/or cash, and/or (ii) the exercise price of an outstanding Award is reduced. The Administrator will determine the terms and conditions of any Exchange Program in its sole discretion.

(r) "**Fair Market Value**" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq National Market or The Nasdaq SmallCap Market of The Nasdaq Stock Market, its Fair Market Value will be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a Share of Common Stock will be the mean between the high bid and low asked prices for the Common Stock on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(iii) For purposes of any Awards granted on the Registration Date, the Fair Market Value will be the initial price to the public as set forth in the final prospectus included within the registration statement in Form S-1 filed with the Securities and Exchange Commission for the initial public offering of the Company's Common Stock; or

(iv) In the absence of an established market for the Common Stock, the Fair Market Value will be determined in good faith by the Administrator.

(s) "**Fiscal Year**" means the fiscal year of the Company.

(t) "**Freestanding SAR**" means a SAR that is granted independently of any Option.

(u) "**Incentive Stock Option**" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.

(v) "**Inside Director**" means a Director who is an Employee.

(w) "**Nonstatutory Stock Option**" means an Option that by its terms does not qualify or is not intended to qualify as an Incentive Stock Option.

(x) "**Officer**" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(y) "**Option**" means a stock option granted pursuant to the Plan.

(z) "**Optioned Stock**" means the Common Stock subject to an Award.

(aa) "**Outside Director**" means a Director who is not an Employee.

(bb) "**Parent**" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(cc) "**Participant**" means the holder of an outstanding Award.

(dd) "**Performance Share**" means an Award granted to a Participant pursuant to Section 9.

(ee) "**Performance Unit**" means an Award granted to a Participant pursuant to Section 9.

(ff) "**Period of Restriction**" means the period during which the transfer of Shares of Restricted Stock are subject to restrictions and therefore, the Shares are subject to a substantial risk of forfeiture. Such restrictions may be based on the passage of time, the achievement of target levels of performance, or the occurrence of other events as determined by the Administrator.

(gg) "**Plan**" means this 2006 Equity Incentive Plan.

(hh) "**Registration Date**" means the effective date of the first registration statement that is filed by the Company and declared effective pursuant to Section 12(g) of the Exchange Act, with respect to any class of the Company's securities.

(ii) "**Restricted Stock**" means shares of Common Stock issued pursuant to a Restricted Stock award under Section 7 of the Plan, or issued pursuant to the early exercise of an Option.

(jj) "**Rule 16b-3**" means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.

(kk) "**Section 16(b)**" means Section 16(b) of the Exchange Act.

(ll) "**Service Provider**" means an Employee, Director or Consultant.

(mm) "**Share**" means a share of the Common Stock, as adjusted in accordance with Section 13 of the Plan.

(nn) "**Stock Appreciation Right**" or "**SAR**" means an Award, granted alone or in connection with an Option, that pursuant to Section 8 is designated as a SAR.

(oo) "**Subsidiary**" means a "subsidiary corporation", whether now or hereafter existing, as defined in Section 424(f) of the Code.

(pp) "**Tandem SAR**" means a SAR that is granted in connection with a related Option, the exercise of which will require forfeiture of the right to purchase an equal number of Shares under the related Option (and when a Share is purchased under the Option, the SAR will be canceled to the same extent).

(qq) "**Unvested Awards**" will mean Options or Restricted Stock that (i) were granted to an individual in connection with such individual's position as an Employee and (ii) are still subject to vesting or lapsing of Company repurchase rights or similar restrictions.

3. Stock Subject to the Plan.

(a) Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares pursuant to which Awards may be made under the Plan is 3,000,000 Shares plus (i) the number of Shares which have been reserved but not issued under the Company's 2003 Stock Plan (the "**2003 Plan**") and with respect to which awards are not outstanding under the 2003 Plan as of the Registration Date, (ii) any Shares returned to the 2003 Plan as a result of termination of options or repurchase of Shares issued under such plan, and (iii) an annual increase to be added on the first day of the Company's fiscal year beginning in 2007, equal to the lesser of (A) 3,000,000 Shares, (B) 10% of the outstanding Shares on such date or (C) an amount determined by the Board. The Shares may be authorized, but unissued, or reacquired Common Stock. Shares will not be deemed to have been issued pursuant to the Plan with respect to any portion of an Award that is settled in cash. Upon payment in Shares pursuant to the exercise of an SAR, the number of Shares available for issuance under the Plan will be reduced only by the number of Shares actually issued in such payment. If the exercise price of an Option is paid by tender to the Company, or attestation to the ownership, of Shares owned by the Participant, the number of Shares available for issuance under the Plan will be reduced by the gross number of Shares for which the Option is exercised.

(b) Lapsed Awards. If an Award expires or becomes unexercisable without having been exercised in full, or is surrendered pursuant to an Exchange Program, the unpurchased Shares which were subject thereto will become available for future grant or sale under the Plan (unless the Plan has terminated); provided, however, that Shares that have actually been issued under the Plan, whether upon exercise of an Award, will not be returned to the Plan and will not become available for future distribution under the Plan, except that if unvested Shares are forfeited or repurchased by the Company, such Shares will become available for future grant under the Plan.

(c) Share Reserve. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as will be sufficient to satisfy the requirements of the Plan.

4. Administration of the Plan.

(a) Procedure.

(i) Multiple Administrative Bodies. Different Committees with respect to different groups of Service Providers may administer the Plan.

(ii) Section 162(m). To the extent that the Administrator determines it to be desirable to qualify Options granted hereunder as "performance-based compensation" within the meaning of Section 162(m) of the Code, the Plan will be administered by a Committee of two or more "outside directors" within the meaning of Section 162(m) of the Code.

(iii) Rule 16b-3. To the extent desirable to qualify transactions hereunder as exempt under Rule 16b-3, the transactions contemplated hereunder will be structured to satisfy the requirements for exemption under Rule 16b-3.

(iv) Other Administration. Other than as provided above, the Plan will be administered by (A) the Board or (B) a Committee, which committee will be constituted to satisfy Applicable Laws.

(b) Powers of the Administrator. Subject to the provisions of the Plan, and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator will have the authority, in its discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Awards may be granted hereunder;

(iii) to determine the number of Shares to be covered by each Award granted hereunder;

(iv) to approve forms of agreement for use under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator will determine;

(vi) to institute an Exchange Program;

(vii) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws;

(ix) to modify or amend each Award (subject to Section 17(c) of the Plan), including the discretionary authority to extend the post-termination exercisability period of Awards longer than is otherwise provided for in the Plan;

(x) to allow Participants to satisfy withholding tax obligations by electing to have the Company withhold from the Shares to be issued upon exercise of an Award that number of Shares having a Fair Market Value equal to the minimum amount required to be withheld (the

Fair Market Value of the Shares to be withheld will be determined on the date that the amount of tax to be withheld is to be determined and all elections by a Participant to have Shares withheld for this purpose will be made in such form and under such conditions as the Administrator may deem necessary or advisable);

(xi) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xii) to allow a Participant to defer the receipt of the payment of cash or the delivery of Shares that would otherwise be due to such Participant under an Award

(xiii) to make all other determinations deemed necessary or advisable for administering the Plan.

(c) Effect of Administrator's Decision. The Administrator's decisions, determinations and interpretations will be final and binding on all Participants and any other holders of Awards.

5. Eligibility. Nonstatutory Stock Options, Restricted Stock, Stock Appreciation Rights, Performance Units and Performance Shares may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.

6. Stock Options.

(a) Limitations.

(i) Each Option will be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designation, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds $100,000, such Options will be treated as Nonstatutory Stock Options. For purposes of this Section 6(a), Incentive Stock Options will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted.

(ii) The following limitations will apply to grants of Options and Stock Appreciation Rights:

(1) Except as provided in Section 6(a)(ii)(2), no Service Provider will be granted, in any Fiscal Year, Options to purchase more than 750,000 Shares.

(2) In connection with his or her initial service, a Service Provider may be granted Options to purchase up to an additional 2,000,000 Shares, which will not count against the limit set forth in Section 6(a)(2)(ii)(1) above.

(3) The foregoing limitations will be adjusted proportionately in connection with any change in the Company's capitalization as described in Section 13.

(4) If an Option is cancelled in the same Fiscal Year in which it was granted (other than in connection with a transaction described in Section 13), the cancelled Option will be counted against the limits set forth in subsections (1) and (2) above. For this purpose, if the exercise price of an Option is reduced, the transaction will be treated as a cancellation of the Option and the grant of a new Option.

(b) Term of Option. The term of each Option will be stated in the Award Agreement. In the case of an Incentive Stock Option, the term will be ten (10) years from the date of grant or such shorter term as may be provided in the Award Agreement. Moreover, in the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option will be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(c) Option Exercise Price and Consideration.

(i) Exercise Price. The per share exercise price for the Shares to be issued pursuant to exercise of an Option will be determined by the Administrator, subject to the following:

(1) In the case of an Incentive Stock Option

a) granted to an Employee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price will be no less than 110% of the Fair Market Value per Share on the date of grant.

b) granted to any Employee other than an Employee described in paragraph (A) immediately above, the per Share exercise price will be no less than 100% of the Fair Market Value per Share on the date of grant.

c) Notwithstanding the foregoing, Incentive Stock Options may be granted with a per Share exercise price of less than 100% of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code.

(2) In the case of a Nonstatutory Stock Option, the per Share exercise price will be determined by the Administrator. In the case of a Nonstatutory Stock Option intended to qualify as “performance-based compensation” within the meaning of Section 162(m) of the Code, the per Share exercise price will be no less than 100% of the Fair Market Value per Share on the date of grant.

(ii) Waiting Period and Exercise Dates. At the time an Option is granted, the Administrator will fix the period within which the Option may be exercised and will determine any conditions that must be satisfied before the Option may be exercised.

(iii) Form of Consideration. The Administrator will determine the acceptable form of consideration for exercising an Option, including the method of payment. In the

case of an Incentive Stock Option, the Administrator will determine the acceptable form of consideration at the time of grant. Such consideration may consist entirely of: (1) cash; (2) check; (3) promissory note; (4) other Shares, provided Shares acquired directly or indirectly from the Company, (A) have been owned by the Participant and not subject to substantial risk of forfeiture for more than six months on the date of surrender, and (B) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option will be exercised; (5) consideration received by the Company under a cashless exercise program implemented by the Company in connection with the Plan; (6) a reduction in the amount of any Company liability to the Participant, including any liability attributable to the Participant's participation in any Company-sponsored deferred compensation program or arrangement; (7) any combination of the foregoing methods of payment; or (8) such other consideration and method of payment for the issuance of Shares to the extent permitted by Applicable Laws.

(d) Exercise of Option.

(i) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share.

An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Administrator specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with an applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant or, if requested by the Participant, in the name of the Participant and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 13 of the Plan.

Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(ii) Termination of Relationship as a Service Provider. If a Participant ceases to be a Service Provider, other than upon the Participant's death or Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option will remain exercisable for three (3) months following the Participant's termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified by the Administrator, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iii) Disability of Participant. If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option will remain exercisable for twelve (12) months following the Participant's termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iv) Death of Participant. If a Participant dies while a Service Provider, the Option may be exercised following the Participant's death within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of death (but in no event may the option be exercised later than the expiration of the term of such Option as set forth in the Award Agreement), by the Participant's designated beneficiary, provided such beneficiary has been designated prior to Participant's death in a form acceptable to the Administrator. If no such beneficiary has been designated by the Participant, then such Option may be exercised by the personal representative of the Participant's estate or by the person(s) to whom the Option is transferred pursuant to the Participant's will or in accordance with the laws of descent and distribution. In the absence of a specified time in the Award Agreement, the Option will remain exercisable for twelve (12) months following Participant's death. Unless otherwise provided by the Administrator, if at the time of death Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will immediately revert to the Plan. If the Option is not so exercised within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

7. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Service Providers in such amounts as the Administrator, in its sole discretion, will determine.

(b) Restricted Stock Agreement. Each Award of Restricted Stock will be evidenced by an Award Agreement that will specify the Period of Restriction, the number of Shares granted, and such other terms and conditions as the Administrator, in its sole discretion, will determine. Unless the Administrator determines otherwise, Shares of Restricted Stock will be held by the Company as escrow agent until the restrictions on such Shares have lapsed.

(c) Transferability. Except as provided in this Section 7, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction.

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 7, Shares of Restricted Stock covered by each Restricted Stock grant made under the Plan will be released from escrow as soon as practicable after the last day of the Period of Restriction. The Administrator, in its discretion, may accelerate the time at which any restrictions will lapse or be removed.

(f) Voting Rights. During the Period of Restriction, Service Providers holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(g) Dividends and Other Distributions. During the Period of Restriction, Service Providers holding Shares of Restricted Stock will be entitled to receive all dividends and other distributions paid with respect to such Shares unless otherwise provided in the Award Agreement. If any such dividends or distributions are paid in Shares, the Shares will be subject to the same restrictions on transferability and forfeitability as the Shares of Restricted Stock with respect to which they were paid.

(h) Return of Restricted Stock to Company. On the date set forth in the Award Agreement, the Restricted Stock for which restrictions have not lapsed will revert to the Company and again will become available for grant under the Plan.

8. Stock Appreciation Rights.

(a) Grant of SARs. Subject to the terms and conditions of the Plan, a SAR may be granted to Service Providers at any time and from time to time as will be determined by the Administrator, in its sole discretion. The Administrator may grant Affiliated SARs, Freestanding SARs, Tandem SARs, or any combination thereof.

(b) Number of Shares. The Administrator will have complete discretion to determine the number of SARs granted to any Service Provider.

(c) Exercise Price and Other Terms. The Administrator, subject to the provisions of the Plan, will have complete discretion to determine the terms and conditions of SARs granted under the Plan. However, the exercise price of Tandem or Affiliated SARs will equal the exercise price of the related Option.

(d) Exercise of Tandem SARs. Tandem SARs may be exercised for all or part of the Shares subject to the related Option upon the surrender of the right to exercise the equivalent portion of the related Option. A Tandem SAR may be exercised only with respect to the Shares for which its related Option is then exercisable. With respect to a Tandem SAR granted in connection with an Incentive Stock Option: (a) the Tandem SAR will expire no later than the expiration of the underlying Incentive Stock Option; (b) the value of the payout with respect to the Tandem SAR will be for no more than one hundred percent (100%) of the difference between the exercise price of the underlying Incentive Stock Option and the Fair Market Value of the Shares subject to the underlying Incentive Stock Option at the time the Tandem SAR is exercised; and (c) the Tandem SAR will be exercisable only when the Fair Market Value of the Shares subject to the Incentive Stock Option exceeds the Exercise Price of the Incentive Stock Option.

(e) Exercise of Affiliated SARs. An Affiliated SAR will be deemed to be exercised upon the exercise of the related Option. The deemed exercise of an Affiliated SAR will not necessitate a reduction in the number of Shares subject to the related Option.

(f) Exercise of Freestanding SARs. Freestanding SARs will be exercisable on such terms and conditions as the Administrator, in its sole discretion, will determine.

(g) SAR Agreement. Each SAR grant will be evidenced by an Award Agreement that will specify the exercise price, the term of the SAR, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(h) Expiration of SARs. An SAR granted under the Plan will expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement. Notwithstanding the foregoing, the rules of Section 6(d) also will apply to SARs.

(i) Payment of SAR Amount. Upon exercise of an SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying:

(i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times

(ii) The number of Shares with respect to which the SAR is exercised.

At the discretion of the Administrator, the payment upon SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

9. Performance Units and Performance Shares.

(a) Grant of Performance Units/Shares. Performance Units and Performance Shares may be granted to Service Providers at any time and from time to time, as will be determined by the Administrator, in its sole discretion. The Administrator will have complete discretion in determining the number of Performance Units and Performance Shares granted to each Participant.

(b) Value of Performance Units/Shares. Each Performance Unit will have an initial value that is established by the Administrator on or before the date of grant. Each Performance Share will have an initial value equal to the Fair Market Value of a Share on the date of grant.

(c) Performance Objectives and Other Terms. The Administrator will set performance objectives or other vesting provisions (including, without limitation, continued status as a Service Provider) in its discretion which, depending on the extent to which they are met, will determine the number or value of Performance Units/Shares that will be paid out to the Service Providers. The time period during which the performance objectives or other vesting provisions must be met will be called the "**Performance Period**." Each Award of Performance Units/Shares will be evidenced by an Award Agreement that will specify the Performance Period, and such other

terms and conditions as the Administrator, in its sole discretion, will determine. The Administrator may set performance objectives based upon the achievement of Company-wide, divisional, or individual goals, applicable federal or state securities laws, or any other basis determined by the Administrator in its discretion.

(d) Earning of Performance Units/Shares. After the applicable Performance Period has ended, the holder of Performance Units/Shares will be entitled to receive a payout of the number of Performance Units/Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding performance objectives or other vesting provisions have been achieved. After the grant of a Performance Unit/Share, the Administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such Performance Unit/Share.

(e) Form and Timing of Payment of Performance Units/Shares. Payment of earned Performance Units/Shares will be made as soon as practicable after the expiration of the applicable Performance Period. The Administrator, in its sole discretion, may pay earned Performance Units/Shares in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Units/Shares at the close of the applicable Performance Period) or in a combination thereof.

(f) Cancellation of Performance Units/Shares. On the date set forth in the Award Agreement, all unearned or unvested Performance Units/Shares will be forfeited to the Company, and again will be available for grant under the Plan.

10. Formula Option Grants to Outside Directors.

All grants of Options to Outside Directors pursuant to this Section will be automatic and nondiscretionary, except as otherwise provided herein, and will be made in accordance with the following provisions:

(a) Type of Option. All Options granted pursuant to this Section will be Nonstatutory Stock Options and, except as otherwise provided herein, will be subject to the other terms and conditions of the Plan.

(b) No Discretion. No person will have any discretion to select which Outside Directors will be granted Options under this Section or to determine the number of Shares to be covered by such Options (except as provided in Sections 10(f) and 13).

(c) First Option. Each person who first becomes an Outside Director following the Registration Date will be automatically granted an Option to purchase 56,523 Shares (the "**First Option**") on or about the date on which such person first becomes an Outside Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy; provided, however, that an Inside Director who ceases to be an Inside Director, but who remains a Director, will not receive a First Option.

(d) Terms. The terms of each Option granted pursuant to this Section will be as follows:

(i) The term of the Option will be ten (10) years.

(ii) The exercise price per Share will be 100% of the Fair Market Value per Share on the date of grant of the Option.

(iii) Subject to Section 14, the First Option will vest and become exercisable as to 18,841 of the Shares subject to the Option on the first anniversary of the date of grant, and as to 1,570 of the Shares subject to the Option each month for the next twenty-three (23) months following the date of grant, and as to 1,572 of the Shares subject to the Option in the twenty-fourth (24th) month following the date of grant, provided that the Participant continues to serve as a Director through each such date.

(e) Amendment. The Administrator in its discretion may change the number of Shares subject to the First Options and Subsequent Options.

11. Leaves of Absence. Unless the Administrator provides otherwise, vesting of Awards granted hereunder will be suspended during any unpaid leave of absence. A Service Provider will not cease to be an Employee in the case of (i) any leave of absence approved by the Company or (ii) transfers between locations of the Company or between the Company, its Parent, or any Subsidiary. For purposes of Incentive Stock Options, no such leave may exceed ninety (90) days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then three months following the 91st day of such leave any Incentive Stock Option held by the Participant will cease to be treated as an Incentive Stock Option and will be treated for tax purposes as a Nonstatutory Stock Option.

12. Transferability of Awards. Unless determined otherwise by the Administrator, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Participant, only by the Participant. If the Administrator makes an Award transferable, such Award will contain such additional terms and conditions as the Administrator deems appropriate.

13. Adjustments; Dissolution or Liquidation; Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, may (in its sole discretion) adjust the number and class of Shares that may be delivered under the Plan and/or the number, class, and price of Shares covered by each outstanding Award, the numerical Share limits in Sections 3 and 6 of the Plan and the number of Shares issuable pursuant to Options to be granted under Section 10.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator will notify each Participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.

(c) Change in Control. In the event of a Change in Control, each outstanding Award will be assumed or an equivalent option or right substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the Award, the Participant will fully vest in and have the right to exercise all of his or her outstanding Options and Stock Appreciation Rights, including Shares as to which such Awards would not otherwise be vested or exercisable, all restrictions on Restricted Stock will lapse, and, with respect to Performance Shares and Performance Units, all performance goals or other vesting criteria will be deemed achieved at target levels and all other terms and conditions met. In addition, if an Option or Stock Appreciation Right becomes fully vested and exercisable in lieu of assumption or substitution in the event of a Change in Control, the Administrator will notify the Participant in writing or electronically that the Option or Stock Appreciation Right will be fully vested and exercisable for a period of time determined by the Administrator in its sole discretion, and the Option or Stock Appreciation Right will terminate upon the expiration of such period.

With respect to Awards granted to an Outside Director that are assumed or substituted for, if on the date of or following such assumption or substitution the Participant's status as a Director or a director of the successor corporation, as applicable, is terminated other than upon a voluntary resignation by the Participant, then the Participant will fully vest in and have the right to exercise Options and/or Stock Appreciation Rights as to all of the Optioned Stock, including Shares as to which such Awards would not otherwise be vested or exercisable, all restrictions on Restricted Stock will lapse, and, with respect to Performance Shares and Performance Units, all performance goals or other vesting criteria will be deemed achieved at target levels and all other terms and conditions met.

For the purposes of this subsection (c), an Award will be considered assumed if, following the Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the Change in Control, the consideration (whether stock, cash, or other securities or property) or, in the case of a Stock Appreciation Right upon the exercise of which the Administrator determines to pay cash or a Performance Share or Performance Unit which the Administrator can determine to pay in cash, the fair market value of the consideration received in the merger or Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of an Option or Stock Appreciation Right or upon the payout of a Performance Share or Performance Unit, for each Share subject to such Award (or in the case of Performance Units, the number of implied shares determined by dividing the value of the Performance Units by the per share consideration received by holders of Common Stock in the Change in Control), to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the Change in Control.

Notwithstanding anything in this Section 13(c) to the contrary, an Award that vests, is earned or paid-out upon the satisfaction of one or more performance goals will not be considered assumed if the Company or its successor modifies any of such performance goals without the Participant's consent; provided, however, a modification to such performance goals only to reflect the successor corporation's post-Change in Control corporate structure will not be deemed to invalidate an otherwise valid Award assumption.

14. No Effect on Employment or Service. Neither the Plan nor any Award will confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider with the Company, nor will they interfere in any way with the Participant's right or the Company's right to terminate such relationship at any time, with or without cause, to the extent permitted by Applicable Laws.

15. Date of Grant. The date of grant of an Award will be, for all purposes, the date on which the Administrator makes the determination granting such Award, or such other later date as is determined by the Administrator. Notice of the determination will be provided to each Participant within a reasonable time after the date of such grant.

16. Term of Plan. Subject to Section 20 of the Plan, the Plan will become effective upon its adoption by the Board. It will continue in effect for a term of ten (10) years unless terminated earlier under Section 17 of the Plan.

17. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Company will obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan will impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan will not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.

18. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares will not be issued pursuant to the exercise of an Award unless the exercise of such Award and the issuance and delivery of such Shares will comply with Applicable Laws and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

19. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, will relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority will not have been obtained.

20. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

Exhibit 10.31

EXECUTION COPY

LUNA INNOVATIONS INCORPORATED

CLASS C COMMON STOCK AND NOTE PURCHASE AGREEMENT

December 30, 2005

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LUNA INNOVATIONS INCORPORATED

CLASS C COMMON STOCK AND NOTE PURCHASE AGREEMENT

This Class C Common Stock and Note Purchase Agreement (this "**Agreement**") is made as of December 30, 2005, by and between Luna Innovations Incorporated, a Delaware corporation (the "**Company**"), and Carilion Health System, a Virginia non-profit, non-stock corporation (the "**Investor**").

WHEREAS, the Company and the Investor are parties to that certain Class C Common Stock Purchase Agreement dated as of August 2, 2005 (the "**Prior Agreement**"), pursuant to which the Investor purchased, and the Company sold and issued to the Investor, 2,639,688 shares (the "**Original Class C Shares**") of the Company's Class C Common Stock, par value $0.001 per share (the "**Class C Common Stock**") at the First Closing (as defined in the Prior Agreement);

WHEREAS, the Prior Agreement contemplated the sale and issuance of (i) an additional 1,885,491 shares of Class C Common Stock (the "**Second Tranche Shares**"), subject to the satisfaction of certain conditions precedent, at a Second Closing (as defined in the Prior Agreement) and (ii) an additional 1,131,294 shares of Class C Common Stock (the "**Third Tranche Shares**"), subject to the satisfaction of certain conditions precedent, at a Third Closing (as defined in the Prior Agreement);

WHEREAS, the Company and the Investor have determined, among other things, that (i) the sale and issuance of the Second Tranche Shares at a Second Closing (as defined in the Prior Agreement) shall not occur and (ii) the sale and issuance of the Third Tranche Shares at a Third Closing (as defined in the Prior Agreement) shall occur on modified terms as set forth in this Agreement;

WHEREAS, the Company and the Investor desire to terminate the Prior Agreement and enter into this Agreement;

WHEREAS, the Company and the Investor are parties to that certain Investor Rights Agreement dated as of August 2, 2005 (the "**Prior Investor Rights Agreement**") and that certain Right of First Refusal, Co-Sale and Voting Agreement dated as of August 2, 2005 (the "**Right of First Refusal, Co-Sale and Voting Agreement**"); and

WHEREAS, the Company and the Investor desire that (i) the Prior Investor Rights Agreement be amended and restated as of the date hereof to reflect certain changes and (ii) the Right of First Refusal, Co-Sale and Voting Agreement survive Closing (as defined below) without modification or amendment.

NOW, THEREFORE, in consideration of the foregoing and the representations, warranties and conditions set forth below, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and agreed, the parties hereto, intending to be legally bound, hereby agree as follows:

SECTION 1

Authorization, Sale and Issuance of the Notes and the Class C Common Stock.

1.1 *Authorization*. The Company will, prior to the Closing (as defined below), authorize the sale and issuance, pursuant to the terms of this Agreement, of five (5) convertible promissory notes, each in the principal amount of one million dollars ($1,000,00.00), and each in substantially the form attached hereto as Exhibit A (each a "**Note**" and collectively the "**Notes**") and 1,131,294 shares (the "**Class C Shares**") of the Company's Class C Common Stock, par value $0.001 per share (the "**Class C Common Stock**"), having the rights, privileges, preferences and restrictions set forth in the Amended and Restated Certificate of Incorporation of the Company, in substantially the form attached hereto as Exhibit B (the "**Restated Certificate**"). The Company will, prior to the Closing (as defined below), authorize and reserve: (i) 1,885,490 shares of Class C Common Stock for issuance upon conversion of the principal amount of the Notes prior to the Company's IPO (as defined in the Notes) in accordance with their terms (the "**Class C Note Conversion Shares**"); (ii) 905,035 shares of Class B Common Stock, par value $0.001 per share (the "**Class B Common Stock**") for issuance upon conversion of the maximum amount of accrued interest under the Notes prior to the Company's IPO in accordance with their terms (the "**Class B Note Conversion Shares**"); (iii) 2,790,525 shares of Common Stock, par value $0.001 per share (the "**Common Stock**") for issuance upon conversion of the principal and maximum amount of accrued interest under the Notes on or after the date of the Company's IPO in accordance with their terms (the "**Common Note Conversion Shares**" and together with the Class C Note Conversion Shares and the Class B Note Conversion Shares, the "**Note Conversion Shares**"); (iv) 1,131,294 shares of Class C Common Stock for sale and issuance of the Class C Shares under this Agreement; (v) 2,149,145 shares of Class A Common Stock, par value $0.001 per share (the "**Class A Common Stock**") and 3,507,327 shares of Class B Common Stock for issuance upon conversion of the Class C Shares, the Class C Note Conversion Shares and the Original Class C Shares (such shares of Class A Common Stock and Class B Common Stock collectively, the "**Conversion Shares**") and (vi) 5,656,472 shares of Common Stock for issuance upon the conversion of the Class B Note Conversion Shares and the conversion of the Conversion Shares.

1.2 *Sale and Issuance of Notes and Class C Shares*. Subject to the terms and conditions of this Agreement, the Investor agrees to purchase, and the Company agrees to sell and issue to the Investor, (i) the Notes in the principal amounts set forth on Exhibit C attached hereto (the "**Note Purchase Prices**") and (ii) the number of Class C Shares for the aggregate purchase price set forth on Exhibit C attached hereto (the "**Class C Shares Purchase Price**" and together with the Note Purchase Prices the "**Aggregate Purchase Price**").

SECTION 2

Closing Date and Delivery of the Notes and the Class C Common Stock.

2.1 *Closing*. The purchase, sale and issuance of the Notes and the Class C Shares shall take place at a closing (the "**Closing**") at the offices of Woods Rogers PLC, 10 South Jefferson Street, Suite 1400, Roanoke, Virginia 24011, at 10:00 a.m. local time on the date of this Agreement or such other date and time as the Company and the Investor mutually agree.

2.2 *Delivery*. At the Closing, the Company will deliver to the Investor (i) the Notes to be purchased by such Investor and (ii) a certificate registered in such Investor's name representing the number of Class C Shares that such Investor is purchasing in such Closing, against payment of the Aggregate Purchase Price therefor as set forth on Exhibit C, by (a) check payable to the Company, (b) wire transfer in accordance with the Company's instructions, (c) cancellation of indebtedness or (d) any combination of the foregoing. In the event that payment by the Investor is made, in whole or in part, by cancellation of indebtedness, then such Investor shall surrender to the Company for cancellation at the Closing any evidence of indebtedness or shall execute an instrument of cancellation in form and substance acceptable to the Company.

2.3 *Termination of Prior Agreement*. Effective upon the Closing, the Prior Agreement (except for the representations and warranties of the Company and Investor contained in Sections 3 and 4, respectively, which shall survive until August 4, 2007) is hereby terminated and of no further force or effect. For purposes of clarity, the Prior Investor Rights Agreement shall be amended and restated as of the date hereof and the Right of First Refusal, Co-Sale and Voting Agreement shall survive the Closing without modification or amendment.

SECTION 3

Representations and Warranties of the Company.

A Schedule of Exceptions is attached hereto as Exhibit D (the "**Schedule of Exceptions**"). Except as set forth on the Schedule of Exceptions, the Company hereby represents and warrants to the Investor, effective as of each Closing (unless otherwise set forth herein), as follows:

3.1 *Organization, Good Standing and Qualification*. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. The Company has the requisite corporate power and authority to own and operate its properties and assets, to carry on its business as presently conducted, to execute and deliver this Agreement and the Notes (collectively, together with the exhibits and schedule hereto and thereto, the "**Agreements**"), to issue and sell the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares and to perform its obligations pursuant to the Agreements, the Company's Amended and Restated Bylaws (the "**Bylaws**") and the Restated Certificate. The Company is presently qualified to do business as a foreign corporation in each jurisdiction where the failure to be so qualified would have a material adverse effect on the Company's financial condition or business as presently conducted (a "**Material Adverse Effect**").

3.2 *Subsidiaries*. The Company does not own or control, directly or indirectly, any interest in any corporation, partnership, limited liability company, association or other business entity, except as set forth on the Schedule of Exceptions.

3.3 *Capitalization*.

(a) Immediately prior to the Closing, the authorized capital stock of the Company will consist of 7,164,463 shares of Class A Common Stock (of which 5,015,318 shares are issued and outstanding), 13,707,297 shares of Class B Common Stock, (of which 1,732,477 shares are issued and outstanding), 5,656,472 shares of Class C Common Stock (of which 2,639,688 shares are issued and outstanding), and 23,257,094 shares of Common Stock (none of which are issued and outstanding). The Class A Common Stock, Class B Common Stock, Class C Common Stock and Common Stock shall have the rights, preferences, privileges and restrictions set forth in the Restated Certificate.

(b) The outstanding shares have been duly authorized and validly issued in compliance with applicable laws, and are fully paid and nonassessable.

(c) The Company has reserved as of the Closing:

(i) 1,131,294 shares of Class C Common Stock for issuance at Closing pursuant to this Agreement;

(ii) 1,885,490 shares of Class C Common Stock for issuance upon conversion of the principal amount of the Notes prior to the Company's IPO (as defined in the Notes) in accordance with their terms;

(iii) 905,035 shares of Class B Common Stock for issuance upon conversion of the maximum amount of accrued interest under the Notes prior to the Company's IPO in accordance with their terms;

(iv) 2,790,525 shares of Common Stock for issuance upon conversion of the principal and maximum amount of accrued interest under the Notes on or after the date of the Company's IPO in accordance with their terms;

(v) 2,149,145 shares of Class A Common Stock and 3,507,327 shares of Class B Common Stock for issuance upon conversion of the Class C Shares, the Class C Note Conversion Shares and the Original Class C Shares;

(vi) 5,656,472 shares of Common Stock for issuance upon the conversion of the Class B Note Conversion Shares and the conversion of the Conversion Shares; and

(vii) 8,000,000 shares of Class B Common Stock authorized for issuance to employees, consultants and directors pursuant to the Company's 2003 Stock Plan (the "**Stock Plan**"), of which options to purchase 7,154,084 shares of Class B Common Stock are issued and outstanding as of the date of this Agreement and options to purchase 518,123 shares of Class B Common Stock have previously been exercised.

(d) The outstanding shares of Class A Common Stock, Class B Common Stock, Class C Common Stock and Common Stock are owned by the stockholders and in the numbers specified in Exhibit E attached hereto.

(e) All options granted and outstanding vest as follows: twenty-five percent (25%) of the shares vest one (1) year following the vesting commencement date, with the remaining seventy-five percent (75%) vesting in equal monthly installments over the next three (3) years. No stock plan, stock purchase, stock option or other agreement or understanding between the Company and any holder of any equity securities or rights to purchase equity securities provides for acceleration or other changes in the vesting provisions or other terms of such agreement or understanding as the result of (i) termination of employment (whether actual or constructive); (ii) any merger, consolidated sale of stock or assets, change in control or any other transaction(s) by the Company; or (iii) the occurrence of any other event or combination of events.

(f) The Class C Shares, when issued and delivered and paid for in compliance with the provisions of this Agreement, will be validly issued, fully paid and nonassessable. The Conversion Shares have been duly and validly reserved and, when issued in compliance with the provisions of this Agreement, the Restated Certificate and applicable law, will be validly issued, fully paid and nonassessable. The Class C Shares and the Conversion Shares will be free of any liens or encumbrances, other than any liens or encumbrances created by or imposed upon the Investor; *provided*, *however*, that the Class C Shares and the Conversion Shares are subject to restrictions on transfer under U.S. state and/or federal securities laws and as set forth herein and in that Amended and Restated Investor Rights Agreement by and among the Company, the Investor and certain stockholders of the Company of even date herewith in substantially the form attached hereto as Exhibit F (the "**Investor Rights Agreement**"). Except as set forth in the Right of First Refusal, Co-Sale and Voting Agreement by and among the Company and certain of the Company's stockholders dated August 2, 3005 (the "**ROFR, Co-Sale and Voting Agreement**"), the Class C Shares and the Conversion Shares are not subject to any preemptive rights or rights of first refusal.

(g) Except for the rights provided pursuant to the Investor Rights Agreement and the ROFR, Co-Sale and Voting Agreement, or as otherwise described in this Agreement, there are no options, warrants or other rights to purchase any of the Company's authorized and unissued capital stock.

3.4 *Authorization*. All corporate action on the part of the Company and its directors, officers and stockholders necessary for the authorization, execution and delivery of the Agreements by the Company, the authorization, sale, issuance and delivery of the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares, and the performance of all of the Company's obligations under the Agreements, the Restated Certificate and Bylaws has been taken or will be

taken prior to the Closing. The Agreements, when executed and delivered by the Company, shall constitute valid and binding obligations of the Company, enforceable in accordance with their terms, except (i) as limited by laws of general application relating to bankruptcy, insolvency and the relief of debtors, (ii) as limited by rules of law governing specific performance, injunctive relief or other equitable remedies and by general principles of equity, and (iii) to the extent the indemnification provisions contained in the Agreements may further be limited by applicable laws and principles of public policy.

3.5 *Financial Statements*. The Company has delivered to the Investor the unaudited balance sheet and statement of operations of the Company as of and for the 12-month period ended December 31, 2004 and unaudited balance sheet and statement of operations of the Company as of the nine-month period ended September 30, 2005 (the "**Financial Statements**"). The Financial Statements have been prepared in accordance with the books and records of the Company, have been prepared in accordance with accounting principles generally accepted in the United States ("**GAAP**") applied on a consistent basis throughout the periods indicated and are correct in all material respects and present fairly the financial condition and operating results of the Company as of the date(s) and during the period(s) indicated therein. Except as disclosed in the Financial Statements, the Company is not a guarantor or indemnitor of any indebtedness of any other person. The Company maintains and will continue to maintain a standard system of accounting established and administered in a manner to produce financial reports in accordance with GAAP.

3.6 *Changes*. Since September 30, 2005, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business, that has had a Material Adverse Effect;

(b) any damage, destruction or loss, whether or not covered by insurance, that has had a Material Adverse Effect;

(c) any change or amendment to an agreement by which the Company or any of its assets or properties is bound or subject that has had a Material Adverse Effect;

(d) any resignation or termination of any executive officer or key employee of the Company;

(e) any sale, assignment or transfer of any patents, trademarks, copyrights, trade secrets or other material intangible assets; or

(f) any mortgage, pledge, transfer of a security interest in, or lien, created by the Company, with respect to any of its material properties or assets, except liens for taxes not yet due or payable.

3.7 *Material Contracts*. Except for the agreements explicitly contemplated hereby, there are no agreements, understandings, instruments, contracts, proposed transactions, judgments, orders,

writs or decrees to which the Company is a party or by which it is bound which may involve (i) obligations of, or payments to, the Company in excess of $50,000 (other than obligations of, or payments to, the Company arising from purchase or sale agreements entered into in the ordinary course of business), (ii) the license of any patent, copyright, trade secret or other proprietary right to or from the Company, or (iii) the grant of rights to manufacture, produce, assemble, license, market or sell the Company's products or affect the Company's exclusive right to develop, manufacture, assemble, distribute, market or sell its products (each, a "**Material Contract**", collectively the "**Material Contracts**"). All of the Material Contracts are valid, binding and in full force and effect in all material respects, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies and to general principles of equity. The Company is not in default under any of such Material Contracts.

3.8 *Intellectual Property*. The Company owns or possesses sufficient legal rights to all patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses (software or otherwise), information, processes and similar proprietary rights ("**Intellectual Property**") necessary to the business of the Company as presently conducted, the lack of which would have a Material Adverse Effect. The Schedule of Exceptions contains a complete list of the Company's patents, trademarks, copyrights and domain names and pending patent, trademark and copyright applications. Except for agreements with its own employees or consultants, standard end-user license agreements, support/maintenance agreements and agreements entered in the ordinary course of the Company's business, there are no outstanding options, licenses or agreements relating to the Intellectual Property, and the Company is not bound by or a party to any options, licenses or agreements with respect to the Intellectual Property of any other person or entity. The Company has not violated any of the Intellectual Property of any other person or entity.

3.9 *Proprietary Information and Invention Assignment*. Each current or former employee of the Company, and each current consultant or independent contractor used by the Company has executed a confidential information and invention assignment agreement, substantially in the form(s) delivered to the Investor.

3.10 *Title to Properties and Assets; Liens*. The Company has good and marketable title to its properties and assets, and has good title to all its leasehold interests, in each case subject to no mortgage, pledge, lien, lease, encumbrance or charge, other than (i) liens for current taxes not yet due and payable, (ii) liens imposed by law and incurred in the ordinary course of business for obligations not past due, (iii) liens in respect of pledges or deposits under workers' compensation laws or similar legislation, and (iv) liens, encumbrances and defects in title which do not in any case materially detract from the value of the property subject thereto or have a Material Adverse Effect, and which have not arisen otherwise than in the ordinary course of business. With respect to the property and assets it leases, the Company is in compliance with such leases in all material respects and holds a valid leasehold interest free of any liens, claims or encumbrances, subject to clauses (i)-(iv) above.

3.11 *Compliance with Other Instruments*. The Company is not in violation of any term of its Certificate of Incorporation or Bylaws, each as amended to date, or of any term or provision of any mortgage, indebtedness, indenture, contract, agreement, instrument, judgment, order or decree to which it is party or by which it is bound which would or could reasonably be expected to have a Material Adverse Effect. The Company is not in violation of any federal or state statute, rule or regulation applicable to the Company the violation of which would have a Material Adverse Effect. The execution and delivery of the Agreements by the Company, the performance by the Company of its obligations pursuant to the Agreements, the Restated Certificate and the Bylaws and the issuance of the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares, will not result in any violation of, or conflict with, or constitute a default under, the Company's Certificate of Incorporation or Bylaws, each as amended to date, or any of its agreements, nor result in the creation of any mortgage, pledge, lien, encumbrance or charge upon any of the properties or assets of the Company.

3.12 *Litigation*. All pending or threatened litigation involving the Company or its assets or properties is listed on the Schedule of Exceptions. There are no actions, suits, proceedings or investigations pending against the Company or its properties (nor has the Company received written notice of any threat thereof) before any court or governmental agency that questions the validity of the Agreements or the right of the Company to enter into them, or the right of the Company to perform its obligations contemplated thereby, or that, either individually or in the aggregate, if determined adversely to the Company, would or could reasonably be expected to have a Material Adverse Effect or result in any change in the current equity ownership of the Company. The Company is not a party or subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality.

3.13 *Consents*. No consent, approval or authorization of or designation, declaration or filing with any governmental authority is required in connection with the valid execution and delivery of this Agreement, or the offer, sale or issuance of the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares, or the consummation of any other transaction contemplated by this Agreement, except (i) filing of the Restated Certificate with the office of the Secretary of State of the State of Delaware, (ii) the filing of such notices as may be required under the Securities Act of 1933, as amended (the "**Securities Act**") and (iii) such filings as may be required under applicable state securities laws, all of which shall be undertaken by the Company in a timely manner.

3.14 *Permits*. The Company has all franchises, permits, licenses, and any similar authority necessary for the conduct of its business as now being conducted by it, the lack of which would have a Material Adverse Effect, and believes it can obtain, without undue burden or expense, any similar authority for the conduct of its business as presently planned to be conducted. The Company is not in default in any material respect under any of such franchises, permits, licenses or other similar authority.

3.15 *Registration and Voting Rights*. Except as set forth in the Investor Rights Agreement and the Schedule of Exceptions, the Company is presently not under any obligation and has not

granted any rights to register under the Securities Act any of its presently outstanding securities or any of its securities that may hereafter be issued. To the Company's knowledge, except as contemplated in the ROFR, Co-Sale and Voting Agreement, no stockholder of the Company has entered into any agreements with respect to the voting of capital shares of the Company.

SECTION 4

Representations and Warranties of the Investor.

The Investor hereby represents and warrants to the Company as follows:

4.1 *No Registration*. Such Investor understands that the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares have not been, and will not be (except pursuant to the Investor Rights Agreement), registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of such Investor's representations as expressed herein or otherwise made pursuant hereto.

4.2 *Investment Intent*. Such Investor is acquiring the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution thereof, and that such Investor has no present intention of selling, granting any participation in, or otherwise distributing the same. Such Investor further represents that it does not have any contract, undertaking, agreement or arrangement with any person or entity to sell, transfer or grant participation to such person or entity or to any third person or entity with respect to any of the Notes, the Class C Shares, the Note Conversion Shares or the Conversion Shares.

4.3 *Investment Experience*. Such Investor has substantial experience in evaluating and investing in private placement transactions of securities in companies in the development stage and has such knowledge and experience in financial and business matters so that such Investor is capable of evaluating the merits and risks of its investment in the Company.

4.4 *Speculative Nature of Investment*. Such Investor understands and acknowledges that the Company has a limited financial and operating history and that an investment in the Company is highly speculative and involves substantial risks. Such Investor can bear the economic risk of such Investor's investment and is able, without impairing such Investor's financial condition, to hold the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares for an indefinite period of time and to suffer a complete loss of such Investor's investment.

4.5 *Access to Data*. Such Investor has had an opportunity to ask questions of, and receive answers from, the officers of the Company concerning the Agreements, the exhibits and schedules attached hereto and thereto and the transactions contemplated by the Agreements, as well as the Company's business, management and financial affairs, which questions were answered to its satisfaction. Such Investor believes that it has received all the information such Investor considers

necessary or appropriate for deciding whether to purchase the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares. Such Investor acknowledges that any business plans prepared by the Company have been, and continue to be, subject to change and that any projections included in such business plans or otherwise are necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the projections will not materialize or will vary significantly from actual results. Such Investor also acknowledges that it is relying solely on its own counsel and not on any statements or representations of the Company or its agents for legal advice with respect to this investment or the transactions contemplated by the Agreements.

4.6 *Accredited Investor*. The Investor is an "accredited investor" within the meaning of Regulation D, Rule 501(a), promulgated by the Securities and Exchange Commission under the Securities Act and shall submit to the Company such further assurances of such status as may be reasonably requested by the Company.

4.7 *Residency*. The residency of the Investor (or, in the case of a partnership or corporation, such entity's principal place of business) is the Commonwealth of Virginia.

4.8 *Rule 144*. Such Investor acknowledges that the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. Such Investor is aware of the provisions of Rule 144 promulgated under the Securities Act which permit limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions, including among other things, in certain situations, the existence of a public market for the shares, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sale being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of shares being sold during any three-month period not exceeding specified limitations. Such Investor understands that the current public information referred to above is not now available and the Company has no present plans to make such information available. Such Investor acknowledges and understands that notwithstanding any obligation under the Investor Rights Agreement, the Company may not be satisfying the current public information requirement of Rule 144 at the time the Investor wishes to sell the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares, and that, in such event, the Investor may be precluded from selling such securities under Rule 144, even if the other requirements of Rule 144 have been satisfied. Such Investor acknowledges that, in the event all of the applicable requirements of Rule 144 are not met, registration under the Securities Act or an exemption from registration will be required for any disposition of the Notes, the Class C Shares, the Note Conversion Shares, the Conversion Shares or the underlying Common Stock. Such Investor understands that, although Rule 144 is not exclusive, the Securities and Exchange Commission has expressed its opinion that persons proposing to sell restricted securities received in a private offering other than in a registered offering or pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales and that such persons and the brokers who participate in the transactions do so at their own risk.

4.9 *No Public Market*. Such Investor understands and acknowledges that no public market now exists for any of the securities issued by the Company and that the Company has made no assurances that a public market will ever exist for the Company's securities.

4.10 *Authorization*.

(a) Such Investor has all requisite power and authority to execute and deliver the Agreements, to purchase the Notes and the Class C Shares hereunder and to carry out and perform its obligations under the terms of the Agreements. All action on the part of the Investor necessary for the authorization, execution, delivery and performance of the Agreements, and the performance of all of the Investor's obligations under the Agreements, has been taken or will be taken prior to the Closing.

(b) The Agreements, when executed and delivered by the Investor, will constitute valid and legally binding obligations of the Investor, enforceable in accordance with their terms except: (i) to the extent that the indemnification provisions contained in the Investor Rights Agreement may be limited by applicable law and principles of public policy, (ii) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, and (iii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies or by general principles of equity.

(c) No consent, approval, authorization, order, filing, registration or qualification of or with any court, governmental authority or third person is required to be obtained by the Investor in connection with the execution and delivery of the Agreements by the Investor or the performance of the Investor's obligations hereunder or thereunder.

4.11 *Brokers or Finders*. Such Investor has not engaged any brokers, finders or agents, and neither the Company nor any other Investor has, nor will, incur, directly or indirectly, as a result of any action taken by the Investor, any liability for brokerage or finders' fees, agents' commissions or any similar charges in connection with the Agreements.

4.12 *Tax Advisors*. Such Investor has reviewed with its own tax advisors the U.S. federal, state, local and foreign tax consequences of this investment and the transactions contemplated by the Agreements. With respect to such matters, such Investor relies solely on such advisors and not on any statements or representations of the Company or any of its agents, written or oral. The Investor understands that it (and not the Company) shall be responsible for its own tax liability that may arise as a result of this investment or the transactions contemplated by the Agreements.

4.13 *Legends*. Such Investor understands and agrees that the certificates evidencing the Class C Shares, the Note Conversion Shares and the Conversion Shares, or any other securities issued in respect of the Class C Shares, the Note Conversion Shares or the Conversion Shares upon any stock split, stock dividend, recapitalization, merger, consolidation or similar event, until such securities are registered, shall bear the legends required by the Investor Rights Agreement and the ROFR, Co-Sale and Voting Agreement (in addition to any legend required under applicable state securities laws).

4.14 *Due Diligence*. The Investor has completed its due diligence investigation on the Company to its full satisfaction.

SECTION 5

Conditions to Investor's Obligation to Close.

The Investor's obligation to purchase the Notes and the Class C Shares at the Closing is subject to the fulfillment on or before such Closing of each of the following conditions, unless waived by the Investor:

5.1 *Representations and Warranties*. The representations and warranties made by the Company in **Section 3** (except to the extent such representations and warranties address matters as of a particular date or period, in which case such representations and warranties shall be true and correct as of such date or period, and except as otherwise modified by the Schedule of Exceptions) shall be true and correct in all material respects as of the date of such Closing.

5.2 *Repayment of Outstanding Indebtedness*. The Company shall have repaid all outstanding principal and interest on the Company's line of credit facility with First National Bank and no principal and interest amount shall be outstanding on such line of credit as of the Closing Date.

5.3 *Covenants*. All covenants, agreements and conditions contained in this Agreement to be performed by the Company on or prior to the Closing shall have been performed or complied with in all material respects.

5.4 *Blue Sky*. The Company shall have obtained, or have the availability of exemptions from, all necessary Blue Sky law permits and qualifications required by any state for the offer and sale of the Notes, the Class C Shares, the Note Conversion Shares and the Conversion Shares.

5.5 *Restated Certificate*. The Restated Certificate shall have been duly authorized, executed and filed with and accepted by the Secretary of State of the State of Delaware.

5.6 *Closing Deliverables*. The Company shall have delivered to counsel to the Investor the following:

(a) a certificate executed by the Chief Executive Officer or President of the Company on behalf of the Company, in substantially the form attached hereto as Exhibit G, certifying the satisfaction of the conditions to closing listed in **Sections 5.1, 5.3** and **5.4**.

(b) a certificate of the Secretary of State of the State of Delaware, dated as of a date within five days of the date of such Closing, with respect to the good standing of the Company.

(c) an opinion from Wilson Sonsini Goodrich & Rosati, Professional Corporation, counsel to the Company, dated as of the Closing, in substantially the form attached hereto as Exhibit H.

5.7 *Consents and Waivers*. The Company shall have obtained any and all consents, permits and waivers necessary or appropriate for the performance by the Company of its obligations pursuant to the Agreements, the Restated Certificate and the Bylaws.

5.8 *Market Standoff Agreements*. All holders of the Company's Common Stock and all holders of options and warrants to purchase the Company's Common Stock shall have entered into market standoff agreements with the Company containing provisions substantially similar to the market standoff agreement provisions contained in Section 2.10 of the Investor Rights Agreement.

5.9 *Amended & Restated Investor Rights Agreement*. The Company and the Investor shall have executed and delivered the Investor Rights Agreement.

5.10 *Employee Agreements*. The Company shall have entered into non-compete, confidentiality, non-solicitation, intellectual property assignment and stock repurchase agreements with its employees in form or forms reasonably satisfactory to the Investor.

5.11 *Board of Directors*. Effective upon the Closing, the size of the Board shall be set at seven (7) members.

5.12 *Proceedings*. This Agreement and the transactions contemplated hereby shall have been approved by the Executive Committee of the Board of Directors of the Investor.

5.13 *Due Diligence.* The Investor shall have completed due diligence on the Company to their reasonable satisfaction.

SECTION 6

Conditions to Company's Obligation to Close.

The Company's obligation to sell and issue the Notes and the Class C Shares at the Closing is subject to the fulfillment on or before such Closing of the following conditions, unless waived by the Company:

6.1 *Representations and Warranties*. The representations and warranties made by the Investor in **Section 4** shall be true and correct when made and shall be true and correct as of the date of such Closing.

6.2 *Covenants*. All covenants, agreements and conditions contained in the Agreements to be performed by Investor on or prior to the date of such Closing shall have been performed or complied with as of the date of such Closing.

6.3 *Purchase Price*. The Investor shall have delivered payment of the applicable purchase price as specified in Section 2.2.

SECTION 7

Miscellaneous.

7.1 *Amendment*. Except as expressly provided herein, neither this Agreement nor any term hereof may be amended, waived, discharged or terminated other than by a written instrument referencing this Agreement and signed by the Company and the Investor. Any such amendment, waiver, discharge or termination effected in accordance with this paragraph shall be binding upon each holder of any securities purchased under this Agreement at the time outstanding (including securities into which such securities have been converted or exchanged or for which such securities have been exercised) and each future holder of all such securities.

7.2 *Notices*. All notices and other communications required or permitted hereunder shall be in writing and shall be mailed by registered or certified mail, postage prepaid, or otherwise delivered by hand, by messenger, or by recognized national overnight courier; or by facsimile with a copy sent via United States Postal Service, hand delivery, or recognized national overnight courier addressed:

(a) if to the Investor, to Carilion Health System, Carilion Roanoke Memorial Hospital, First Floor, Roanoke, Virginia 24033, Facsimile (540) 981-7670, Attention: Edward G. Murphy, M.D., President, or at such other address as shown in the Company's records, as shall be furnished by the Investor to the Company or as may be updated in accordance with the provisions hereof, with a copy to Briggs W. Andrews, General Counsel, 213 S. Jefferson Street, 7th Floor, Suite 720, Roanoke, Virginia 24011; or

(b) if to the Company, to Luna Innovations Incorporated 2851 Commerce Street Southeast, Blacksburg, Virginia 24060, Facsimile (540) 951-0760, Attention: Dr. Kent Murphy, or at such other address as the Company shall have furnished to the Investors, with a copy to Trevor J. Chaplick, Wilson Sonsini Goodrich & Rosati, Professional Corporation, 11921 Freedom Drive, Suite 600, Reston, Virginia 20190, Facsimile (703) 734-3199.

Each such notice or other communication shall for all purposes of this Agreement be treated as effective or having been given when delivered if delivered personally or via overnight courier, or, if sent via fax, upon delivery as evidenced by a confirmation (unless sent after 5:00 pm on a business day, in which case such delivery shall be deemed to have occurred at 9:00 am on the following business day), or if sent by mail, at the earlier of its receipt or three business days after the same has been deposited in a regularly maintained receptacle for the deposit of the United States mail, addressed and mailed as aforesaid.

7.3 *Governing Law*. This Agreement shall be governed in all respects by the internal laws of the State of Delaware as applied to agreements entered into among Delaware residents to be performed entirely within Delaware, without regard to principles of conflicts of law.

7.4 *Brokers or Finders*. The Investor agrees to indemnify and hold harmless the Company from any liability for any commission or compensation in the nature of a brokerage or finder's fee or agent's commission (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its constituent partners, members, officers, directors, employees or representatives is responsible to the extent such liability is attributable to any inaccuracy or breach of the representations and warranties contained in **Section 4.11**.

7.5 *Expenses*. The Company and the Investor shall each pay their own expenses in connection with the transactions contemplated by this Agreement.

7.6 *Survival*. The representations, warranties, covenants and agreements made in this Agreement shall survive the execution and delivery of this Agreement and the closing of the transactions contemplated hereby for a period of two years following the Closing.

7.7 S*uccessors and Assigns*. Except as otherwise provided herein, the provisions of this Agreement shall inure only to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto (including transferees of the Notes or any Class C Shares, Note Conversion Shares or Conversion Shares).

7.8 *Entire Agreement*. This Agreement, including the exhibits attached hereto, constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and thereof. No party shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations or covenants except as specifically set forth herein or therein.

7.9 *Delays or Omissions*. Except as expressly provided herein, no delay or omission to exercise any right, power or remedy accruing to any party to this Agreement upon any breach or default of any other party under this Agreement shall impair any such right, power or remedy of such non-defaulting party, nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement or by law or otherwise afforded to any party to this Agreement, shall be cumulative and not alternative.

7.10 *Severability*. If any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, portions of such provision, or such provision in its entirety, to the extent necessary, shall be severed from this Agreement, and such court will replace such illegal, void or unenforceable provision of this Agreement with a valid and enforceable provision that will achieve, to the extent possible, the same economic, business and other purposes of the illegal, void or unenforceable provision. The balance of this Agreement shall be enforceable in accordance with its terms.

7.11 *Counterparts*. This Agreement may be executed in any number of counterparts, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

7.12 *Telecopy Execution and Delivery*. A facsimile, telecopy or other reproduction of this Agreement may be executed by one or more parties hereto and delivered by such party by facsimile or any similar electronic transmission device pursuant to which the signature of or on behalf of such party can be seen. Such execution and delivery shall be considered valid, binding and effective for all purposes. At the request of any party hereto, all parties hereto agree to execute and deliver an original of this Agreement as well as any facsimile, telecopy or other reproduction hereof.

7.13 *Jurisdiction; Venue*. With respect to any disputes arising out of or related to this Agreement, the parties consent to the jurisdiction of, and venue in, the state courts in the Commonwealth of Virginia (or in the event of federal jurisdiction, the courts of the Western District of Virginia).

7.14 *Further Assurances*. Each party hereto agrees to execute and deliver, by the proper exercise of its corporate, limited liability company, partnership or other powers, all such other and additional instruments and documents and do all such other acts and things as may be necessary to more fully effectuate this Agreement.

7.15 *Attorney's Fees*. In the event that any suit or action is instituted to enforce any provisions in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, all fees, costs and expenses of appeals.

7.16 *Jury Trial*. Each party to this Agreement hereby waives a trial by jury in any legal action or proceeding relating to this Agreement.

(*The remainder of this page is left intentionally blank.*)

IN WITNESS WHEREOF, this Agreement is executed as of the date first written above.

"COMPANY"

LUNA INNOVATIONS INCORPORATED
a Delaware corporation

By: /s/ Kent A. Murphy
Name: Kent A. Murphy
Title: CEO

SIGNATURE PAGE TO CLASS C COMMON STOCK AND NOTE PURCHASE AGREEMENT

"INVESTOR"

CARILION HEALTH SYSTEM

By: /s/ Edward G. Murphy
Name: Edward G. Murphy, M.D.
Title: Pres./CEO

SIGNATURE PAGE TO CLASS C COMMON STOCK AND NOTE PURCHASE AGREEMENT

EXHIBIT A

FORM OF NOTE

EXHIBIT B

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

EXHIBIT C

SCHEDULE OF NOTES AND CLASS C COMMON STOCK INVESTMENTS

Description of Security	Aggregate Purchase Price
Senior Convertible Promissory Note	$ 1,000,000.00
Senior Convertible Promissory Note	$ 1,000,000.00
Senior Convertible Promissory Note	$ 1,000,000.00
Senior Convertible Promissory Note	$ 1,000,000.00
Senior Convertible Promissory Note	$ 1,000,000.00
1,131,294 Shares of Class C Common Stock	$ 2,999,999.37
	$ 7,999,999.37

EXHIBIT D

SCHEDULE OF EXCEPTIONS

EXHIBIT E

SCHEDULE OF COMMON STOCK OUTSTANDING

EXHIBIT F

FORM OF AMENDED & RESTATED INVESTOR RIGHTS AGREEMENT

EXHIBIT G

LUNA INNOVATIONS INCORPORATED

COMPLIANCE CERTIFICATE

Pursuant to Section 5.7 of the Class C Common Stock and Note Purchase Agreement (the "**Agreement**"), dated as of December 30, 2005, by and among Luna Innovations Incorporated, a Delaware corporation (the "**Company**") and Carilion Health System, the undersigned certifies on behalf of the Company as follows:

1. He is the President and Chief Executive Officer of the Company;

2. Except as set forth in or modified by the Schedule of Exceptions, the representations and warranties of the Company set forth in Section 3 of the Agreement are true and correct in all material respects as of the date hereof;

3. The Company has repaid all outstanding principal and interest on the Company's line of credit facility with First National Bank and no principal and interest amount is outstanding on such line of credit as the date hereof; and

4. The Company has performed or complied with all covenants, agreements and conditions contained in the Agreement to be performed by the Company on or prior to the Closing in all material respects.

Capitalized terms used but not defined herein have the meanings ascribed to them in the Agreement.

(*The remainder of this page is left intentionally blank.*)

IN WITNESS WHEREOF, the undersigned has executed this certificate as of December 30, 2005.

LUNA INNOVATIONS INCORPORATED

By: /s/ Kent A. Murphy
Dr. Kent A. Murphy
President and Chief Executive Officer

EXHIBIT H

OPINION OF COUNSEL TO THE COMPANY

Exhibit 10.32

EXECUTION VERSION

MEMBER INTEREST PURCHASE AGREEMENT

By and Between

LUNA INNOVATIONS INCORPORATED
(Seller)

and

BAKER HUGHES OILFIELD OPERATIONS, INC.
(Buyer)

Covering the Acquisition of shares of Luna Energy LLC

December 17, 2004

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EXHIBITS

SCHEDULES

MEMBER INTEREST PURCHASE AGREEMENT

This **MEMBER INTEREST PURCHASE AGREEMENT** (the "***Agreement***") is entered into this 17th day of December, 2004, by and between LUNA INNOVATIONS INCORPORATED, a Delaware corporation ("***Seller***"), and **BAKER HUGHES OILFIELD OPERATIONS, INC**., a California corporation ("***Buyer***").

W I T N E S S E T H:

WHEREAS, Seller is the record and beneficial owner of 15,000,000 Common Shares (defined below) of **LUNA ENERGY, LLC**, a Delaware limited liability company (the "***Company***"), which represents 60% of the issued and outstanding equity interests of the Company;

WHEREAS, Buyer is the record and beneficial owner of 10,000,000 Common Shares of the Company which represents 40% of the issued and outstanding equity interest of the Company;

WHEREAS, Seller and Buyer are parties to that certain Purchase and Sale Agreement dated February 19,2002 by and among Seller, Buyer and certain of their, respective affiliates (the "***Original Purchase Agreement***"), pursuant to which Buyer acquired its 10,000,000 Common Shares;

WHEREAS, Seller desires to sell and Buyer desires to buy Seller's 15,000,000 Common Shares (the "***Seller Shares***"), subject to the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE I

DEFINITIONS AND INTERPRETATIONS

1.01 Definitions. Terms which are defined in Sections other than Article I of this Agreement, shall have the meanings attributed to them where defined. As used in this Agreement, the following terms shall have the meanings set forth below, unless the context otherwise requires:

"***Affiliate***" shall mean, with respect to a specified Person, a Person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the Person specified. For purposes of this definition, "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"***Applicable Law***" shall mean any applicable order, writ, injunction, decree, judgment, statute, ordinance, rule, code (including the Code) or regulation of any Governmental Authority.

"***Benefit Plan***" shall mean (a) any employee welfare benefit plan or employee pension benefit plan as defined in sections 3(1) and 3(2) of ERISA, including, but not limited to, a plan that provides retirement income or results in deferrals of income by employees for periods extending to their terminations of employment or beyond, and a plan that provides medical, surgical, or hospital care benefits or benefits in the event of sickness, accident, disability, death or unemployment and (b) any other material employee benefit agreement or arrangement that is not an ERISA plan, including without limitation, any deferred compensation plan, incentive plan, bonus plan or arrangement, stock option plan, stock purchase plan, stock award plan, golden parachute agreement, severance pay plan, dependent care plan, cafeteria plan, employee assistance program, scholarship program, employment contract, retention incentive agreement, noncompetition agreement, consulting agreement, confidentiality agreement, vacation policy, or other similar plan or agreement or arrangement that has been sponsored, maintained or adopted by the Company at any time during the past three (3) years, or has been approved by the Company before this date but is not yet effective, for the benefit of directors, officers, employees or former employees (or their beneficiaries) of the Company, or with respect to which the Company may have any liability.

"***Business Day***" shall mean any day other than a Saturday, Sunday or other day on which commercial banks in Houston, Texas are authorized by law to close.

"***Buyer Indemnified Part(ies)***" shall have the meaning specified in Section 8.01(a).

"***Claim***" shall mean a dispute, claim, or controversy whether based on contract, tort, strict liability, statute or other legal or equitable theory (including any claim of fraud, misrepresentation or fraudulent inducement or any question of validity or effect of an agreement).

"***Claim Notice***" shall have the meaning set forth in Section 8.04.

"***Closing***" shall have the meaning set forth in Section 2.04.

"***Closing Date***" shall mean the time and date established for the Closing pursuant to Section 2.04.

"***Code***" shall mean the Internal Revenue Code of 1986, as amended.

"***Combined IP***" shall mean the Company Owned IP, the Innovations Owned IP and the Third Party IP.

"***Commitments***" shall have the meaning set forth in Section 4.07.

"***Common Shares***" shall have the meaning given such term in the Company Agreement.

"***Company Agreement***" shall mean that certain Second Amended and Restated Limited Liability Company Agreement dated February 19, 2002 by and between Seller and Buyer.

"***Company Owned IP***" shall mean the Intellectual Property owned by the Company.

"***Contracts***" shall mean all contracts, commitments, arrangements, agreements, leases or any other obligations, understandings, responsibilities, liabilities, costs and expenses of whatever kind and nature (whether written or oral).

"***Damages***" shall mean any and all obligations, liabilities, damages, fines, penalties, deficiencies, losses, Judgments, settlements, costs and reasonably incurred expenses, interest, bonding and appellate costs and attorneys', accountants', consultants' and investigators' reasonable fees and disbursements, in each case after the application of any and all amounts actually recovered by the Indemnified Party under insurance contracts or similar arrangements (but excluding self-insurance arrangements) except to the extent such amounts have been subrogated to an insurance carrier by the Person claiming indemnity.

"***Delaware Act***" means the Delaware Limited Liability Company Act, 6 Del. C. § 18-101 ***et seq***.

"***Employee Options***" shall have the meaning set forth in Section 3.08.

"***Environmental Claim***" shall mean any administrative, regulatory or judicial action, suit, order, demand, directive, Claim, lien, investigation, proceeding or written or oral notice of noncompliance or violation by or from any Person alleging liability of whatever kind or nature (including liability or responsibility for the costs of enforcement proceedings, investigations, cleanup, governmental response, removal or remediation, natural resources damages, property damages, personal injuries, medical monitoring, penalties, contribution, indemnification and injunctive relief) arising out of, based on or resulting from (i) the presence or release of, or exposure to, any Hazardous Substances; or (ii) the failure to comply, with any Environmental Laws.

"***Environmental Laws***" shall mean any applicable legal requirement or common law relating to pollution, protection or cleanup of the environment (including ambient air, surface water, groundwater, land surface or subsurface strata) or protection of human health including CERCLA; RCRA; the Toxic Substance Control Act, 15 U.S.C. Section 2601 ***et seq***.; the Hazardous Materials Transportation Act, 49 U.S.C. Section 1802 ***et seq***.; the Clean Water Act, 33 U.S.C. Section 1251 ***et seq***.; the Safe Drinking Water Act, 42 U.S.C. Section 300F ***et seq***.; the Clean Air Act, 42 U.S.C. Section 7401 ***et seq***.; the Oil Pollution Act of 1990, 33 U.S.C. Section 2701 ***et seq***. and any other federal, state and local legal requirements, including those related to natural resources damages, relating to: (i) a release or the containment, removal, remediation, response, cleanup or abatement of a Hazardous Substance; (ii) the manufacture, generation, formulation, processing, labeling, distribution, introduction into commerce, use, treatment, handling, storage, or transportation of a Hazardous Substance; (iii) exposure of persons, including employees, to a Hazardous Substance; (iv) occupational safety or health matters; and (v) the physical structure or condition of a building,

facility, fixture or other structure, including, without limitation, those relating to the management, use, storage, disposal, cleanup or removal of asbestos, asbestos-containing materials, polychlorinated biphenyls or any other Hazardous Substance.

"***Environmental Permit***" shall mean any approval, registration, authorization, certificate, certificate of occupancy, consent, license, order, permit, variance or other similar authorization of any applicable Governmental Authority required by Environmental Laws in effect on or prior to the Closing for the current ownership, operation or use of the assets of the Company.

"***ERISA***" shall mean the Employee Retirement Income Security Act of 1974, as amended.

"***Field***" shall mean sensors for oil and gas exploration, production, transportation and refining.

"***Final Determination***" shall mean the first to occur of (a) a Judgment by a court or other tribunal with appropriate jurisdiction, which has become final and non-appealable; (b) a final and binding settlement or compromise with any Taxing Authority, including, but not limited to, a closing agreement under Section 7121 of the Code; or (c) any final disposition by reason of the expiration of all applicable statutes of limitations.

"***Governmental Authority***" shall mean any federal, state, local or foreign government or any provincial, departmental or other political subdivision thereof, or any entity, body or authority exercising executive, legislative, judicial, regulatory, administrative or other governmental functions, including any court, department, commission, board, bureau, agency, instrumentality or administrative body.

"***Hazardous Substance***" shall mean any toxic substance or waste, pollutant, hazardous substance or waste, contaminant, special waste, industrial substance or waste, petroleum or petroleum-derived substance or waste, or any toxic or hazardous constituent of any such substance or waste including any substance regulated under or defined as hazardous by Environmental Laws.

"***Indemnified Party***" shall refer to the Person or Persons indemnified, or entitled, or claiming to be entitled to be indemnified, held harmless or defended pursuant to this Agreement including a Buyer Indemnified Party and a Seller Indemnified Party.

"***Indemnifying Party***" shall refer to the Party having the obligation to indemnify, hold harmless or defend pursuant to this Agreement.

"***Innovations Owned IP***" shall mean the Intellectual Property that is owned by the Seller.

"***Intellectual Property***" shall mean any or all of the following and all intellectual Property Rights therein, arising therefrom, or associated therewith, only insofar as each such item or Intellectual Property Right is applicable to or useable in the Field: (A) all United States and foreign patents and applications therefor and all reissues, divisions, renewals, extensions, provisional, continuations and continuations-in-part thereof; (B) all inventions (whether patentable or not),

invention disclosures, improvements, works of authorship, trade secrets, proprietary information, know how, processes and technology; (C) all copyrights, copyright registrations and applications therefor and all other rights corresponding thereto throughout the world; (D) all industrial designs and any registrations and applications therefor throughout the world; (E) all trade names, logos, common law trademarks and service marks, trademark and service mark registrations and applications therefor and all goodwill associated therewith throughout the world; and (F) all tangible embodiments of the foregoing in this definition, including drawings, schematics, notebooks, instruction manuals and software (including both source code and object code).

"***Intellectual Property Rights***" shall mean all proprietary or other rights throughout the world only insofar as such right is applicable to or useable in the Field and provided under (A) patent law, (B) copyright law, (C) trademark and service mark law, (D) design patent or industrial design law, (E) semi-conductor chip or mask work law, (F) trade secret law, and (G) any other statutory provision, common law principle or principle of law under any jurisdiction hi the world that provides protective or other intellectual property rights in the Intellectual Property.

"***Judgments***" shall mean all judgments, orders, decisions, injunctions, decrees or awards of any federal, state, local or foreign court, arbitrator or administrative or Governmental Authority, bureau or agency.

"***Known***" "***Knowledge***" or "***To the Knowledge of***"or "***Within the knowledge of***" shall mean with respect to Seller, the actual knowledge after reasonable investigation and due inquiry of the individuals listed as "Seller Knowledge Individuals" on Schedule 1.01 A, and with respect to Buyer, the actual knowledge of the individuals listed as "Buyer Knowledge Individuals" on Schedule 1.01A.

"***Liens***" shall mean with respect to any property or other asset of any Person (or any revenues, income or profits of that Person therefrom) (in each case whether the same is consensual or nonconsensual or arises by contract, operation of law, legal process or otherwise), (a) any mortgage, lien, security interest, pledge, attachment, levy or other charge or encumbrance of any kind thereupon or in respect thereof or (b) any other arrangement under which the same is transferred, sequestered or otherwise identified with the intention of subjecting the same to, or making the same available for, the payment or performance of any liability in priority to the payment of the ordinary, unsecured creditors of that Person. For purposes of this Agreement, a Person will be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease, synthetic lease or other title retention agreement relating to that asset.

"***Material Adverse Effect***" shall mean, with respect to any Person, a material adverse change in, or effect on, the business, financial condition or results of operations of such Person, taken as a whole on a consolidated basis with such Person's subsidiaries; provided, that the effects of changes that are generally applicable to the industries or the economies of the countries in which such Person operates shall be excluded from such determination. In addition to the foregoing, the determination of the dollar value or impact of any change or event pursuant to the preceding sentence shall be

based solely on the actual dollar value of such change or effect, on a dollar-for-dollar basis, and (except as expressly provided in this Agreement) shall not take into account (i) any multiplier valuations, including any multiple based on earnings or other financial indicia or (ii) any consequential damages or other consequential valuation.

"***Non-Exclusive Identified Support Services***" shall mean support of Solomon financial reporting, including reasonable transitional use of the software, insurance/benefits continuation, network connections, internet services, exchange email service, maintenance of the Company's website, file storage and backup, telecom, helpdesk, system and peripheral purchasing and security audits, facilities management, government compliance with hazardous and chemical waste requirements, lab training, safety training, facilities maintenance, communications, phone system and security monitoring and maintenance.

"***Obligations***" shall mean duties, liabilities and obligations, whether vested, absolute or contingent, primary or secondary, direct or indirect, known or unknown, asserted or unassorted, accrued or unaccrued, liquidated or unliquidated, due or to become due, and whether contractual, statutory or otherwise.

"***Party***" and "***Parties***" shall mean each of Seller and Buyer and collectively Seller and Buyer.

"***Person***" shall mean any individual, foreign or domestic general partnership, limited partnership, limited liability company, corporation, joint enterprise, trust, business trust, employee benefit plan, cooperative or association, and any heir, executor, administrator, legal representative, successor or assign thereof where the context so permits.

"***Prime Rate***" means, at the time any determination thereof is to be made, the fluctuating rate per annum of interest then reported in *The Wall Street Journal* as the "Prime Rate" (the base rate on corporate loans at large U.S. money center commercial banks), *provided* that, if the "Prime Rate" is reported as a range, the Prime Rate shall be the midpoint of the range. In the event that *The Wall Street Journal* ceases to report the Prime Rate, then "Prime Rate" shall mean the fluctuating interest rate per annum announced from time to time by Morgan Guaranty Trust Company of New York as its "prime rate" (or, if otherwise denominated, such bank's reference rate for interest rate calculations on general commercial loans), which rate is not necessarily the lowest or best rate which such bank may at any time or from time to time charge any of its customers.

"***Related Agreements***" shall mean the agreements listed in Section 2.05 and any other agreements or documents executed in connection with or as required under this Agreement.

"***Securities Act***" shall mean the Securities Act of 1933, as amended.

"***Seller Indemnified Party(ies***)" shall have the meaning specified in Section 8.01(b).

"***Seller Tax Threshold Amount***" shall have the meaning specified in Section 7.01.

"***Taxes***" shall mean all United States federal, state, local or foreign income, profits, gross receipts, windfall profits, severance, real or personal property, intangible property, occupation, production, franchise, capital gains, employment, withholding, social security (or similar), disability, registration, stamp, payroll, goods and services, alternative or add-on minimum tax, or any other taxes, charges, fees, imposts, duties, levies, withholdings or other assessments imposed by any governmental entity, including environmental taxes imposed pursuant to Chapter 38 of the Code, and similar state laws, excise taxes, customs duties, utility, property, sales, use, value added, transfer and fuel taxes, or other like assessment or charge of any kind whatsoever, together with any interest, fines, penalties or additions to tax attributable to or imposed on or in respect thereof imposed by any Governmental Authority, whether or not disputed, including all applicable sales, use, excise, business, occupation or other tax, if any, relating to this or any other service, supply or operating agreement.

"***Taxing Authority***" shall mean, with respect to any Tax, the Governmental Authority or political subdivision thereof that imposes such Tax, and the agency (if any) charged with the collection of such Tax for such Governmental Authority or subdivision.

"***Tax Return***" shall mean any return, declaration, report or similar statement required to be filed with respect to any Taxes (including any attached schedules) including any information return, claim for refund, amended return and declaration of estimated Tax.

"***Technology Amendment and Restatement***" shall have the meaning specified in Section 2.05(ii).

"***Technology Agreement***" shall mean that certain Amended and Restated Technology Transfer and License Agreement dated February 19, 2002, by and among Seller, Buyer and the Company.

"***Third Party Claims***" shall have the meaning specified in Section 8.04.

"***Third Party IP***" shall mean the Intellectual Property that is owned by a Person other than a Party or the Company.

"***Transfer Instrument***" shall have the meaning specified in Section 2.05(a)(i).

"***Treasury Regulations***" shall mean the income tax regulations, including temporary regulations, promulgated under the Code, as those regulations may be amended from time to time. Any reference herein to a specific section of the Treasury Regulations shall include any corresponding provisions of succeeding, similar, substitute, proposed or final Treasury Regulation.

1.02 Interpretation. Unless expressly provided for elsewhere in this Agreement, this Agreement shall be interpreted in accordance with the following provisions:

(a) The headings of the Articles, Sections and subsections of this Agreement and the headings contained in the Exhibits and Schedules hereto are inserted for convenience of

reference only and shall not in any way define or affect the meaning, construction, or scope of any of the provisions hereof or thereof;

(b) Except where specifically stated otherwise, any reference to any statute, regulation, rule, or agreement shall be a reference to the same as amended, supplemented or re-enacted from time to time;

(c) Whenever the words "include," "including," or "includes" appear in this Agreement, they shall be read to be followed by the words "without limitation" or words having similar impart;

(d) A reference to any agreement or document (including a reference to this Agreement) is to the agreement or document as amended, varied, supplemented, novated or replaced, except to the extent prohibited by this Agreement or that other agreement or document;

(e) The words "hereof" "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement;

(f) All references to "day" or "days" shall mean calendar days unless specified as a "Business Day."

ARTICLE II

SALE AND PURCHASE OF SELLER SHARES

2.01 Agreement to Sell and Purchase. In reliance upon the representations, warranties and covenants of Buyer, and on the terms and subject to the conditions herein set forth, Seller agrees that at Closing it will convey, transfer, sell and assign the Seller Shares to the Buyer, or its designee, free and clear of all Liens. In reliance upon the representations, warranties and covenants of Seller contained herein, and on the terms and subject to the conditions herein set forth, Buyer agrees that at Closing it will purchase from Seller the Seller Shares. In consideration of the sale to it of the Seller Shares, Buyer agrees to pay to Seller nine hundred ninety thousand dollars ($990,000) in cash at Closing (the "***Purchase Price***").

2.02 Transfer of Seller Shares. At the Closing, Seller shall execute and deliver the Transfer Instrument to Buyer and shall execute and deliver any additional documents of transfer or conveyance that Buyer shall reasonably request Seller to execute to more effectively evidence the conveyance, sale, transfer and assignment of the Seller Shares to Buyer at the Closing.

2.03 Payment of Purchase Price. At the Closing, Buyer shall deliver nine hundred ninety thousand dollars ($990,000) in cash to Seller in immediately available funds by wire transfer to an account or accounts designated in writing by Seller at least three (3) Business Days prior to the Closing Date.

2.04 Place and Time. The consummation of the transactions contemplated by this Agreement (the "**Closing**") shall take place at the offices of Fulbright & Jaworski L.L.P. at 1301 McKinney Avenue, Suite 5100, Houston, Texas 77010-3095, simultaneously with the execution of this Agreement, such date being herein called the "**Closing Date**". At the Closing, all transactions contemplated by this Agreement to be consummated at the Closing shall be deemed to have occurred simultaneously.

2.05 Transactions and Deliveries at the Closing.

(a) At the Closing, Seller shall deliver or caused to be delivered to Buyer the following:

(i) an Assignment of Common Shares in the form of Exhibit A (the "***Transfer Instrument***") to evidence the conveyance of the Seller Shares;

(ii) a Noncompetition and Confidentiality Agreement executed by Kent Murphy in the form of Exhibit B;

(iii) a Resignation from the Board of Directors of the Company by Kent Murphy, Robert Martinet and Doug Juanarena all to be effective as of the Closing;

(iv) copies of the resolutions of Seller, certified as being correct and complete and then in full force and effect, authorizing the execution of this Agreement and the Related Agreements to which it is a party and the consummation of the transactions contemplated under this Agreement and the Related Agreements to which it is a party;

(v) certificates of incumbency and specimen signatures of the signatory officers of Seller;

(vi) a Good Standing Certificate issued by the Secretary of State for the State of Delaware in respect of Seller,

(vii) a short-form Good Standing Certificate issued by the Secretary of State for the State of Delaware in respect of the Company;

(viii) any other documents, instruments or agreements contemplated hereby or reasonably necessary or appropriate to consummate the transactions contemplated hereby; and

(ix) a certificate of non-foreign status dated as of the Closing Date, sworn under penalties of perjury and in form and substance required by the Treasury Regulations promulgated under Section 1445 of the Code, stating that Seller is not a "foreign person" as defined in Section 1445 of the Code.

(b) At the Closing, Buyer shall deliver to Seller:

(i) the Purchase Price;

(ii) copies of the resolutions of Buyer, certified as being correct and complete and then in full force and effect, authorizing the execution of this Agreement and the Related Agreements to which it is a party and the consummation of the transactions contemplated under this Agreement and the Related Agreements to which it is a party;

(iii) certificates of incumbency and specimen signatures of the signatory officers of Buyer; and

(iv) any other documents, instruments or agreements contemplated hereby or reasonably necessary or appropriate to consummate the transactions contemplated hereby.

(c) At the Closing, Seller and Buyer shall enter into the following agreements:

(i) a Bill of Sale to be executed by Seller and Buyer in the form of Exhibit C:

(ii) an Amended and Restated Technology Agreement in the form of Exhibit D (the "**Technology Amendment and Restatement**");

(iii) a Mutual Release to be executed by Seller, Kent Murphy, Buyer and the Company in the form of Exhibit E; and

(iv) a Supply Agreement related to specialty fiber to be in the form of Exhibit F.

ARTICLE III

REPRESENTATIONS AND WARRANTIES CONCERNING SELLER AND SELLER SHARES, AND CERTAIN REPRESENTATIONS AND WARRANTIES CONCERNING THE COMPANY

Seller represents and warrants to Buyer, as follows:

3.01 Organization and Standing. Seller (a) is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, (b) has all requisite power and authority to own, lease and operate all of its properties and assets and to carry on its business substantially as now being conducted and (c) is duly qualified and in good standing to do business in each jurisdiction in which the nature of its business or the ownership, operation or leasing of its properties makes such qualification necessary, except where the failure to have such power or authority or to be so qualified would not, individually or in the aggregate, have a Material Adverse Effect with respect to Seller.

3.02 Authority and Binding Obligations. Seller has the power and authority to execute and deliver this Agreement and the Related Agreements to which it is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby, as applicable. The execution, delivery and performance of this Agreement and the Related Agreements to which it is a party and the consummation of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of Seller. This Agreement has been, and at Closing the Related Agreements to which it is a party will be, duly executed and delivered by Seller and, assuming that this Agreement has been, and at Closing the Related Agreements to which it is a party will be, duly authorized, executed and delivered by Buyer, as applicable, this Agreement constitutes, and at Closing the Related Agreements to which it is a party will constitute, valid and binding agreements of Seller enforceable against Seller in accordance with their respective terms, except that (a) such enforcement may be subject to any bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer or other laws, now or hereafter in effect, relating to or limiting creditors' rights generally and (b) enforcement of this Agreement and Related Agreements, including the remedy of specific performance and injunctive and other forms of equitable relief, may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

3.03 Consents and Approvals; No Violations. Neither the execution and delivery by Seller of this Agreement or any Related Agreement nor the consummation by Seller of the transactions contemplated hereby and thereby, or the fulfillment and performance by Seller of its obligations hereunder and thereunder, respectively, will (a) conflict with or result in any breach of any provision of the applicable governing documents of Seller, (b) result in a violation or breach of, or constitute (with or without due notice or lapse of time or both) a default (or give rise to any right of termination, cancellation or acceleration) under, or require any consent under, any indenture, mortgage, deed of bust, license, contract, lease, agreement or other instrument or obligation to which Seller is a party or by which it or any of its properties or assets may be bound, (c) violate any Applicable Law applicable to Seller or any of its properties or assets or (d) require any filing with, or the obtaining of any permit, authorization, consent or approval of, any Governmental Authority, except in the case of clauses (b), (c), and (d) of this Section 3.03 for any such violations, breaches, defaults, rights of termination, cancellation or acceleration or requirements that, individually or in the aggregate, would not have a Material Adverse Effect with respect to Seller.

3.04 Litigation.

(a) there is no Claim, action, suit, demand, proceeding, arbitration, grievance, citation, summons, subpoena or, to Seller's Knowledge, any inquiry or investigation, of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending, or to Seller's Knowledge, threatened against Seller involving or affecting the Seller Shares, and there are no Judgments outstanding against Seller involving or affecting the Seller Shares; and

(b) no Claim, action, suit, demand, proceeding, arbitration, grievance, citation, summons, subpoena or to Seller's Knowledge any inquiry or investigation, of any nature, civil, criminal, regulatory or otherwise, in law or in equity, that is pending, or to Seller's Knowledge,

threatened seeking to restrain or prohibit this Agreement, the Related Agreements or any agreement, instrument or transaction contemplated hereby or thereby, or to obtain damages, a discovery order or other relief in connection with this Agreement, the Related Agreements or the transactions contemplated hereby and thereby.

3.05 Title to the Seller Shares. Seller owns good and marketable title to the Seller Shares free and clear of any Liens. The Seller Shares constitute sixty percent (60%) of all of the issued and outstanding Common Shares of the Company. The Seller Shares have been duly authorized, and are validly issued and fully paid and non-assessable. Seller is not a party to any voting trust, proxy, or other agreement or understanding with respect to voting any of the Seller Shares except as provided pursuant to the Company Agreement. The Seller Shares represent Seller's entire right, title and interest in and to the equity of the Company.

3.06 Brokers; Finders and Fees. Seller has not employed any investment banker, broker or finder or incurred any liability for any investment banking, financial advisory or brokerage fees, commissions or finders' fees in connection with this Agreement or the transactions contemplated hereby.

3.07 Capitalization. The authorized capital of the Company consists of 29,000,000 Common Shares. All of the issued and outstanding Common Shares (i) have been duly authorized, and are validly issued, fully paid and nonassessable, (ii) are owned of record and beneficially by the shareholders and in the respective amounts as indicated on Schedule 3.07 and (iii) were issued in compliance with all Applicable Laws including the Securities Act. No Person other than Seller and Buyer has any record or beneficial interest in any Common Shares (other than the holders of the Employee Options) or any other limited liability company interests (as such term is defined in the Delaware Act) in the Company. The Company does not have outstanding any convertible securities, options (other than the Employee Options) or warrants. The Company and has not entered into any Contracts, and there are no restrictions by which it is bound directly or indirectly, to issue any additional Common Shares, membership interests or limited liability company interests (as such term is defined in the Delaware Act) or other securities.

3.08 Employee Options. Four million (4,000,000) Common Shares are reserved for issuance pursuant to the Company's Option Plan. Schedule 3.08 is a true, correct and complete list of all options outstanding of the Company indicating the record holders thereof, the amount of vested Common Shares, the grant dates of the options and the exercise prices (collectively, the "***Employee Options***"). The Company has provided Buyer with true, correct and complete copies of all agreements and correspondence related to the Employee Options.

3.09 Intellectual Property.

(a) *Identification and Ownership*.

(i) Seller owns, legally and beneficially, free from all Liens, the Innovations Owned IP and has legally enforceable license rights for or otherwise possesses legally

enforceable rights to the Third Party IP used by Seller pursuant to a license, sublicense or other agreement, except to the extent that such enforceability may be limited by bankruptcy, insolvency or other laws affecting creditors' rights and other laws of equity.

(ii) Schedule 3.09(ii) lists all Innovations Owned IP for which an application has been filed with any Governmental Authority, including patents, trademarks/service marks and copyrights, issued or registered, or for which any application for issuance or registration thereof has been filed.

(iii) Schedule 3.09(a)(iii) lists all licenses, sublicenses or other agreements as to which Seller is a party and pursuant to which Seller is authorized to use any Third Party IP.

(iv) Schedule 3.09(a)(iv) lists all licenses, sublicenses or other agreements as to which the Company is a party and pursuant to which the Company is authorized to use any Innovations Owned IP or any Third Party IP licensed to Seller.

(v) Schedule 3.09(a)(v) lists all trademarks, service marks and other trade designations that are Innovations Owned IP and not otherwise identified in Schedule 3.09(a)(ii).

(vi) Except as set forth in Schedule 3.09(a)(vi), Seller has, and at Closing will have, all rights necessary to grant the licenses and other rights granted to Baker Hughes under the Technology Amendment and Restatement in respect of the Innovations Owned IP and the Third Party IP licensed to Seller.

(vii) Seller has not granted any right, license or interest in or to any of the Combined IP that conflicts with the rights granted in the Technology Agreement.

(viii) All necessary documents and certificates in connection with the Innovations Owned IP listed in Schedule 3.09(a)(ii), have been properly filed with the relevant patent, trademark, copyright or intellectual property offices of the countries where such rights are filed, or registered, or both.

(ix) No present or former employee or independent contractor of Seller or any of its Affiliates owns or to the Knowledge of Seller claims to own any of the Company Owned IP or Innovations Owned IP.

(x) Seller has secured a written assignment of the rights to any contribution from all independent contractors and employees who contributed to the creation of the Innovations Owned IP.

(xi) No Claim has been asserted, nor to the Knowledge of Seller are there any Claims that could be asserted, alleging that the licenses that have been granted to Seller or any of its Affiliates with respect to Third Party IP have been terminated or otherwise diminished.

(b) *Validity and Enforceability*

(i) The Innovations Owned IP is valid and enforceable, and has not been adjudged to be invalid or unenforceable in whole or in part.

(ii) Each license of the Third Party IP granted to Seller or any of its Affiliates is valid and enforceable, is binding on all parties to such license, and is in full force and effect.

(iii) No act or omission by Seller has taken place that may give rise to revocation, invalidation, unenforceability or non-renewal of any Company Owned IP or Innovations Owned IP or that might prejudice any application for the registration or grant of it.

(iv) No act or omission by Seller has taken place that constitutes, would constitute, or to the Knowledge of Seller, has been alleged to constitute a breach or permit termination of any of the licenses, sublicenses or other agreements related to the Third Party IP granted to Seller or any of its Affiliates.

(c) *Violation of Combined IP*.

(i) Seller has not brought, and is not aware of, any action, suit or proceeding against any third party for infringement, misappropriation or other violation of the Company Owned IP or the Innovations Owned IP or for breach of any license or agreement involving the Combined IP or made any allegation to this effect.

(ii) Except as set forth in Schedule 3.09(c)(ii). there are no pending (with service of process having been made or written notice having been served on Seller), or, to Seller's Knowledge, threatened Claims, suits, demands or actions against Seller affecting any of the Combined IP.

(iii) Seller has not entered into any agreement to defend, hold harmless or indemnify and does not otherwise owe a duty to defend, hold harmless or indemnify any entity against any charge of infringement or misappropriation of any of the Innovations Owned IP or Third Party IP licensed to Seller, other than hold harmless, defense or indemnification provisions with the Company, Buyer or their Affiliates arising in the ordinary course of business.

(iv) Seller has taken all commercially reasonable and appropriate steps to protect and preserve the confidentiality of any confidential information related to the Combined IP disclosed to it by a third party pursuant to an obligation of confidentiality.

(v) All software that is a part of the Innovations Owned IP or Third Party IP licensed to Seller, but not including any commercially available off-the-shelf software, used by the Company for its business is properly and validly licensed to or owned by the Company, and, if licensed, the Company has secured or obtained a sufficient number of licenses to cover all authorized use of such software by the Company.

(d) *Other Existing IP Issues*.

(i) Seller has the power and authority to license to Baker Hughes the Innovations Pre-Existing IP, Innovations Newly-Developed Technology and Innovations Background Technology (as such terms are defined in the Technology Amendment and Restatement) in the Field and the Innovations Third Party IP (as such term is defined in the Technology Amendment and Restatement) in the Field in accordance with the Technology Amendment and Restatement, to the extent Seller has rights to the Innovations Third Party IP (as such term is defined in the Technology Amendment and Restatement) as of the Closing Date, to be licensed pursuant to the Technology Amendment and Restatement.

(ii) Seller will not be, as a result of the execution and delivery of this Agreement or any of the documents contemplated hereby or thereby or the performance by Seller hereunder or thereunder, in breach of any license, sublicense or other agreement relating to the Combined IP.

3.10 Employee Benefits.

(a) Schedule 3.10(a) contains a true, complete and accurate list and brief description of all Benefit Plans. Seller has made available to Buyer prior to Closing, as applicable, true, complete and correct copies of all plan documents, summary plan descriptions, financial statements, funding vehicles, agreements pursuant to which the Company may be obligated to indemnify any person, determination letters issued by the IRS and filings with all applicable Governmental Authorities for the past three (3) years relating to the Benefit Plans.

(b) (i) Each of the Benefit Plans complies with all Applicable Laws (including ERISA) and (ii) the Company has complied with all such laws and regulations in administering each of such plans.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES CONCERNING SELLER'S KNOWLEDGE ABOUT CERTAIN MATTERS CONCERNING THE COMPANY

Seller represents and warrants to Buyer, to Seller's Knowledge, as follows:

4.01 Organization and Standing. The Company (a) is a limited liability company duly organized, validly existing and in good standing under the laws of the State of Delaware, (b) has all requisite power and authority to own, lease and operate all of its properties and assets and to carry on its business substantially as now being conducted and (c) is duly qualified and in good standing to do business in each jurisdiction in which the nature of its business or the ownership, operation or leasing of its properties makes such qualification necessary, except where the failure to have such power or authority or to be so qualified would not, individually or in the aggregate, have a Material Adverse Effect with respect to Seller.

4.02 Authority and Binding Obligations. The Company has the power and authority to execute and deliver the Related Agreements to which it is a party, to perform its obligations thereunder and to consummate the transactions contemplated thereby, as applicable. The execution, delivery and performance of the Related Agreements to which it is a party and the consummation of the transactions contemplated thereby have been duly authorized by all requisite corporate action on the part of the Company. At the Closing the Related Agreements to which the Company is a party will be, duly executed and delivered by the Company and, assuming that at the Closing the Related Agreements to which the Company is a party will be, duly authorized, executed and delivered by the other parties thereto, will constitute, valid and binding agreements of the Company enforceable against the Company in accordance with their respective terms, except that (a) such enforcement may be subject to any bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer or other laws, now or hereafter in effect, relating to or limiting creditors' rights generally and (b) enforcement of Related Agreements, including the remedy of specific performance and injunctive and other forms of equitable relief, may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

4.03 Consents and Approvals; No Violations. Neither the execution and delivery by the Company of any Related Agreement nor the consummation by the Company of the transactions contemplated thereby, or the fulfillment and performance by the Company of its obligations thereunder, will (a) conflict with or result in any breach of any provision of the applicable governing documents of the Company, (b) result in a violation or breach of, or constitute (with or without due notice or lapse of tune or both) a default (or give rise to any right of termination, cancellation or acceleration) under, or require any consent under, any indenture, mortgage, deed of trust, license, contract, lease, agreement or other instrument or obligation to which the Company is a party or by which it or any of its properties or assets may be bound, (c) violate any Applicable Law applicable to the Company or any of its properties or assets or (d) require any filing with, or the obtaining of any permit, authorization, consent or approval of, any Governmental Authority.

4.04 Litigation. There is no Claim, action, suit, demand, proceeding, arbitration, grievance, citation, summons, subpoena or any inquiry or investigation, of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending or threatened against or involving the Company and there are no Judgments outstanding against the Company.

4.05 Financial Information. The Company has delivered to Buyer true, correct, and complete copies of the following financial statements of the Company (collectively, the "***Financial Statements***"):

(a) the audited Balance Sheets of the Company as of December 31, 2002 and 2003 and the related Statements of Operations, Member's Equity, and Cash Flows of the Company all for the fiscal years ended on such dates and for the period from inception through December 31, 2002 and 2003, including the schedules and/or notes related thereto, and

(b) the unaudited Balance Sheet of the Company as of November 26, 2004 and the related Statement of Operations, Member's Equity, and Cash Flows of the Company for the period

ended on such date (subject to normal recurring year-end audit adjustments as prepared by the Company) (collectively, the "***Interim Financial Statement***"). As used herein, the term "***Balance Sheet Date***" shall mean November 26, 2004.

The Financial Statements (taken together and including the related schedules and/or notes thereto) have been prepared in accordance with generally accepted accounting principles applied on a consistent basis and are complete and correct in all material respects and fairly present (i) the financial position of the Company as of the respective dates as such statements and (ii) the results of the operations and the changes in financial position of the Company for the fiscal period ended on such dates, all applied on a consistent basis (except as otherwise stated therein or in the notes thereto throughout the periods involved).

4.06 Undisclosed Liabilities. All material obligations and liabilities, contingent or otherwise, of the Company arising from events which have occurred on or before the Balance Sheet Date have been fully accrued or reserved for in the Interim Financial Statement and the Company has not incurred any material obligation or liability, contingent or otherwise, subsequent to the Balance Sheet Date except for accounts payable incurred in die ordinary course of business consistent with past practice.

4.07 Contracts and Commitments. Schedule 4.07 contains an accurate and complete list of each Contract as of the date of this Agreement to which the Company is a party (the "Commitments"), Except as specified in Schedule 4.07, the Company is not, nor is any other party thereto, in default under any of the Commitments where such defaults would result in a Material Adverse Effect. Except as specified in Schedule 4.07, the Company has not received written notice of cancellation or termination of any Commitment from any party thereto.

4.08 Changes. Except as set forth in Schedule 4.08. since the Balance Sheet Date there has not been:

(a) Any change in the condition (financial or other) or properties, assets, liabilities, business operating results or prospects of the Company from that reflected in the Interim Financial Statement, except changes in the ordinary course of business;

(b) Any damage, destruction, or loss (whether or not covered by insurance) materially and adversely affecting the properties, assets, or business of the Company as presently or proposed to be conducted;

(c) Any material increase in the compensation or rate of compensation or commissions payable or to become payable by the Company to any of its directors, officers, employees, or agents, or any hiring of any employee, or any payment of any bonus, profit-sharing amount or other extraordinary compensation to any director, officer, employee, salesperson or agent, or any material change in any bonus, profit-sharing, retirement or other similar plan, agreement or arrangement or any adoption of or entry into of any new bonus, profit-sharing, group life or health insurance, or other similar plan, agreement or arrangement;

(d) Any material change in the accounting methods or practices followed by the Company;

(e) Any material debt, obligation or liability (whether absolute or contingent) incurred by the Company (whether or not presently outstanding) except current liabilities incurred, and obligations under agreements entered into, in the ordinary course of business;

(f) Any sale, lease, abandonment or other disposition by the Company of any real property or, in each case other than in the ordinary course of business, of any equipment or other operating properties or any sale, assignment, transfer, license or other disposition by the Company of any Intellectual Property or other intangible asset;

(g) Any labor trouble, strike or any other occurrence, event or condition of any similar character that materially and adversely affects or may materially and adversely affect the assets, properties, business or prospects of the Company;

(h) Any change, except in the ordinary course of business, in the contingent obligations of the Company by way of guaranty, endorsement, indemnity, warranty, or otherwise;

(i) Any waiver by the Company of a valuable right or a material debt owed to it except in the ordinary course of business;

(j) Any direct or indirect loans made by the Company to any member, employee, officer, or director of the Company, other than advances made in the ordinary course of business;

(k) Any declaration or payment of any dividend or other distribution of the assets of the Company;

(l) Any satisfaction or discharge of any Lien, Claim, or encumbrance or payment of any obligation by the Company, except in the ordinary course of business and that is not material to the business, properties, prospects or financial condition of the Company (as such business is presently conducted and proposed to be conducted);

(m) Any material change to a material contract or agreement by which the Company or any of its assets is bound or subject;

(n) Any resignation or termination of employment of any officer or key employee of the Company; and the Company, to Seller's Knowledge, does not know of any impending resignation or termination of employment of any such officer or key employee;

(o) Any other event or condition of any character that materially and adversely affects the business (as such business is presently conducted and is proposed to be conducted), properties, prospects or financial condition of the Company; or

(p) Any arrangement or commitment by the Company to do any of the things described in this Section 4.08.

4.09 Compliance with Laws. The Company is in compliance with all Applicable Laws.

4.10 Taxes. There are no claims for unpaid Taxes, pending against or threatened against the Company or its assets. The Company has filed all Tax Returns that are required to be filed by the Company with respect to all periods ending prior to the Closing Date, and such Tax Returns are true, correct and complete in all material respects and were prepared in conformity with all Applicable Law.

4.11 Title to Assets. Except as set forth in Schedule 4.11, the Company has good and marketable title to, or a valid leasehold interest in, all of its assets free and clear of any Liens, except for assets sold, consumed or otherwise disposed of in the ordinary course of business consistent with past practices.

4.12 Guaranties. The Company does not have outstanding (a) any guaranty (whether direct or indirect) whereby the Company is or may become liable for an indebtedness or obligation of any other Person, (b) any indemnification obligations in favor of any Person, or (c) any investment in the securities, obligations or other ownership interest of, or loans or advances to (excluding employee/contractor loans or advances) any Person.

4.13 Employee Matter.

(a) Schedule 4.13(a) contains a true, complete and accurate list of each person employed by the Company as of the date hereof, together with such individual's title or job description and date of hire by the Company, such individual's salary and incentive compensation arrangements with the Company. Except as set forth in Schedule 4.13(a), the Company does not use the services of independent contractors or consultants. Except as set forth on Schedule 4.13(a), none of the employees of the Company are employed pursuant to a written employment agreement. As of the date prior to the date hereof, neither the Company nor the Seller has received notification that any of the current employees of the Company presently plans to terminate his employment during the 2004 calendar year, whether by reason of the transactions contemplated by this Agreement or otherwise.

(b) The Company is, and during the last three (3) years has been, in, material compliance with all Applicable Laws in respect of employment and employment practices, terms and conditions of employment, wages, hours of work and occupational safety and health, and has not engaged in any unfair labor practices as defined in the National Labor Relations Act. No charges with respect to or relating to the Company are pending before the Equal Employment Opportunity Commission or any other agency responsible for the prevention of unlawful employment practices. There are no Claims, complaints, lawsuits or other proceedings pending or threatened in any forum against the Company by or on behalf of any present or former employee of the Company, any applicant for employment or classes of the foregoing, alleging breach of any express or implied

contract of employment, any Applicable , governing employment or the termination thereof or other discriminatory, wrongful or tortious conduct in connection with the employment relationship. No event has occurred and no circumstance exists that could give rise to or serve as a basis for the commencement of any such any action, arbitration, audit, hearing, litigation, proceeding or investigation described in the preceding sentence.

4.14 Environmental Matters.

(a) The Company has at all times operated in compliance with all applicable limitations, restrictions, conditions, standards, prohibitions, requirements and obligations of Environmental Laws and related orders of any court or other Governmental Authority.

(b) There are no existing, pending or threatened Environmental Claims related to the Company or any of its assets or properties.

(c) All Environmental Permits required to be obtained or filed by the Company under all applicable Environmental Laws in connection with its operation or use of the assets or properties or the conduct of its business have been duly obtained or filed and are in full force and effect and will remain in full force and effect following the transfer of the Seller Shares to Buyer.

(d) The Company has not received notice that any Environmental Permit is to be revoked or suspended by any Governmental Authority and the Company is not currently operating or required to be operating under any compliance order, schedule, decree or agreement, any consent decree, order or agreement, or corrective action decree, order or agreement issued or entered into under, or pertaining to matters regulated by, any Environmental Law.

(e) The Company does not own or operate any underground storage tanks and has not polluted with any Hazardous Substances the soil or groundwater of any past or present premises of the Company.

(f) No portion of the assets or properties currently or previously leased or owned by the Company is part of any type of site designated as an environmental site under Environmental Laws nor is part of a decontamination schedule or plan of any Governmental Authority.

(g) All Hazardous Substances generated by the Company have been transported, stored, treated and disposed of in compliance with all applicable Environmental Laws.

4.15 Permits and Licenses. The Company has duly obtained and maintained all permits, licenses, concessions, warrants, franchises and other authorizations and approvals of all third parties and Governmental Authorities required or necessary for the Company to carry on its business in the places and in the manner currently conducted (collectively, the "***Permits***"). The Permits are in mil force and effect. No violations, defaults or breaches are in existence or have been recorded with respect to the Permits and no proceeding is pending or, to Seller's Knowledge, threatened with respect to the revocation or limitation of any of the Permits.

4.16 Intellectual Property.

(a) *Identification and Ownership*.

(i) The Company owns, legally and beneficially, free from all Liens, the Company Owned IP and has legally enforceable license rights for or otherwise possesses legally enforceable rights to the Third Party IP used by the Company pursuant to a license, sublicense or other agreement, except to the extent that such enforceability may be limited by bankruptcy, insolvency or other laws affecting creditors' rights and other laws of equity.

(ii) Schedule 4.16(a)(ii) lists all Company Owned IP for which an application has been filed with any Governmental Authority, including patents, trademarks/service marks and copyrights, issued or registered, or for which any application for issuance or registration thereof has been filed.

(iii) Schedule 4.16(a)(iii) lists all licenses, sublicenses or other agreements as to which the Company is a party and pursuant to which the Company is authorized to use any Third Party IP.

(iv) Schedule 4.16(a)(iv) lists all trademarks, service marks and other trade designations that are Company Owned IP and not otherwise identified in Schedule 4.16(a)(ii).

(v) The Intellectual Property listed in Schedules 3.09(a)(ii), 3.09(a)(iii), 3.09(a)(iv), 3.09(a)(v), 4.16(a)(ii), 4.16(a)(iii) and 4.16(a)(iv) is all the Intellectual Property necessary for the operation of the business of the Company as it is currently conducted.

(vi) All necessary documents and certificates in connection with the Company Owned IP listed in Schedule 4.16(a)(ii) have been properly filed with the relevant patent, trademark, copyright or intellectual property offices of the countries where such rights are filed, or registered, or both.

(vii) No present or former employee or independent contractor of the Company or any of its Affiliates owns or claims to own any of the Company Owned IP or Innovations Owned IP.

(viii) The Company has secured a written assignment of the rights to any contribution from all independent contractors and employees who contributed to the creation of the Company Owned IP.

(ix) No Claim has been asserted, nor are there any Claims that could be asserted, alleging that the licenses that have been granted to the Company or any of its Affiliates with respect to Third Party IP have been terminated or otherwise diminished.

(b) *Validity and Enforceability*

(i) The Company Owned IP is valid and enforceable, and has not been adjudged to be invalid or unenforceable in whole or in part.

(ii) No act or omission by the Company has taken place mat may give rise to revocation, invalidation, unenforceability or non-renewal of any Company Owned IP or Innovations Owned IP or that might prejudice any application for the registration or grant of it.

(iii) No act or omission by the Company has taken place that constitutes, would constitute, or has been alleged to constitute a breach or permit termination of any of the licenses, sublicenses or other agreements related to the Third Party IP.

(c) *Violation of Combined IP*.

(i) There is no unauthorized use, disclosure, infringement, threatened infringement, misappropriation or other violation of any of the Combined IP by any third party, including any employee, former employee or independent contractor of Seller or any of its Affiliates or any material breach of any Contract involving the Combined IP.

(ii) Except as set forth in Schedule 4.16(c)(ii), there are no pending (with service of process having been made or written notice having been served on the Company or Seller) or threatened Claims, suits, demands or actions against the Company affecting any of the Combined IP.

(iii) No part of the business conducted by the Company or related to the Combined IP, infringes, misappropriates or otherwise violates or has been alleged to infringe, misappropriate or otherwise violate any Intellectual Property Rights of any third party.

(iv) The Company has not entered into any agreement to defend, hold harmless or indemnify and does not otherwise owe a duty to defend, hold harmless or indemnify any entity against any charge of infringement or misappropriation of any of the Combined IP, other than hold harmless, defense or indemnification provisions arising in the ordinary course of business.

(v) None of the Company, Seller, nor any of Seller's Affiliates, is in breach of any obligation of confidence related to the Combined IP.

(vi) All software that is a part of the Combined IP, but not including any commercially available off-the-shelf software, used by the Company for its business is properly and validly licensed to or owned by the Company, and, if licensed, the Company has secured or obtained a sufficient number of licenses to cover all authorized use of such software by the Company.

(d) *Other Existing IP Issues*.

(i) The Company will not be, as a result of the execution and delivery of this Agreement or any of the documents contemplated hereby or thereby or the performance by Seller hereunder or thereunder, in breach of any license, sublicense or other agreement relating to the Combined IP.

ARTICLE V

REPRESENTATIONS AND WARRANTIES CONCERNING BUYER

Buyer represents and warrants to Buyer, as follows:

5.01 Organization and Standing. Buyer (a) is a corporation duly organized, validly existing and in good standing under the laws of the State of California, (b) has all requisite power and authority to own, lease and operate all of its properties and assets and to carry on its business substantially as now being conducted and (c) is duly qualified and in good standing to do business in each jurisdiction in which the nature of its business or the ownership, operation or leasing of its properties makes such qualification necessary, except where the failure to have such power or authority or to be so qualified would not, individually or in the aggregate, have a Material Adverse Effect with respect to Buyer.

5.02 Authority and Binding Obligations. Buyer has the power and authority to execute and deliver this Agreement and the Related Agreements to which it is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby, as applicable. The execution, delivery and performance of this Agreement and the Related Agreements to which it is a party and the consummation of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of Buyer. This Agreement has been, and at Closing the Related Agreements to which it is a party will be, duly executed and delivered by Buyer and, assuming that this Agreement has been, and at Closing the Related Agreements to which it is a party will be, duly authorized, executed and delivered by Buyer, as applicable, this Agreement constitutes, and at Closing the Related Agreements will constitute, valid and binding agreements of Buyer enforceable against Buyer in accordance with their respective terms, except that (a) such enforcement may be subject to any bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer or other laws, now or hereafter in effect, relating to or limiting creditors' rights generally and (b) enforcement of this Agreement and Related Agreements, including the remedy of specific performance and injunctive and other forms of equitable relief, may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

5.03 Consents and Approvals; No Violations. Neither the execution and delivery by Buyer of this Agreement or any Related Agreement nor the consummation by Buyer of the transactions contemplated hereby and thereby, or the fulfillment and performance by Buyer of its

obligations hereunder and thereunder, respectively, will (a) conflict with or result in any breach of any provision of the applicable governing documents of Buyer, (b) result in a violation or breach of, or constitute (with or without due notice or lapse of time or both) a default (or give rise to any right of termination, cancellation or acceleration) under, or require any consent under, any indenture, mortgage, deed of trust, license, contract, lease, agreement or other instrument or obligation to which Buyer is a party or by which it or any of its properties or assets may be bound, (c) violate any Applicable Law applicable to Buyer or any of its properties or assets or (d) require any filing with, or the obtaining of any permit, authorization, consent or approval of, any Governmental Authority, except in the case of clauses (b), (c), and (d) of this Section 5.03 for any such violations, breaches, defaults, rights of termination, cancellation or acceleration or requirements that, individually or in the aggregate, would not have a Material Adverse Effect with respect to Buyer.

5.04 Litigation. There is no Claim, action, suit, demand, proceeding, arbitration, grievance, citation, summons, subpoena or to Buyer's Knowledge any inquiry or investigation, of any nature, civil, criminal, regulatory or otherwise, in law or in equity, that is pending, or to Buyer's Knowledge, threatened seeking to restrain or prohibit this Agreement, the Related Agreements or any agreement, instrument or transaction contemplated hereby or thereby, or to obtain damages, a discovery order or other relief in connection with this Agreement, the Related Agreements or the transactions contemplated hereby and thereby.

5.05 Brokers; Finders and Fees. Buyer has not employed any investment banker, broker or finder or incurred any liability for any investment banking, financial advisory or brokerage fees, commissions or finders' fees in connection with this Agreement or the transactions contemplated hereby.

5.06 No Registration. Seller understands that the Seller Shares have not been, and may not be, registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act, the availability of which depends upon, among other things, the bona fide nature of the investment intent of Buyer, the investment experience of Buyer and the financial sophistication of Buyer.

5.07 Investment Intent. Buyer is acquiring the Seller Shares for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution thereof.

5.08 Investment Experience. Buyer has the requisite sophistication related to evaluating and investing in private placement transactions of securities so that it is capable of evaluating the merits and risks of its investment in the Company and has the capacity to protect its own interests.

5.09 Speculative Nature of Investment. Buyer acknowledges that its investment in the Seller Shares is highly speculative and entails a substantial degree of risk, and Buyer is in a position to lose the entire amount of such investment.

5.10 Access to Data. Buyer has had an opportunity to discuss the Company's business, management and financial affairs with the Company's management. Buyer also has had an opportunity to ask questions of management of the Company, which questions were answered to its satisfaction. Buyer understands that such discussions, as well as any information issued by the Company, were intended to describe certain aspects of the Company's business and prospects, but were not necessarily a thorough or exhaustive description.

5.11 Accredited Investor. Buyer is an "accredited investor" within the meaning of Regulation D, Rule 501 (a), promulgated by the Securities and Exchange Commission.

5.12 Residency. The principal place of business of Buyer is Texas.

5.13 Restriction on Resales. Buyer acknowledges that the Seller Shares must be held indefinitely unless subsequently registered under the Securities Act or unless an exemption from such registration is available. The Company has no present intention of registering the Seller Shares. Buyer further understands that there is no assurance that any exemption from registration under the Securities Act will be available or, if available, that such exemption will allow Buyer to dispose of or otherwise transfer any or all of the Seller Shares under the circumstances, in the amounts or at the times the Buyer might propose, *provided* that Buyer may dispose of or otherwise transfer any or all of the Seller Shares in accordance with the Company Agreement.

5.14 Rule 144. Buyer is aware of the provisions of Rule 144 promulgated under the Securities Act which permit limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions. Buyer understands that the current public information referred to in Rule 144 above is not now available and the Company has no present plans to make such information available. Buyer acknowledges that, in the event all of the requirements of Rule 144 are not met, registration under the Securities Act or an exemption from registration will be required for any disposition of the Seller Shares.

5.15 No Public Market. Buyer understands and acknowledges that no public market now exists for any of the Seller Shares and that the Company has made no assurances that a public market will ever exist for the Seller Shares.

5.16 Reliance. Buyer acknowledges that it has had the opportunity to review with its legal counsel and tax advisors this Agreement and the Related Agreements, the exhibits and schedules attached hereto and thereto (including the U.S. federal, state, local and foreign tax consequences of this investment and the transactions contemplated herein and therein). With respect to this investment and the transactions contemplated by this Agreement and the Related Agreements, Buyer is relying on (i) such counsel and advisors for legal and tax advice, (ii) the statements, representations and warranties of Seller in this Agreement and the Related Agreements and (iii) the due diligence materials made available to Buyer.

ARTICLE VI

COVENANTS AND AGREEMENTS OF SELLER

Seller covenants and agrees as follows:

6.01 ATP Project. With respect to rights or assets arising out of the ATP project, Seller will use its commercially reasonable efforts to secure the same from NIST and to transfer same to Buyer; provided, however, that any additional consideration necessary to acquire such rights from NIST shall be the responsibility of Buyer to fund.

6.02 Covenant Not to Compete. For a period of five (5) years from and after the Closing Date, Seller will not engage (and will prohibit its Affiliates from engaging) directly or indirectly in any business anywhere in the world that competes with Buyer or the Company in the development, marketing or sale of single point measurement or distributed measurement fiber optic technology in the Field, anywhere in the world; *provided*, *however*, ownership of less than 3% of the outstanding equity of any entity shall not be deemed to be engaging in any business solely by reason thereof.

If a court of competent jurisdiction or the Tribunal pursuant to Article IX hereof declares or intends to declare that any term or provision of this Section 6.02 is invalid or unenforceable, the Parties agree that such court/Tribunal making the determination of invalidity or unenforceability shall have the power to reduce the scope, duration, or area of the term or provision, to delete specific words or phrases, or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be enforceable as so modified.

In the event of breach or threatened breach of the provisions of this Section 6.02 it is understood and agreed that Buyer and the Company shall be entitled to injunctive relief (without bond or other security being required) as well as any and all other applicable remedies at law and inequity.

Seller acknowledges that its agreement in this Section 6.02 forms an essential part of the consideration received by Buyer hereunder.

6.03 Non-Hiring of Employees. For a period of two (2) years from and after the Closing Date, Seller agrees not to solicit, offer employment to or employ in any capacity (and shall prohibit its Affiliates from such activities) any employee of the Company or Buyer without the prior written consent of Buyer or the Company; *provided*, *however*, such limitations shall not apply to any Employee whose employment is terminated by the Company. Seller acknowledges that its agreement in this Section 6.03 forms an essential part of the consideration received by Buyer hereunder.

6.04 Services and Employee Benefit.

(a) Seller shall assist Buyer and the Company in an orderly transition and will cooperate with Buyer and the Company to ensure appropriate transition of services provided by Seller to the Company can be made to Buyer. In this regard, Seller will continue to provide the same services and support, including the Non-Exclusive Identified Support Services, that Seller is currently providing to the Company for a period of one hundred twenty (120) days after the Closing or such earlier period as the Company may notify Seller that such services are not required. Seller will provide all such services and support in substantially the same manner, nature and quality as such service and support is currently being provided to the Company.

(b) Without in any way limiting the generality of the foregoing, Seller will continue to provide such Employee Benefits including insurance coverage on the same basis that Seller currently provides such services until the Company is able to confirm its own coverage is in place; provided Seller shall not be required to continue such services beyond such 120-day period.

(c) Seller will promptly invoice the Company $2,500 per month to provide the services and support described in this Section 6.04 for so long as such services and support are being provided; provided, however, that the amount due for the month in which the services and support cease to be provided shall be equal to the product of $85 times the number of days the services and support were provided in such month. Payment will be made by the Company promptly after receipt of such invoice, but in no event more than thirty (30) days after receipt.

6.05 Licenses and Permits. Seller shall use (and shall cause Kent Murphy to use) its commercially reasonable efforts to secure for the Company or Buyer all licenses, sublicenses, assignments or other suitable rights in and to any intellectual property and any contracts or leases necessary for the operation of the business of the Company as currently conducted and related to the Field and not already held by the Company as well as such rights that are impaired, terminated, or otherwise adversely affected as a result of the change of control contemplated by this Agreement; *provided*, *however*, that to the extent such rights are held by a third party, it shall be the responsibility of the Company or Buyer to provide such funds as may be required by the third party to acquire such third party rights for the Company.

ARTICLE VII

TAX MATTERS

Seller and Buyer covenant and agree as follows:

7.01 Tax Indemnity. Seller shall be responsible for, shall pay or cause to be paid, and shall indemnify, defend and hold harmless Buyer and the Company and their respective Affiliates (all of such Persons indemnified by Seller under this Section 7.01 being collectively referred to

herein as the "***Tax Indemnitees***" and individually referred to herein as a "***Tax Indemnitee***") from and against:

(a) 60% of any and all Taxes imposed on, or pertaining or attributable to, the Company with respect to any period or portion thereof that ends on or before the Closing Date (a "***Pre-Closing Period***") and any and all Taxes allocated to a Pre-Closing Period pursuant to the terms of this Article VII; and

(b) any and all income, sales, use, transfer and similar Taxes imposed in connection with the transfer of the Seller Shares contemplated by this Agreement.

Notwithstanding anything to the contrary in this Section 7.01, Seller will not have any liability under Section 7.01(a) unless and until the aggregate amount for which the Tax Indemnitees are entitled to recover under such Section 7.01 (a) exceeds in the aggregate an amount equal to Ten Thousand Dollars ($20,000) (the "***Seller Tax Threshold Amount***"), in which case Seller shall be liable only for the portion of such amount in excess of the Seller Tax Threshold Amount consistent with Section 7.01(a).

7.02 Allocation of Certain Taxes.

(a) Seller and Buyer will, to the extent permitted by Applicable Law, elect with the appropriate Taxing Authorities to close the Taxable periods of the Company as of and including the Closing Date. In any case where Applicable Law does not require or permit such a Taxable period of the Company to be closed as of and including the Closing Date, any Tax described in Section 7.01(a) and pertaining to a period that begins on or before the Closing Date and ends after the Closing Date (a "***Straddle Period***") shall be determined in accordance with the applicable provisions of Section 7.02(b) hereof.

(b) In the case of any Tax described in Section 7.01 (a) and pertaining to a Straddle Period and which is based on income, sales, revenue, production or similar items, or other Taxes not described in the next sentence, the portion of such Tax pertaining or attributable to the Company for the Pre-Closing Period of such Straddle Period shall be determined on the basis of an interim closing of the books as of and including the Closing Date. For purposes of this Section 7.02, the liability for any real or personal property Taxes or a flat minimum dollar Tax, the total amount of such Taxes allocable to the Pre-Closing Period of a Straddle Period shall be the product of (i) such Tax for the entirety of such Straddle Period, multiplied by (ii) a fraction, the numerator of which is the number of days for such Tax period included in the Pre-Closing Period and the denominator of which is the total number of days in such Tax period.

7.03 Preparation of Tax Returns.

(a) With respect to each Tax Return covering a Straddle Period which is required to be filed for, by, on behalf of or with respect to the Company after the Closing Date, Buyer (i) shall cause to be prepared each such Tax Return and (ii) shall determine the portion of the Taxes shown as due on such Tax Return that is allocable to a Pre-Closing Period, which determination shall be set

forth in a statement ("***Statement***") prepared by Buyer. Buyer shall deliver a copy of such Tax Return and the Statement related thereto to Seller at least ten (10) days prior to the due date (including any extension thereof) for filing such Tax Return.

(b) In the case of each Tax Return described in Section 7.03(a), not later five (5) days before the due date for payment of Taxes with respect to such Tax Return, Seller shall pay to Buyer an amount equal to the total amount of Taxes reflected on the Statement which are the responsibility of Seller under Section 7.01.

7.04 Tax Contests.

(a) If a Tax Indemnitee receives any written or oral communication with respect to any question, adjustment, assessment or pending or threatened audit, examination, investigation, or administrative, court or other proceeding which, if pursued successfully, could result in or give rise to, or could reasonably be expected to result in or give rise to, a claim for indemnification of such Tax Indemnitee with respect to any Tax described in Section 7.01 (a "***Tax Claim***"), then such Tax Indemnitee shall promptly notify the Seller in writing of such Tax Claim.

(b) The Tax Indemnitee shall have the right to control the defense, prosecution, settlement or compromise of the Tax Claim, and the Seller shall take such action in connection with contesting such Tax Claim as the Tax Indemnitee shall reasonably request in writing from time to time.

(c) Seller shall reimburse the Tax Indemnitee for: (A) 60% of its costs (including accountant's fees, investigatory fees and fees and disbursements of tax counsel) ("***Indemnification Expenses***") incurred in contesting any Tax Claim for items described in Section 7.01(a) and (B) 100% of its Indemnification Expenses incurred in contesting any Tax Claim for Taxes described in Section 7.01(b). The Tax Indemnitee shall provide the Seller with a written statement (a "***Reimbursement Statement***") periodically (but not more often than monthly) that sets forth the amount of the Tax Indemnitee's Indemnification Expenses since the most recent Reimbursement Statement and due hereunder. Within fifteen (15) days of the Seller's receipt of each Reimbursement Statement, the Seller shall pay to the Tax Indemnitee in immediately available funds the total amount of the Indemnification Expenses shown on such Reimbursement Statement.

(d) Promptly after a Final Determination of a Tax Claim, the Seller shall pay to the Tax Indemnitee in immediately available funds the amount of any Taxes and the Indemnification Expenses to which the Tax Indemnitee is entitled under the provisions of this Article VII.

7.05 Cooperation. In connection with preparation of any Tax Return or contesting a Tax Claim, Seller shall cooperate with the Buyer (or any Tax Indemnitee) in good faith in the preparation of such Tax Return or in order to contest effectively any such Tax Claim. Seller shall grant or cause to be granted to Buyer or its representatives access at all reasonable times to all of the information, books and records relating to the Company within Seller's possession or control (including, without limitation, Tax work papers, Tax Returns and correspondence with Tax Authorities), including the

right to take extracts therefrom and make copies thereof to the extent reasonably necessary in connection with Taxes and shall furnish the assistance and cooperation of such personnel of the Seller as Buyer may reasonably request in connection therewith.

7.06 Nature of Payments. Buyer and Seller agree that any indemnity payments made pursuant to this Agreement shall constitute an adjustment to the Purchase Price.

7.07 Survival. Notwithstanding any provision of this Agreement to the contrary, the Seller's representations, warranties, covenants, agreements and obligations with respect to any Tax covered by this Agreement shall survive the Closing and shall not terminate until 20 calendar days after the expiration of all statutes of limitations (including any and all extensions thereof) applicable to such Tax or the assessment thereof.

7.08 Tax Consequences of Purchase and Sale. For U.S. federal income tax purposes, Buyer and Seller agree and consent to treat the purchase of the Seller Shares as a transaction governed by Rev. Rul. 99-6,1999-1 C.B. 432 (Situation 1). Buyer and Seller shall report, act and file their U.S. federal income tax returns in all respects and for all purposes consistent with such intent and treatment. Neither Buyer nor Seller shall take any position, whether in any Tax Return, audit, examination, claim, adjustment, litigation or other proceeding with respect to any Tax, which is inconsistent with such intent and treatment, unless required to do so by Applicable Law.

7.09 Conflict. In the event of a conflict between the provisions of this Article VII and any other provisions of this Agreement, the provisions of this Article VII shall control.

ARTICLE VIII

INDEMNIFICATION; SURVIVAL

8.01 Indemnification.

(a) Indemnification by Seller. Seller agrees to indemnify, hold harmless and defend Buyer, its Affiliates, the Company and their respective stockholders, members, owners, agents, officers, directors, partners, employees, servants, consultants, representatives, successors and assigns (collectively called "***Buyer Indemnified Parties***") from and against any and all claims or Damages (whether based on negligent acts or omissions, statutory liability, strict liability or otherwise) asserted against or incurred by any Buyer Indemnified Party, to the extent arising out of the following:

(i) To the extent not Known to Buyer as of the Closing Date, any inaccuracy or breach of any representation or warranty of Seller contained in this Agreement, the Related Agreements or any certificate delivered pursuant hereto and made on or as of the Closing Date; and

(ii) Any breach of any covenant or agreement of Seller contained in this Agreement or the Related Agreements.

(b) Indemnification by Buyer. Buyer agrees to indemnify, hold harmless and defend Seller and its Affiliates and their respective stockholders, members, owners, agents, officers, directors, partners, employees, servants, consultants, representatives, successors and assigns (collectively called "***Seller Indemnified Parties***") from and against any and all claims or Damages (whether based on negligent acts or omissions, statutory liability, strict liability or otherwise) asserted against or incurred by any Seller Indemnified Party, to the extent arising out of the following:

(i) To the extent not Known to Seller as of the Closing Date, any inaccuracy or breach of any representation or warranty of Buyer contained in this Agreement, the Related Agreements or any certificate delivered pursuant hereto and made on or as of the Closing Date; and

(ii) Any breach of any covenant or agreement of Buyer contained in this Agreement or the Related Agreements.

8.02 Limitations on Indemnification.

(a) The following limitations shall apply with regard to Seller's obligations to indemnify the Buyer Indemnified Parties pursuant to Section 8.01(a)(i):

(i) Seller's liability to indemnify pursuant to Section 8.01(a)(i) for any breach by Seller of any of its representations or warranties herein shall never exceed, in the aggregate, an amount equal to One Million Three Hundred Thousand Dollars ($1,300,000); *provided*, *however*, such limitation on Seller's indemnification obligations shall not apply to Damages resulting from (y) any breach or default by Seller of Sections 3.01, 3.02, 3.03, 3.04(b), or 3.07 or (z) fraud or willful misconduct by Seller in the negotiation or execution of this Agreement.

(ii) Seller will not have any liability for any Damages for any breach by Seller of any of its representations or warranties herein unless and until the aggregate Damages for which the Buyer Indemnified Parties are entitled to recover under this Agreement and the Related Agreements for any breach by Seller of any of its representations or warranties contained herein or therein, exceeds in the aggregate an amount equal to Five Thousand Dollars ($5,000) (the "***Seller Threshold Amount***"); *provided*, *however*, once such amounts exceed the Seller Threshold Amount, the Buyer Indemnified Parties will be entitled to recover all such Damages to which they are entitled including expenditures incurred to reach the Seller Threshold Amount.

(b) The following limitations shall apply with regard to Buyer's obligations to indemnify the Seller Indemnified Parties pursuant to Section 8.01(b)(i):

(i) Buyer's liability to indemnify pursuant to Section 8.01(b)(i) for any breach by Buyer of any of its representations or warranties herein shall never exceed, in the

aggregate, an amount equal to One Million Three Hundred Thousand Dollars ($1,300,000); *provided*, *however*, such limit on Buyer's indemnification obligations shall not apply to Damages resulting from (y) any breach or default by Buyer of Sections 5.01, 5.02 or 5.03 or (z) fraud or willful misconduct by Buyer in f the negotiation or execution of this Agreement.

(ii) Buyer will not have any liability for any Damages for any breach by Buyer of any of its representations or warranties herein unless and until the aggregate Damages for which the Seller Indemnified Parties are entitled to recover exceeds an amount equal to Five Thousand Dollars ($5,000) (the "***Buyer Threshold Amounts***"), *provided*, *however*, once such amounts exceed the Buyer Threshold Amount, the Seller Indemnified Parties will be entitled to recover all such Damages to which they are entitled including expenditures incurred to reach the Buyer Threshold Amount.

8.03 Survival. The representations and warranties of Seller and Buyer contained in this Agreement shall survive the Closing for a period of eighteen (18) months after the Closing Date except for written claims that are made prior to such date. Notwithstanding the preceding sentence to the contrary, the representations and warranties with respect to (i) Sections 3.01, 3.02, 3.03, 3.04(b), 3.07, 5.01, 5.02 or 5.03 shall continue and be in effect after the Closing Date without any time limitation and (ii) Sections 3.10 and 4.14 and Article VII until twenty (20) calendar days after the expiration of the applicable statute of limitations with respect to such matters.

8.04 Notification and Third Party Claims. Within thirty (30) days following the determination thereof, an Indemnified Party shall give the Indemnifying Party written notice of any matter that an Indemnified Party has determined has given or could give rise to a right of indemnification under this Agreement, stating the amount of the Damage, if known, and method of computation thereof, all with reasonable particularity and containing a reference to the provisions of this Agreement in respect of which such right of indemnification is claimed or arises ("***Claim Notice***"), provided that the failure of the Indemnified Party to provide such thirty (30) day notice shall only relieve the Indemnifying Party of its obligation to indemnify the Indemnified Party to the extent that the Indemnifying Party is actually prejudiced by such failure. Any Claim between the Parties not resolved within this thirty (30) day period shall be handled pursuant to the dispute resolution provisions set forth in Article IX. The obligations and liabilities of an Indemnifying Party under this Article VIII with respect to Damages arising from claims of any third party that are subject to the indemnification provisions of this Article VIII ("***Third Party Claims***") shall be governed by and contingent upon the following additional terms and conditions:

(a) Within fifteen (15) days of the receipt of a Claim Notice of a Third Party Claim, the Indemnifying Party shall notify the Indemnified Party whether the Indemnifying Party elects to defend such Third Party Claim. If the Indemnifying Party so elects, it shall undertake the defense thereof by counsel of its own choosing, which counsel shall be reasonably satisfactory to the Indemnified Party; provided that if, in the Indemnified Party's and the Indemnifying Party's reasonable judgment, a legal conflict of interest exists between the Indemnified Party and the Indemnifying Party with respect to such Third Party Claim, or if the Indemnifying Party elects not to defend such Third Party Claim, or if the Indemnifying Party fails to notify the Indemnified Party

within the fifteen (15) day notice period that it elects to defend such Claim, such Indemnified Party shall be entitled to select reasonable counsel of its own choosing, in which event the Indemnifying Party shall be obligated to pay the reasonable fees and expenses of such counsel to the extent that the Indemnifying Party is finally determined to be obligated to indemnify the Indemnified Party under this Agreement. The Claim Notice of the Third Party Claim by the Indemnified Party shall contain all material information known to the Indemnified Party with respect to the Third Party Claim and shall include copies of materials submitted to the Indemnified Party by the relevant third party with respect to the Third Party Claim.

(b) If the Indemnifying Party refuses or fails at any time to defend the Indemnified Party against any Third Party Claim, the Indemnified Party shall have the right to undertake the defense, and to compromise or settle such Third Party Claim on behalf of and for the account and at the risk of the Indemnifying Party to the extent that the Indemnifying Party is finally determined to be obligated to indemnify the Indemnified Party under this Agreement with respect to such Third Party Claim.

(c) If the Indemnifying Party elects to undertake and diligently pursues the defense of a Third Party Claim hereunder, the Indemnifying Party shall control all aspects of the defense and if the indemnifying Party acknowledges in writing its duty to provide full indemnification to the Indemnified Party regarding such Third Party Claim, the Indemnifying Party may enter into a settlement of such Third Party Claim and may settle, compromise or enter into a judgment with respect to such Third Party Claim; provided that the Indemnifying Party shall not enter into any such settlement, compromise or judgment without the prior written consent of the Indemnified Party if it would result in the imposition of any non-monetary liability or obligation on the Indemnified Party. Unless the Indemnified Party undertakes the defense of a Third Party Claim pursuant to Subsection (b) hereof, it shall not settle, compromise or enter into any judgment with respect to a Third Party Claim for which it is seeking or shall seek indemnification hereunder without the prior written consent of the Indemnifying Party, that shall not be unreasonably withheld, conditioned or delayed.

(d) If the Indemnifying Party elects to undertake and diligently pursues the defense of a Third Party Claim hereunder, the Indemnified Party shall provide the Indemnifying Party with access to all reasonably requested witnesses, records and documents of the Indemnified Party relating to any Third Party Claim.

(e) The Indemnified Party may participate in the defense of any Third Party Claim at its own expense.

8.05 Coordination of Indemnification Rights.

(a) A Claim Notice in connection with any Section of this Article VIII shall be deemed to be a Claim Notice in connection with all Sections of this Article VIII, pursuant to which the Person asserting such claim has any right to be indemnified, defended or held harmless.

(b) In the event that an Indemnified Party has a right of recovery against any third party with respect to any Damages in connection with which a payment is made to such Indemnified Party by an Indemnifying Party; then (i) such Indemnifying Party shall, to the extent of such payment, be subrogated to all of the rights of recovery of such Indemnified Party against such third party with respect to such Damages; and (ii) such Indemnified Party shall execute all such documents as are necessary to enable such Indemnifying Party to bring suit to enforce such right.

(c) An Indemnified Party shall take all commercially reasonable steps to mitigate damages in respect of any claim for which it is seeking indemnification and shall use commercially reasonable efforts to avoid any costs or expenses associated with such claim and, if such costs and expenses cannot be avoided, to minimize the amount thereof

(d) Except as provided in Section 7.09, in the event of any conflict between this Article VIII and any other provisions of this Agreement or the Related Agreements, this Article VIII shall prevail.

8.06 Right to Cure. Any Party that is obligated to indemnify, defend or hold harmless any Person pursuant to any provision of this Article VIII shall have the right to cure, within a reasonable time, not to exceed thirty (30) days after receipt of written notice, and in a manner reasonably satisfactory to such Person, any matter giving rise to such obligation; *provided*, *however*, that any such cure shall not relieve or reduce any such obligation to the extent that such cure is inadequate.

ARTICLE IX

DISPUTE RESOLUTION

9.01 Negotiation. The Parties shall attempt in good faith to resolve any dispute, Claim, or controversy arising out of or relating to this Agreement, the Related Agreements or the performance, breach, validity, interpretation, application, or termination thereof (a "***Dispute***") whether based on contract, tort, statute or other legal or equitable theory (including any claim of fraud, misrepresentation or fraudulent inducement or any question of validity or effect of this Agreement including this section) promptly by negotiations between executives of each Party who have authority to settle the controversy. Any Party may give the other parties written notice of any Dispute not resolved in the normal course of business (a "***Notice of Dispute***"). Within five (5) days after the effective date of a Notice of Dispute, executives of the Parties shall agree upon a mutually acceptable time and place to meet and shall meet at that time and place, and thereafter as often as they reasonably deem necessary, to exchange relevant information and to attempt to resolve the Dispute. The first of those meetings shall take place within thirty (30) days of delivery of the disputing Party's Notice of Dispute. If the Dispute has not been resolved within sixty (60) days of delivery of the Notice of Dispute, or if the Parties fail to agree on a time and place for an initial meeting within five (5) days of that notice, any Party may initiate arbitration of the controversy or claim as provided hereinafter. If any negotiator intends to be accompanied at a meeting by an

attorney, the other negotiators shall be given at least three (3) Business Days' notice of that intention and may also be accompanied by an attorney. All negotiations pursuant to this Section 9.01 shall be treated as compromise and settlement negotiations for the purposes of applicable rules of evidence and procedure.

9.02 Arbitration. Any Dispute that has not been resolved in a manner acceptable to all Parties by non-binding procedures as provided in Section 9.01 within sixty (60) days of delivery of the Notice of Dispute, shall be finally settled by arbitration conducted expeditiously in accordance this Agreement and the American Arbitration Association ("***AAA***") arbitration rules for commercial disputes applying expedited procedures, as in effect on the date hereof (the "***Rules***") and judgment on the award may be entered in any court having jurisdiction thereof; provided that if one Party has requested the other parties to participate in a non-binding procedure and the other parties have failed to participate, the requesting Party may initiate arbitration before the expiration of me period.

9.03 Arbitration Proceeding. Any Dispute shall be referred to and determined by binding arbitration, as the sole and exclusive remedy of the parties as to the Dispute conducted in accordance with the Rules, which are incorporated by reference, except that in the event of any conflict between those rules and the arbitration provisions set forth below, the provisions set forth below shall govern and control. The arbitral tribunal (the "***Tribunal***") shall use the substantive laws of the State of Delaware, excluding conflicts of laws and choice of law principles, in construing and interpreting the terms of this Agreement. The Tribunal shall be composed of three (3) arbitrators, with Seller appointing one (1) arbitrator and Buyer appointing one (1) arbitrator, and the two (2) arbitrators so appointed appointing the third arbitrator who shall act as the presiding arbitrator of the Tribunal (the "***Chairman***"). The arbitrators selected shall be qualified by education, training, and experience to hear and determine matters in the nature of the Dispute. The arbitrators shall be bound by and shall follow the then current ABA/AAA Rules of Ethics for Arbitrators. The language of the arbitration, the submission of all writings, the decision of the Tribunal, and the reasons supporting such decision shall be in English. The arbitration shall be held in Washington, D.C., and the proceedings shall be conducted and concluded as soon as reasonably practicable, based upon the schedule established by the Tribunal, but in any event the award of the Tribunal shall be rendered within one hundred twenty (120) days following the selection of the Chairman of the Tribunal. Any monetary award shall be made in U.S. Dollars, and shall include interest from the date of any breach or other violation of the Agreement to the date paid in full at a per annum rate equal to the Prime Rate on the date one Business Day prior to the date of such award. The award of the Tribunal pursuant hereto shall be final and binding upon the Parties, and judgment upon the award rendered by the Tribunal pursuant hereto may be entered in, and enforced by, any court of competent jurisdiction. Each Party shall bear the expense of the arbitrator specified to be selected by it, and the fees of the Chairman of the Tribunal and other expenses incurred by the Tribunal shall be borne by the losing Party, unless the Tribunal shall determine that fairness requires that such fees and expenses be allocated among the Parties in a different manner, including requiring the losing Party to pay all such expenses. Each Party shall bear its own expenses, including expenses of its counsel. Any attorney-client privilege and other protection against disclosure of privileged or confidential information, including any protection afforded the work-product of any attorney, that could otherwise be claimed by any Party shall be available to, and may be claimed by, any such Party in

any arbitration proceeding. No Party waives any attorney-client privilege or any other protection against disclosure of privileged or confidential information by reason of anything contained in, or done pursuant to, the arbitration provisions hereof. It is the desire of the Parties that any Dispute be resolved quickly and at the lowest possible cost, and the Tribunal shall act in a manner consistent with these intentions, including limiting discovery to only that necessary to enable the Tribunal to render a fair decision that reflects the Parties' intent set forth in this Agreement.

9.04 Consent to Jurisdiction. The Parties hereby consent to the non-exclusive jurisdiction of the state or federal courts of Delaware for the enforcement of any award rendered by the Tribunal.

9.05 Confidentiality. Unless the Parties agree otherwise, the Parties, the arbitrator(s), and the AAA shall treat the dispute resolution proceedings provided for herein, any related disclosures, and the decisions of the Tribunal, as confidential, except in connection with judicial proceedings ancillary to the dispute resolution proceedings, such as a judicial challenge to, or enforcement of, the arbitral award, and unless otherwise required by law to protect a legal right of a Party.

9.06 Joinder. If more than one Dispute exists, the Parties agree that any negotiation pursuant to Section 9.01 and any arbitration proceeding pursuant to Section 9.02 shall address all existing disputes to the extent possible, hi addition, each Party shall, and shall use its best efforts to cause each of its Affiliates that is party to a Related Agreement to, become subject to and bound by any resolution achieved or award rendered pursuant to this Article IX in respect of any dispute arising out of or relating to this Agreement or any Related Agreement; *provided*, *however*, that no Party shall become subject to and bound by any resolution achieved or award rendered unless it was provided the opportunity to participate in such negotiation or arbitration.

9.07 Survival. The terms of this Article IX shall survive the Closing.

ARTICLE X

MISCELLANEOUS

10.01 Entire Agreement; Amendments. This Agreement and the Related Agreements, including their Exhibits and Schedules, and other writings referred to herein or delivered pursuant hereto which form a part hereof contain the entire understanding of the Parties with respect to the subject matter hereof. There are no restrictions, agreements, promises, warranties, covenants, or undertakings other than those expressly set forth herein or therein. This Agreement and the Related Agreements supersede any and all prior agreements and understandings between the Parties with respect to the subject matter hereof including the provisions of that certain letter agreement dated October 27, 2004 by and between Seller and Buyer. This Agreement shall not be amended, altered, or modified except by an instrument in writing duly executed by the Parties.

10.02 Business Day Actions. No action shall be required of the Parties except on a Business Day and in the event an action is required on a day that is not a Business Day, such action shall be required to be performed on the next succeeding day which is a Business Day.

10.03 Invalidity. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future laws, such provision shall be fully severable; this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part of this Agreement; and the remaining provisions of this Agreement shall remain in full force and effect, unaffected by the illegal, invalid or unenforceable provision or by its severance from this Agreement. In lieu of such illegal, invalid, or unenforceable provision, there shall be added automatically as a part of this Agreement a provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.

10.04 Joint Drafting. The Parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Parties and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of the authorship of any of the provisions of this Agreement.

10.05 Effect of Waiver or Consent. No waiver or consent, express or implied, by any Party to or of any breach or default by any other Party in the performance by such other Party of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other or subsequent breach or default in the performance by such other Party of the same or any other obligations of such other Party hereunder. Failure on the part of a Party to exercise its rights or to complain of any act of the other Party or to declare the other Party in default, irrespective of how long such failure continues, shall not constitute a waiver by such Party of its rights hereunder until the applicable statute of limitation period has run.

10.06 Limitation on Benefits of this Agreement. No person or entity other than the Parties (or their respective successors or assigns as permitted hereunder) is or shall be entitled to bring any action to enforce any provision of this Agreement against either of the Parties, and the covenants, undertakings, and agreements set forth in this Agreement shall be solely for the benefit of, and shall be enforceable only by, the Parties (or their respective successors and assigns as permitted hereunder). Notwithstanding the preceding to the contrary, the Company shall be a third party beneficiary to this Agreement to the extent the provisions herein apply to the Company.

10.07 Notices. All notices, requests, demands and other communications made in connection with this Agreement shall be in writing and shall be deemed to have been duly given on the date delivered, if delivered personally, by reputable overnight delivery service that requires a signature on delivery or sent by facsimile machine with telephonic confirmation of receipt to the Persons identified below, or three (3) Business Days after mailing in the U.S. Mail if mailed by certified or registered mail, postage prepaid, return receipt requested, addressed as follows:

(i) If to Seller:

Luna Innovations Incorporated
2851 Commerce Street
Blacksburg, VA 24060
Attn: Kent Murphy, Ph.D.
Tel: (540) 552-5128
Fax: (540) 951-0760

with a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati, P.C.
Two Fountain Square, Reston Town Center
11921 Freedom Drive, Suite 600
Reston, Virginia 20190-56340
Attn: Trevor J. Chaplick, Esq.
Tel: (703) 734-3100
Fax: (703) 734-3199

(ii) If to Buyer:

Baker Hughes Oilfield Operations, Inc.
3900 Essex Lane, 12th Floor
Houston, Texas 77027
Attn: Vice President, Business Development
Tel: (713) 439-8156
Fax: (713) 439-8750

with a copy (which shall not constitute notice) to:

Baker Hughes Incorporated
3900 Essex Lane, 12th Floor Houston,
Texas 77027
Attn: Corporate Counsel
Tel: (713) 439-8543
Fax: (713) 439-8472

Each Party may designate by prior notice in writing a new address to which any notice, demand, request, or communication may thereafter be so given, served, or sent.

10.08 Binding Effect. Subject to the provisions hereof restricting assignment, this Agreement shall be binding upon and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

10.09 Additional Actions and Documents. Each of the Parties hereby agrees to take or cause to be taken such further actions to execute, deliver and file or cause to be executed, delivered and filed such farther documents and instruments, and to use all reasonable efforts to obtain such

consents, as may be necessary or as may be reasonably requested in order to fully effectuate the purposes, terms and conditions of this Agreement, whether before, at or after the closing of transactions contemplated by this Agreement, provided that neither Party shall be obligated to make payments or incur obligations to third Parties or governmental agencies in connection therewith except to pay such Party's reasonable expenses or to pay normal fees to governmental agencies.

10.10 Choice of Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles of Delaware, and applicable United States federal law.

10.11 Publicity. Seller and Buyer shall, and shall use their reasonable efforts to cause their Affiliates to, cooperate in the development and distribution of all news releases and other public disclosures relating to the transactions described in this Agreement, and to ensure that no such releases or disclosures are made without prior notice to, and the consent of, the other Party; *provided, however*, that no news release or other public disclosure whatsoever may disclose the terms of this Agreement unless both Parties agree to the form and content of such disclosure, each being under no obligation to agree and having the right to withhold agreement for any reason; *provided*, *however*, that either Party may make all public disclosures which, in the written opinion of counsel, are required under applicable regulations of the Securities and Exchange Commission with such Party giving the other Party as much advance notice thereof as is feasible.

10.12 Costs and Expenses. All expenses incident to the transaction contemplated by this Agreement will be borne exclusively by the Party making the expenditure or incurring the expense for such Party or on its behalf, including any expenses incurred prior to the date hereof other than expenses properly incurred on behalf of the Company including but not limited to a maximum of $15,000 in legal fees and expenses incurred in connection with the bridge loan from Buyer to Company. Subject to the foregoing, all invoices and expenses of Wilson Sonsini Goodrich & Rosati not appropriately billed and outstanding as a liability of the Company as of October 27, 2004 will be borne exclusively by Seller and not by the Company.

10.13 Assignment. Seller may upon notice to Buyer transfer or assign any of its rights but not directly or indirectly its obligations under this Agreement without prior consent of Buyer, provided that, Seller may, assign its rights and obligations under this Agreement to an Affiliate of Seller upon delivery of a guaranty from Seller to Buyer, in form reasonably satisfactory to Buyer. Even if consent is obtained, no Party may make an assignment or delegation unless such Party delivers to the other Party such written assumptions, affirmations or legal opinions as such other Party may reasonably request to preserve their rights and remedies hereunder. Notwithstanding anything contained in this Agreement or the Related Agreements to the contrary, the obligations of any Indemnifying Party to indemnify, hold harmless and defend pursuant to this Agreement shall not be assignable in whole or in part without the prior written consent of the Indemnifying Party.

10.14 Confidentiality.

(a) *Company and Buyer Confidential Information*.

(i) Seller acknowledges that the information and material, in whatever form, including this Agreement and the Related Agreements relating to the Company and Buyer and its Affiliates (collectively, the "***Company Confidential Information***") and disclosed or made available to it prior to the Closing Date is confidential. Seller further agrees that it shall use its (and shall cause its Affiliates to use their respective) commercially reasonable efforts not to make or permit disclosure of the Company Confidential Information to any Person, other than their Affiliates and their respective stockholders, members or owners, officers, employees, advisers and representatives to whom such disclosure is necessary. Seller (and its respective Affiliates) shall appropriately notify each officer, employee, adviser and representative to whom any such disclosure is made, that such disclosure is made in confidence and shall be kept in confidence and not to be used in any capacity except for the benefit of the Company.

(ii) Seller agrees to use (and cause its Affiliates to use) diligent efforts in accordance with customary and reasonable commercial practice, and at least with the same degree of skill and care that it would manifest in protection of its own confidential information, to protect the Company Confidential Information.

(iii) Seller agrees to notify Buyer promptly, in the event that Seller or any of its Affiliates becomes aware of the unauthorized possession or use of the Company Confidential Information (or any part thereof) by any third Person, including any of its officers, employees, advisers or representatives. Seller agrees to cooperate (and cause its Affiliates to cooperate) with Buyer in connection with the Buyer's efforts to terminate or prevent such unauthorized possession or use of the Company Confidential Information. Seller shall pay Buyer's reasonable out-of-pocket expenses in so cooperating in protecting the Company Confidential Information, unless the unauthorized possession or use of the Company Confidential Information resulted from the willful misconduct or gross negligence of Buyer.

(b) *Seller Confidential Information*.

(i) Buyer acknowledges that the information and material, in whatever form, including this Agreement and the Related Agreements relating to Seller (collectively, the "***Seller Confidential Information***") and disclosed or made available to it prior to the Closing Date is confidential. Buyer further agrees that it shall use its (and shall cause its Affiliates to use their respective) commercially reasonable efforts not to make or permit disclosure of the Seller Confidential Information to any Person, other than their Affiliates and their respective stockholders, members or owners, officers, employees, advisers and representatives to whom such disclosure is necessary. Buyer (and its respective Affiliates) shall appropriately notify each officer, employee, adviser and representative to whom any such disclosure is made, that such disclosure is made in confidence and shall be kept in confidence and not to be used in any capacity except for the benefit of Seller.

(ii) Buyer agrees to use (and cause its Affiliates to use) diligent efforts in accordance with customary and reasonable commercial practice, and at least with the same degree of

skill and care that it would manifest in protection of its own confidential information, to protect the Seller Confidential Information.

(iii) Buyer agrees to notify Seller promptly, in the event that Buyer or any of its Affiliates becomes aware of the unauthorized possession or use of the Seller Confidential Information (or any part thereof) by any third Person, including any of its officers, employees, advisers or representatives. Buyer agrees to cooperate (and cause its Affiliates to cooperate) with Seller in connection with Seller's efforts to terminate or prevent such unauthorized possession or use of the Seller Confidential Information. Buyer shall pay Seller's reasonable out-of-pocket expenses in so cooperating in protecting the Seller Confidential Information, unless the unauthorized possession or use of the Seller Confidential Information resulted from the willful misconduct or gross negligence of Seller.

(c) Each of Seller and Buyer (and their respective Affiliates) acknowledges that the other will suffer injury for which the other will not have an adequate remedy at law, in the event of a breach of the provisions of this Section 10.14, and that the other shall be entitled to injunctive relief as is reasonably necessary to prevent or curtail such breach, whether actual or threatened; provided, that, in no event (including a willful breach of this Agreement by Seller or Buyer, respectively) shall Seller or Buyer (or their respective Affiliates) be prevented from exercising all of the rights granted to it hereunder.

(d) The provisions of this Section 10.14 shall remain hi force for a period of seven (7) years from the Closing Date.

(e) At the request of Buyer, Seller shall within twenty (20) days after receiving such request return to Buyer or the Company all written Company Confidential Information including all photocopies of the same.

(f) Notwithstanding anything to the contrary in this Section 10.14, in the event there is any conflict between the terms of this Section 10.14 and the confidentiality terms of any other agreement entered into between Buyer and Seller with respect to Seller Confidential Information, the terms of such other agreement shall control.

10.15 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original but which together will constitute one and the same instrument.

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IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officers or representatives of Buyer and Seller as of the day and year first above written.

SELLER:

LUNA INNOVATIONS INCORPORATED

By: _____

Name:
Title:

BUYER:

BAKER HUGHES OILFIELD OPERATIONS, INC.

By: _____

Name:
Title:

IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officers or representatives of Buyer and Seller as of the day and year first above written.

SELLER:

LUNA INNOVATIONS INCORPORATED

By: _____

Name:
Title:

BUYER:

BAKER HUGHES OILFIELD OPERATIONS, INC.

By: _____

Name:
Title:

Exhibit 10.33

SHARE PURCHASE AND ASSET TRANSFER AGREEMENT

By and Among

IHS ENERGY GROUP, INC.
As Purchaser,

IHS ENERGY INNOVATIONS, INC.

and

LUNA INNOVATIONS INCORPORATED
Kent A. Murphy
Kenneth D. Ferris
Roberta Denise Couch
Walter Daub
Robert L. Martinet
Michael F. Gunther
Robert Harman

As Sellers

Dated October 1, 2003

SHARE PURCHASE AND ASSET TRANSFER AGREEMENT

THIS SHARE PURCHASE AND ASSET TRANSFER AGREEMENT (this "**Agreement**"), is made and entered into as of October 1, 2003, by and among IHS Energy Group Inc., a Delaware corporation (the "**Purchaser**"), IHS Energy Innovations, Inc., a Colorado corporation and wholly-owned subsidiary of Purchaser ("**IHS Sub**"), and each of Luna Innovations Incorporated, a Delaware corporation ("**Luna Innovations**"), Kent A. Murphy ("**Murphy**"), Kenneth D. Ferris ("**Ferris**"), Roberta Denise Couch, Walter Daub, Robert L. Martinet, Michael F. Gunther and Robert Harman (each, a "**Seller**," and collectively, the "**Sellers**").

WHEREAS, the Sellers are the owners and holders of all of the issued and outstanding capital stock of Luna i–Monitoring Inc., a Delaware corporation ("the **Company**"), with each Seller owning that number of shares of Common Stock, par value $0.0001 per share, of the Company (the "**Common Stock**") as is set forth opposite each such Seller's name on Schedule 1(a) hereto;

WHEREAS, the Sellers desire to sell to the Purchaser, and the Purchaser desires to purchase from the Sellers, all of the Securities (as hereinafter defined), on the terms and subject to the conditions contained in this Agreement;

WHEREAS, Luna Innovations owns and/or has licenses to all of the i–Monitoring Intellectual Property (as defined in Article I below);

WHEREAS, Luna Innovations wishes to grant to the Company, and the Company wishes to receive, a non-exclusive license to Company Licensed Sensor IP (as defined in Article I below);

WHEREAS, Luna Innovations wishes to sell, transfer, grant, assign and convey (the "**Transfer**") to IHS Sub, and IHS Sub wishes to receive, accept and assume, all of Luna Innovations' claims, right, title and interest in and to the Purchaser Transferred Property (as defined in Article I below);

WHEREAS, in consideration of the Transfer by Luna Innovations of the Purchaser Transferred Property to IHS Sub pursuant to Purchaser Transfer Documents (as defined in Article I below), the Sellers desire that 56.83% of the Net Proceeds (as defined in Article I below) be allocated to Luna Innovations in accordance with Section 2.1(b) hereof; and

NOW, THEREFORE, in consideration of the mutual agreements hereinafter contained, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS

As used in this Agreement, the following terms shall have the meanings set forth below:

"**Adjusted Net Proceeds**" means the product of 1.5 and the aggregate amount of Net Proceeds (as defined below).

"**Assigned IP**" shall mean all rights and assets assigned by Luna Innovations to IHS Sub pursuant to the Intellectual Property Assignment, including the Intellectual Property Rights of Luna Innovations assigned thereunder.

"**Closing Creditors**" shall mean (i) Luna Innovations, (ii) the Company's legal counsel in connection with this Agreement and the transactions contemplated hereby, and (iii) WWC (as defined below).

"**Company Entities**" means the Company and all of its subsidiaries, if any, and any successor entities of the foregoing.

"**Company Licensed Sensor IP**" shall mean all rights licensed by Luna Innovations to Company pursuant to the Non-Exclusive Intellectual Property License Agreement, including the Intellectual Property Rights of Luna Innovations licensed thereunder.

"**Company Material Adverse Effect**" means any event, occurrence, fact, condition, change or effect that is materially adverse to the assets, business, operations, prospects, condition (financial or otherwise) or results of operations of the Company, or that questions the validity of this Agreement or any of the other Transaction Documents to be delivered by Sellers, or the right of Sellers to enter into such Transaction Documents or to consummate the transactions contemplated hereby and thereby.

"**Company Products**" means all wireless sensing devices, wireless sensing device technology, and all elements of any of the foregoing, developed and/or currently under development, solely or jointly with a third party, by the Company prior to the Closing Date (or on behalf of the Company and/or Luna Innovations by the i–Monitoring Employees prior to the Closing Date), as set forth on Schedule 2(a) hereto.

"**Direct Manufacturing Cost**" means any direct costs, expenses or expenditures incurred by the Company Entities and the Purchaser Entities in the manufacture of Wireless Sensing Products, including, without limitation, materials, subcontract assembly testing, shipping, quality assurance and configuration. To the extent the manufacture of Wireless Sensing Products is not outsourced to a third party, Direct Manufacturing Cost shall also include any overhead charges reasonably allocated to labor, plant and equipment costs directly associated with the manufacture, testing, shipping, quality control and configuration of Wireless Sensing Products.

"**Exclusive Intellectual Property License Agreement**" means the Exclusive Intellectual Property License Agreement dated as of the Closing Date between Luna Innovations and IHS Sub, in the form attached hereto as Exhibit A.

"**Governmental Entity**" means any domestic or foreign federal, state, municipal, local or other governmental or multi-national body, or any subdivision, agency, commission or authority thereof, or any quasi-governmental or private body exercising any regulatory or taxing authority thereunder.

"**IHSGI**" means Information Handling Services Group, Inc. and all of its subsidiaries.

"**i–Monitoring Product Failure**" means that the Purchaser Entities have in good faith determined that the wireless sensing devices or wireless sensing device technology, or any element of any of the foregoing, that are material to the Luna i–Monitoring Business and are developed, solely or jointly with a third party, by the Company Entities (or by the i–Monitoring Employees on behalf of the Company or Luna Innovations prior to the Closing Date) or by the Purchaser Entities, and that are sold or licensed on a stand-alone basis or are incorporated into any product that is sold or licensed by the Company Entities or by the Purchaser Entities, are not reasonably commercially viable.

"**i–Monitoring Intellectual Property**" means the wireless sensing devices and technology (including wireless sensing devices and technology under development), including sensors and all hardware, firmware and software designs, and all Intellectual Property Rights of Luna Innovations in and to the i–Monitoring Wireless Sensing Technology (as defined in the Intellectual Property Assignment) and all other rights and assets (other than the Retained Assets (as defined below) and other than such rights to the Licensed Sensor Technology (as defined below) licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates under the Technology Agreement (as defined below)), that are assigned or licensed, as applicable, to IHS Sub or the Company, as applicable, by Luna Innovations pursuant to the LI Transfer Documents (as defined below).

"**including**" means including, without limitation.

"**Intellectual Property Assignment**" means that certain Intellectual Property Assignment, dated as of the Closing Date, between Luna Innovations and IHS Sub, in the form attached hereto as Exhibit B.

"**Intellectual Property Rights**" means all proprietary or other rights throughout the world provided under (i) patent law, including inventions, whether patentable or not, issued patents, applications therefor pending before any relevant authority worldwide, including, without limitation, any additions, continuations, continuations-in-part, divisions, reissues, reexaminations, renewals or extensions based thereon, (ii) copyright law, (iii) trademark and service mark law, (iv) design patent or industrial design law, (v) semi-conductor chip or mask work law, (vi) trade secret or trade dress law, and (vii) any other statutory provisions, common law principle or principle of law under any jurisdiction in the world which provides proprietary or other intellectual property rights.

"**Licensed Sensor Technology**" means the technology listed on Schedule 1(e) to this Agreement.

"**Lien**" means any lien, mortgage, encumbrance, security interest, charge or other similar restriction of any kind.

"**LI Transfer Documents**" means (a) the Intellectual Property Assignment; (b) the Exclusive Intellectual Property License Agreement; and (c) the Non-Exclusive Intellectual Property License Agreement.

"**Luna i–Monitoring Assets**" means all of the rights and assets owned, licensed or used by the Company and Luna Innovations on and as of the Closing Date in connection with the Luna i–Monitoring Business (other than the Retained Assets (as defined in Section 4.12 below) and other than such rights to the Licensed Sensor Technology licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates under the Technology Agreement), including but not limited to, (i) all right, title and interest of Luna Innovations in and to the i–Monitoring Intellectual Property; (ii) all right, title and interest of Luna Innovations and the Company in and to the Company Products; (iii) all associated goodwill of the Company; (iv) all computer and other equipment and other tangible property of the Company set forth on Schedule 2(b) hereto (the "**Tangible Property**"); (v) all contracts of the Company; and (vi) all cash, accounts receivable and prepaid expenses of the Company on and as of the Closing Date.

"**Luna i–Monitoring Business**" means the entire business conducted by the Company on the Closing Date, and conducted on behalf of the Company by Luna Innovations and the i–Monitoring Employees (as defined in Section 4.14(a) hereof) prior to the Closing Date, in connection with the design, development, marketing and/or sale of the Company Products.

"**Net Proceeds**" shall mean One Million Dollars ($1,000,000) less the Transaction Costs (as defined below).

"**Non-Exclusive Intellectual Property License Agreement**" means the Intellectual Property License Agreement dated as of the Closing Date by and between Luna Innovations and the Company, in the form attached hereto as Exhibit C.

"**Person**" means any individual, firm, corporation, partnership, limited liability company, trust, joint venture, Governmental Entity or other entity.

"**Purchaser Entities**" means the Purchaser and all of its subsidiaries (including, without limitation, IHS Sub), IHSGI, and any successor entities of the any of the foregoing.

"**Purchaser Licensed Sensor IP**" shall mean all rights and assets licensed by Luna Innovations to IHS Sub pursuant to the Exclusive Intellectual Property License Agreement, including the Intellectual Property Rights of Luna Innovations licensed thereunder.

"**Purchaser Material Adverse Effect**" means any event, occurrence, fact, condition, change or effect that is materially adverse to the assets, business, operations, prospects, condition (financial or otherwise) or results of operations of Purchaser, or that questions the validity of this Agreement or any of the other Transaction Documents to be delivered by Purchaser, or the right of Purchaser to enter into such Transaction Documents or to consummate the transactions contemplated hereby and thereby.

"**Purchaser Transfer Documents**" means (a) the Intellectual Property Assignment, and (b) the Exclusive Intellectual Property License Agreement.

"**Purchaser Transferred Property**" shall mean the (a) Assigned IP, and (b) Purchaser Licensed Sensor IP.

"**Retained IP Assets**" means any and all Intellectual Property Rights retained by Luna Innovations under any of the LI Transfer Documents.

"**Securities**" means all of the issued and outstanding shares of capital stock of the Company, including all shares of capital stock of the Company issuable upon the exercise of all outstanding stock options and warrants.

"**Tax**" or "**Taxes**" means all income taxes, excise taxes, sales taxes, goods and services taxes, value added taxes, transfer taxes, property taxes, capital taxes, import and customs duties and other governmental charges and assessments, and includes additions by way of penalties, interest, fines and other amounts with respect thereto.

"**Tax Legislation**" means all legislation, statutes, laws, judgments, rules, regulations, interpretation bulletins and releases, orders and decrees of any jurisdiction, domestic or foreign, pursuant to which Taxes are payable.

"**Tax Returns**" means all tax returns required to be filed under the provisions of any applicable Tax Legislation and any tax forms required to be filed, whether in connection with a Tax Return or not, under the provisions of any applicable Tax Legislation.

"**Technology Agreement**" means the Amended and Restated Technology Transfer and License Agreement dated February 19, 2002 by and among Luna Innovations, Baker Hughes Incorporated and Luna Energy, LLC.

"**Transaction Costs**" means all fees, expenses, costs and expenditures incurred by the Company from the Closing Creditors in connection with this Agreement, as determined in good faith by the Board of Directors of the Company, set forth on Schedule 1(b) hereto, which fees, expenses, costs and expenditures may be updated by notice pursuant to Section 2.1(b) prior to the Closing.

"**Transaction Documents**" means this Agreement and all other agreements, instruments, certificates and documents contemplated hereby, including, without limitation, the Intellectual Property Assignment, the Exclusive Intellectual Property License Agreement, the Non-Exclusive Intellectual Property License Agreement, and the Key Employee Agreements (as defined in Section 3.2(a)(vi)).

"**Upstream Petroleum Market**" means the segment of the petroleum industry engaged in the exploration and extraction of oil and/or gas and the delivery to a refinery or other processing point.

"**Wireless Sensing Products**" means (i) all Company Products, and (ii) any wireless sensing devices or wireless sensing device technology, or any element of any of the foregoing, developed on

or after the Closing Date, solely or jointly with a third party, by the Company Entities or by the Purchaser Entities, or licensed or acquired on or after the Closing Date by the Company Entities or the Purchaser Entities, that is sold or licensed on a stand-alone basis or is incorporated into any product that is sold or licensed by the Company Entities or the Purchaser Entities, either directly or indirectly through resellers, distributors, original equipment manufacturers and the like; excluding, however, any alternative, competing wireless sensing devices or wireless sensing device technology that the Company Entities or the Purchaser Entities license, develop or otherwise acquire as a result of and in response to an i–Monitoring Product Failure.

"**WWC**" shall mean WWC Securities, LLC.

ARTICLE II
PURCHASE AND SALE

2.1 Purchase and Sale of Securities and Purchaser Transferred Property.

(a) Purchase and Sale. At the Closing (as defined in Section 3.1 below), on the terms and subject to the conditions of this Agreement, (i) the Sellers shall sell, transfer and deliver to the Purchaser, and the Purchaser shall purchase from the Sellers, the Securities, and (ii) Luna Innovations shall sell, transfer, assign, and convey to IHS Sub, and IHS Sub shall accept and assume from Luna Innovations, in accordance with the terms of the Purchaser Transfer Documents, the Purchaser Transferred Property.

(b) Purchase Price. The aggregate purchase price (the "**Purchase Price**") payable by the Purchaser for the Securities and the Purchaser Transferred Property shall be the sum of (a) an aggregate amount of One Million Dollars ($1,000,000) payable in cash on the Closing Date payable to the following persons in the amounts set forth herein as follows: (i) the amount of the Transaction Costs payable in cash to the Closing Creditors listed on Schedule 1(b) to this Agreement, in accordance with the amount of Transaction Costs set forth opposite each such Closing Creditor's name on Schedule 1(b), as updated by written notice to the Purchaser prior to the Closing Date, (ii) in consideration of the Transfer by Luna Innovations of the Purchaser Transferred Property to IHS Sub, the amount of 56.83% of the Net Proceeds payable to Luna Innovations in cash, and (iii) in consideration of the sale of the Securities to the Purchaser, the amount of 43.17% of the Net Proceeds payable in cash *pro rata* to each Seller listed on Schedule 1(c) to this Agreement in accordance with the percentage of the Net Proceeds set forth opposite each such Seller's name on such Schedule 1(c), plus (b) in further consideration of the sale of the Securities to the Purchaser, as provided in Section 2.2, the Earn-Out Consideration (as defined below) payable, in cash pro rata to each Seller listed on Schedule 1(d) to this Agreement in accordance with Section 2.2(d), based on the percentage of such Earn-Out Consideration set forth opposite the name of each such Seller on such Schedule 1(d).

2.2 Earn-Out Consideration.

(a) The Sellers shall receive contingent additional consideration for the sale of the Securities to Purchaser (the "**Earn-Out Consideration**") as provided in this Section 2.2. The aggregate Earn-Out Consideration shall be an amount equal to ten percent (10%) of the greater of:

(i) all gross revenue (the "**Revenue**") received from the sale, license, servicing or third-party development of any Wireless Sensing Products, or any element thereof, by the Company Entities or the Purchaser Entities during the period commencing on the Closing Date and ending on the fifth (5^{th}) anniversary of the Closing Date (the "**Earn-Out Period**"), or

(ii) the quotient of (A) all Direct Manufacturing Costs incurred in connection with Wireless Sensing Products sold or licensed during the Earn-Out Period, divided by (B) 0.75.

Notwithstanding anything of the foregoing to the contrary, in no event shall the Earn-Out Consideration payable to Sellers exceed nine million dollars ($9,000,000) in the aggregate (the "**Maximum Earn-Out Consideration**").

The parties hereto acknowledge and agree that Revenue and Direct Manufacturing Costs shall be measured in accordance with GAAP (as defined in Section 4.4 below). The Earn-Out Consideration shall be paid quarterly within thirty (30) days of the end of each quarter for each fiscal year during the Earn-Out Period as set forth in Section 2.2(c) below. Purchaser shall act in good faith in connection with marketing, selling and licensing the Wireless Sensing Products, including setting the price, sales terms or licensing terms for such products at fair market value and commercially reasonable terms, including commercially reasonable discounts. The parties hereby acknowledge and agree that the Earn-Out Consideration shall not include any payment based on sales by the Company Entities or the Purchaser Entities, of Purchaser's (or its subsidiary's) product entitled "Field Direct", any database or software products or any other products or services of the Company Entities or Purchaser Entities (other than Wireless Sensing Products or elements thereof) (collectively, the "**Purchaser Products**"), whether made in conjunction with the sale, license or servicing of any Wireless Sensing Products or otherwise; provided, however, that if any Wireless Sensing Product hardware and/or Wireless Sensing Product embedded software is included in any Purchaser Product without a separate charge to the customer for such Wireless Sensing Product hardware and/or Wireless Sensing Product embedded software, credit for such Wireless Sensing Product hardware and/or Wireless Sensing Product embedded software shall be given towards Revenue for purposes of the Earn-Out Consideration on a commercially reasonable basis based on the fair market value of such Wireless Sensing Product hardware and/or Wireless Sensing Product embedded software.

(b) In the event of any transfer, sale, assignment, license or other disposition by the Purchaser or the Purchaser Entities of the Company, of all or substantially all of the assets of the Company, or of the Intellectual Property Rights of the Company, not in connection with any Purchaser Change of Control (as defined below) (each, a "**Company Change of Control**") prior to the end of the Earn-Out Period, then prior to such Company Change of Control, Purchaser shall make appropriate provision or cause appropriate provision to be made so that (i) the Earn-Out Consideration may be calculated and paid following such Company Change of Control, and (ii) Purchaser's obligations under this Section 2.2 and Articles VI and IX are expressly assumed by the acquiring Person; provided, however, Purchaser shall not be relieved of its obligations under this Agreement as a result of such assumption in the event of a breach by the acquiring Person, and Purchaser's obligation to pay the Earn-Out Consideration hereunder shall survive any Company Change of Control in the event of such breach. In the event of a Company Change of Control, or

any subsequent Company Change of Control following acquisition by an acquiring Person (each, a "**Subsequent Company Change of Control**"), the provisions of this Section 2.2(b) shall apply with respect to such Company Change of Control or Subsequent Company Change of Control; provided, however, in the event (i) of a Company Change of Control or a Subsequent Company Change of Control, or (ii) that in connection with any sale of Purchaser, or any transfer, sale, assignment, license or other disposition of all or substantially all of the assets of Purchaser (each, a "**Purchaser Change of Control**") Purchaser, shortly prior to such sale, or any successor or assign of Purchaser, shortly following such sale, elects to make a Business Termination Decision (as defined in Section 6.7 hereof) pursuant to Section 6.7 hereof (a "**Purchaser Change of Control Termination**"), then, Sellers may elect (an "**Earn-Out Election**") in lieu of receiving any further Earn-Out Consideration to receive the payment computed in accordance with the next sentence (the "**Earn-out Election Payment**"). The Earn-Out Election Payment shall be an amount equal to the product of (x) the product of (A) 75%, in the event the Qualifying Election Event occurs during the first year following the Closing Date, (B) 65%, in the event the Qualifying Election Event occurs during the second year following the Closing Date or (C) 50%, in the event the Qualifying Election Event occurs during the remainder of the Earn-Out Period, times the quotient of the Earn-Out Consideration paid to the Sellers for the four Earn-Out Quarters (as defined in Section 2.2(c) below) immediately preceding the Company Change of Control, Subsequent Company Change of Control or Purchaser Change of Control Termination (each, a "**Qualifying Election Event**"), as applicable, divided by 12, times (y) the number of months remaining in the Earn-Out Period; provided, the Earn-Out Election Payment plus the Earn-Out Consideration paid shall in no event exceed the Maximum Earn-Out Consideration. In the event of an Earn-Out Election, the Earn-Out Period shall terminate on the date of the applicable Qualifying Election Event. Purchaser, or any applicable successor or assign of Purchaser, shall provide Sellers with written notice (the "**Purchaser Notice**") of a proposed Qualifying Election Event at least ten (10) days prior to or after the date of such Qualifying Election Event, and shall provide Sellers with reasonable information ("**Change of Control Information**") about the acquiring Person in connection with a Company Change of Control or a Subsequent Company Change of Control, as applicable, so that the Sellers may make a reasonably informed decision with respect to an Earn Out Election; provided, that if such Change of Control Information would involve confidential information, such Change of Control Information shall only be provided to Murphy and Ferris, and Murphy and Ferris execute an appropriate confidentiality agreement. Sellers shall notify Purchaser, or any applicable successor or assign of Purchaser, of their intention to exercise the Earn-Out Election within thirty (30) days of the Purchaser Notice. If the Qualifying Election Event is not consummated or effected, as applicable, the Earn-Out Election shall have no force or effect, and the Sellers shall retain the right to an Earn-Out Election with respect to any subsequent Qualifying Election Event. For purposes of an Earn-Out Election, a vote (a "**Seller Majority Vote**") by Sellers holding a right to receive at least 67% of the Earn-Out Consideration (the "**Seller Majority**") shall be deemed binding on all Sellers. The parties hereto acknowledge and agree that the consideration received by the Purchaser or the Company from any Company Change of Control shall not constitute Revenue or Direct Manufacturing Costs for purposes of Section 2.2(a).

(c) Within thirty (30) days of the end of the fourth fiscal quarter of the fiscal year beginning on December 1, 2002 and ending on November 30, 2003, and within thirty (30) days of the end of each succeeding fiscal quarter for the five fiscal year periods commencing on December 1 of such year and ending on November 30 of such year, up to and including the fiscal year ended

November 30, 2008, the Purchaser shall provide the Sellers with an initial statement of the Company's Revenues and Direct Manufacturing Costs during the preceding fiscal quarter or, in the event that such period does not cover a full fiscal quarter, partial fiscal quarter during the Earn-Out Period (each such fiscal quarter or partial fiscal quarter during the Earn-Out Period, an "**Earn-Out Quarter**") certified by Purchaser's Chief Financial Officer as to the accuracy of such statement (each, a "**Purchaser Statement**"). Purchaser hereby covenants and agrees that it shall maintain the Company's corporate existence, and separate books and records for the Company and the Wireless Sensing Products during the Earn-Out Period, which books and records shall be available for review by the Sellers and their respective accountants and auditors as provided in subsection (f) below.

(d) Together with such Purchaser Statements, the Purchaser shall pay the Sellers the applicable Earn-Out Consideration for such Earn-Out Quarter calculated in accordance with Section 2.2(a) above, payable (i) with respect to the first amount of dollars of Earn-Out Consideration earned up to an aggregate amount equal to the Adjusted Net Proceeds, pro rata to each Seller in accordance with the percentage set forth opposite the name of each Seller under the column "**Seller's Percentage**" in Column A of Schedule 1(d) hereto, and (ii) after payment in full of the Adjusted Net Proceeds pursuant to Section 2.2(d)(i), with respect to any remaining Earn-Out Consideration earned during the Earn-Out Period, pro rata to each Seller in accordance with the percentage set forth opposite the name of each Seller under the column "**Seller's Percentage**" in Column B of Schedule 1(d) hereto.

(e) Payment of the Earn-Out Consideration shall be made by check or, if requested by a Seller, by wire transfer of immediately available funds to an account specified by such Seller.

(f) The Seller Majority shall have the right to appoint a representative (the "**Sellers' Representative**") to audit the Purchaser Statement on an annual basis within forty-five (45) days of the conclusion of the applicable fiscal year during the Earn-Out Period. If Sellers' Representative disagrees with any of the quarterly Purchaser Statements received from Purchaser for the preceding fiscal year, Sellers' Representative (the "**Seller Disputant**", and collectively with Purchaser, the "**Disputants**") shall deliver a reasonably detailed statement (the "**Seller Disputant's Notice**") describing its objections to Purchaser within forty-five (45) days after the later of (i) conclusion of the applicable fiscal year, or (ii) the Sellers' receipt of all four quarterly Purchaser Statements for the preceding fiscal year. In the event the Sellers' Representative fails to provide a Seller Disputant's Notice within such forty-five (45) day period, the Earn-Out Consideration for the applicable fiscal year shall be deemed to be conclusively agreed to by the parties. In the event of any such dispute between the Sellers' Representative, on the one hand, and Purchaser, on the other hand, with respect to the applicable Purchaser Statement(s), or any calculation of Revenues, Direct Manufacturing Costs, or the Earn-Out Consideration for the preceding fiscal year, or any quarter of such fiscal year, the Sellers' Representative and Purchaser shall first use their best efforts to resolve such dispute among themselves. If the Disputants are unable to resolve the dispute within twenty (20) business days of the Seller Disputant's Notice, they agree to submit the dispute to mediation in accordance with the Commercial Mediation Rules of the American Arbitration Association. The Disputants will jointly appoint a mutually acceptable mediator, and shall in good faith make a reasonable effort to resolve the dispute with the assistance of the mediator. If the dispute is not resolved within sixty (60) business days after initiation of the initial attempts at

resolution, such dispute shall be resolved solely and exclusively by binding arbitration in Roanoke, Virginia, under the commercial arbitration rules of the American Arbitration Association (the "**AAA**"). Following the filing by either party of a demand for arbitration with the AAA, the Sellers' Representative, on the one hand, and Purchaser, on the other hand, shall select a single arbitrator and file with the AAA a notice of appointment. The two arbitrators so chosen shall select a third arbitrator who shall act as chairperson of the arbitration. If either Purchaser or the Sellers' Representative have failed to file a notice of appointment designating an arbitrator within fifteen (15) business days following the filing by either party of a demand for arbitration, or should the two arbitrators selected above fail to select a third arbitrator within fifteen (15) business days, then at the request of any party, the President of the AAA shall select an arbitrator to fill the vacant position within fifteen (15) business days of a request by any party. The arbitrators shall commence a hearing on the matter within forty-five (45) calendar days of their appointment and shall continue the proceedings without interruption until all evidence and arguments are presented. The arbitrators shall have the authority to determine all issues regarding the dispute, including arbitrability. The arbitrators shall only interpret and apply the terms and provisions of this Agreement and the Transaction Documents at issue, and shall not change any such terms or provisions and, to the extent practicable, shall, notwithstanding its rules, apply Delaware law to the resolution of legal issues. The arbitrators shall thereafter resolve the dispute, and such resolution shall be final and binding on all Sellers and Purchaser. Purchaser and Sellers' Representative agree to cooperate with the arbitrators to facilitate the speedy resolution of the dispute. The arbitrators shall provide the parties with a written decision within five (5) business days of the adjournment of the hearing and shall set forth the reasoning for such decision. The decision and award (if any) of the arbitrators shall be binding and final, i.e., not subject to appeal by Purchaser or any Seller, or any of their respective successors or assigns, and may be enforced in any court of competent jurisdiction. If the arbitrators find that the claims of either party in such arbitration are not warranted by existing law or by a non-frivolous argument for the extension, modification, or reversal of existing law or the establishment of new law, the arbitrators may award to the prevailing party its reasonable costs and expenses incurred in the arbitration (including legal fees). In all other instances, the fees and expenses of the arbitration panel and the mediator shall be borne one half (1/2) by Purchaser and one half (1/2) by the Sellers' Representative, and each of the parties shall bear their own other fees and expenses (including legal fees) incurred in the arbitration and the mediation; provided, that the Sellers shall share all fees and expenses of the Sellers' Representative on a pro rata basis based on their respective allocation of cash Earn-Out Consideration actually paid to the Sellers.

(g) The Earn-Out Consideration payable pursuant to this Section 2.2 does not constitute compensation for services, but rather constitutes part of the consideration for the Securities purchased by Purchaser under this Agreement and shall be treated as such for all tax purposes.

ARTICLE III
CLOSING; CONDITIONS PRECEDENT TO CLOSING; ITEMS TO BE DELIVERED AT CLOSING

3.1 Closing, Date and Place. The consummation of the purchase and sale of the Securities and Purchaser Transferred Property contemplated hereby (the "**Closing**") will take place at 10:00 a.m. Eastern Standard Time on October 1, 2003, or at such other time on or before the End

Date (as defined in Section 7.1(b) below) as the parties shall mutually agree, at the offices of Wilson Sonsini Goodrich & Rosati, PC, 11921 Freedom Drive, Suite 600, Reston, Virginia 20190. The date upon which the Closing occurs is referred to herein as the "**Closing Date**."

3.2 Conditions Precedent to the Closing.

(a) Conditions Precedent to Purchaser's Obligations. All obligations of Purchaser under this Agreement are subject to the fulfillment or satisfaction, prior to or at the Closing, of each of the following conditions precedent:

(i) Representations and Warranties True as of the Closing Date. The representations and warranties of Sellers contained in this Agreement shall be true and correct in all material respects at and as of the date hereof and at and as of the Closing Date.

(ii) Compliance with this Agreement. Sellers shall have performed and complied with in all material respects all agreements and conditions required by this Agreement to be performed or complied with by them prior to or at the Closing.

(iii) Closing Certificate. Purchaser shall have received a certificate from Luna Innovations and the other Sellers, as applicable, dated the Closing Date, certifying in such detail as Purchaser may reasonably request that the conditions specified in Sections 3.2(a)(i) and 3.2(a)(ii) hereof have been fulfilled by Luna Innovations and the other Sellers, as applicable, and certifying that Luna Innovations and the other Sellers, as applicable, have obtained all consents and approvals required by Section 3.2(a)(iv) hereof (the "**Sellers' Closing Certificate**").

(iv) Consents and Approvals. All consents and approvals to be obtained by Sellers, including, without limitation, the consent or approval of any governmental or regulatory official, body or authority and any governmental, judicial or regulatory official, body or authority having jurisdiction over Sellers to the extent that their consent or approval is required or necessary for the consummation of the transactions contemplated hereby in the manner herein provided, shall have been obtained.

(v) No Threatened or Pending Litigation. On the Closing Date, no suit, action or other proceeding, or injunction or final judgment relating thereto, shall be pending before any court or governmental or regulatory official, body or authority in which it is sought to restrain or prohibit or to obtain damages or other relief in connection with this Agreement or the consummation of the transactions contemplated hereby, and no investigation that might result in any such suit, action or proceeding shall be pending.

(vi) Key Employee Agreements. Each of Kenneth D. Ferris, Robert Harman and Philip Couch (collectively, the "**Key Employees**") shall have executed employment agreements and bonus agreements with the Company, in the forms attached hereto as Exhibits D, E and F, respectively, (collectively, the "**Key Employee Agreements**").

(vii) Approval of Counsel; Corporate Matters. All actions, proceedings, resolutions, instruments and documents required to carry out this Agreement or incidental hereto and all other related legal matters shall have been approved on the Closing Date by the General Counsel

of Purchaser, in the exercise of his reasonable judgment. Sellers shall also have delivered to Purchaser such other documents, instruments, certifications and further assurances as such counsel may reasonably require.

(viii) Opinion of Counsel to the Company. Wilson Sonsini Goodrich & Rosati, P.C., counsel to the Company, shall have delivered to Purchaser a written opinion, dated the Closing Date, in the form of Exhibit G hereto, with only such changes as shall be in form and substance reasonably satisfactory to the Purchaser and its General Counsel (the "**WSGR Opinion**").

(ix) Intellectual Property Assignment. Luna Innovations shall have executed and delivered to IHS Sub the Intellectual Property Assignment.

(x) Exclusive Intellectual Property License Agreement. Luna Innovations shall have executed and delivered to IHS Sub the Exclusive Intellectual Property License Agreement.

(xi) Non-Exclusive Intellectual Property License Agreement. Luna Innovations and the Company shall have executed and delivered to the Purchaser the Non-Exclusive Intellectual Property License Agreement.

(b) Conditions Precedent to the Obligations of Sellers. All obligations of Sellers under this Agreement are subject to the fulfillment or satisfaction, prior to or at the Closing, of each of the following conditions precedent:

(i) Representations and Warranties True as of the Closing Date. The representations and warranties of Purchaser and IHS Sub contained in this Agreement shall be true and correct in all material respects at and as of the date hereof and at and as of the Closing Date.

(ii) Compliance with this Agreement. Purchaser and IHS Sub shall have performed and complied in all material respects with all agreements and conditions required by this Agreement to be performed or complied with by each of them prior to or at the Closing.

(iii) Closing Certificates. Sellers shall have received a certificate from Purchaser and IHS Sub dated the Closing Date certifying in such detail as Sellers may reasonably request that the conditions specified in Sections 3.2(b)(i) and 3.2(b)(ii) hereof have been fulfilled and certifying that Purchaser and IHS Sub have obtained all consents and approvals required by Section 3.2(b)(iv) hereof (the "**Purchaser's Closing Certificate**").

(iv) Consents and Approvals. All consents and approvals to be obtained by Purchaser and IHS Sub, including, without limitation, the consent or approval of any governmental or regulatory official, body or authority and any governmental, judicial or regulatory official, body or authority having jurisdiction over Purchaser and IHS Sub to the extent that their consent or approval is required or necessary for the consummation of the transactions contemplated hereby in the manner herein provided, shall have been obtained.

(v) No Threatened or Pending Litigation. On the Closing Date, no suit, action or other proceeding, or injunction or final judgment relating thereto, shall be pending before

any court or governmental or regulatory official, body or authority in which it is sought to restrain or prohibit or to obtain damages or other relief in connection with this Agreement or the consummation of the transactions contemplated hereby, and no investigation that might result in any such suit, action or proceeding shall be pending.

(vi) Approval of Counsel; Corporate Matters. All actions, proceedings, resolutions, instruments and documents required to carry out this Agreement or incidental hereto and all other related legal matters shall have been approved on the Closing Date by counsel for Sellers in the exercise of their reasonable judgment. Purchaser and IHS Sub shall also have delivered to Sellers such other documents, instruments, certifications and further assurances as such counsel for Sellers may reasonably require.

(vii) Opinions of Counsel for Purchaser. The General Counsel of Purchaser shall have delivered to Sellers a written opinion, dated the Closing Date, in the form of Exhibit H hereto with only such changes as shall be in form and substance reasonably satisfactory to Sellers and their counsel (the "**Purchaser Legal Opinion**").

(viii) Intellectual Property Assignment. IHS Sub shall have executed and delivered to Luna Innovations the Intellectual Property Assignment.

(ix) Exclusive Intellectual Property License Agreement. IHS Sub shall have executed and delivered to Luna Innovations the Exclusive Intellectual Property License Agreement.

3.3 Items to be Delivered at Closing.

(a) Items to be delivered by Sellers. At the Closing, the Sellers shall deliver, or cause to be delivered, to the Purchaser the following:

(i) Certificates representing the Securities, duly endorsed in blank for transfer or accompanied by stock powers duly executed in blank, sufficient in form and substance to convey to the Purchaser good title to the Securities free and clear of all Liens, with appropriate transfer stamps, if any, affixed.

(ii) A certificate dated as of the Closing Date, signed by the Secretary of the Company and certifying as to the Certificate of Incorporation and By-Laws of the Company, and a certificate of the Secretary of State of Delaware certifying as to the good standing of the Company.

(iii) A certificate dated as of the Closing Date, signed by the Secretary of Luna Innovations and certifying as to (A) the Certificate of Incorporation and By-laws of Luna Innovations, and incumbency of officers executing each of the Transaction Documents to which Luna Innovations is a party, and (B) resolutions of the Board of Directors of Luna Innovations authorizing the execution, delivery and performance by Luna Innovations of each of the Transaction Documents to which Luna Innovations is a party.

(iv) Copies of all consents, approvals, authorizations and filings with third Persons required for the consummation of the sale of the Securities or any of the other transactions

contemplated by any of the Transaction Documents, or for the conduct of the business of the Company subsequent to the Closing Date, including, without limitation, those consents, approvals, authorizations and filings listed on Schedule 3.3(a)(iv) of the Disclosure Schedule (as defined in Article IV below).

(v) The WSGR Opinion dated as of the Closing Date.

(vi) Copies of resignations from all directors and officers of the Company (or, with respect to the officers, evidence that the officers have otherwise been removed from their officer positions), effective as of the Closing Date.

(vii) All books and records belonging to the Company.

(viii) Evidence that all holders of outstanding options to acquire shares of the Company have converted such options into Common Stock and all holders of warrants have exercised such warrants and that such former option holders and warrant holders are Sellers with respect to the Securities issued upon such exercise or conversion.

(ix) The Key Employment Agreements between the Company and each of the Key Employees, duly executed by each such Key Employee.

(x) The Sellers' Closing Certificate.

(xi) The Intellectual Property Assignment, duly executed by Luna Innovations.

(xii) The Exclusive Intellectual Property License Agreement, duly executed by Luna Innovations.

(xiii) The Non-Exclusive Intellectual Property License Agreement, duly executed by each of Luna Innovations and the Company.

(xiv) Such other instruments or documents as may be reasonably required by the Purchaser as necessary or appropriate to carry out the transactions contemplated hereby.

(b) Items to be Delivered by the Purchaser and IHS Sub. At the Closing, the Purchaser and IHS Sub shall deliver, or cause to be delivered, to the Sellers the following:

(i) An aggregate amount equal to One Million Dollars ($1,000,000) payable in cash by wire transfer or cashier's check, as requested by (A) the Company Creditors, to such Persons in the amounts set forth opposite each such Person's name on Schedule 1(b) hereto, (B) Luna Innovations, to such Person in the amount of 56.83% of the Net Proceeds, and (C) the Sellers, to such Persons in accordance with the percentage of Net Proceeds set forth opposite each such Person's name on Schedule 1(c) hereto.

(ii) (A) An aggregate amount equal to One Hundred Three Thousand Four Hundred Thirty Dollars ($103,430) payable in cash by wire transfer or cashiers check as requested

by Luna Innovations, per the payables due by the Company to Luna Innovations shown on Schedule 4.5, and (B) an amount equal to the product of (x) Four Thousand Four Hundred Sixty One and 43/100 Dollars ($4,461.43), and (y) the number of week days beginning on and including Friday, September 26, 2003 through and including the Closing Date, payable by Purchaser company check to Luna Innovations.

(iii) The Purchaser Legal Opinion dated as of the Closing Date.

(iv) A certificate dated as of the Closing Date, signed by the Secretary of the Purchaser and certifying as to (A) the Certificate of Incorporation and By-laws of the Purchaser, and incumbency of officers executing each of the Transaction Documents to which the Purchaser is party, and (B) the resolutions of the Board of Directors of the Purchaser authorizing the execution, delivery and performance by the Purchaser of each of the Transaction Documents to which the Purchaser is a party.

(v) A certificate dated as of the Closing Date, signed by the Secretary of IHS Sub and certifying as to the resolutions of the Board of Directors of IHS Sub authorizing the execution, delivery and performance by IHS Sub of each of the Transactions Documents to which IHS Sub is a party.

(vi) The Key Employment Agreements between the Company and each of the Key Employees, duly executed by the Purchaser or the Company.

(vii) The Purchaser's Closing Certificate.

(viii) The Intellectual Property Assignment, duly executed by IHS Sub.

(ix) The Exclusive Intellectual Property License Agreement, duly executed by IHS Sub.

(x) Such other instruments or documents as may reasonably required by the Sellers as necessary or appropriate to carry out the transactions contemplated hereby.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES OF LUNA INNOVATIONS AND THE SELLERS

Except as set forth in the section of the Disclosure Schedule attached as Exhibit I hereto corresponding to the applicable representation and warranty (the "**Disclosure Schedule**"), (i) Luna Innovations hereby represents and warrants to the Purchaser, and (ii) solely with respect to Sections 4.18, 4.19, 4.20, 4.22(b) and 4.23 hereof, each Seller hereby represents and warrants, severally but not jointly, to the Purchaser, as follows:

4.1 Organization and Authorization. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, has all requisite corporate power and lawful authority to own, lease and operate its assets, properties and business and to carry on its business as now conducted, and is duly qualified and in good standing to do

business in each jurisdiction in which the nature of its business or the ownership or leasing of its properties makes such qualification necessary, except where the failure to be so qualified would not have a Company Material Adverse Effect. Copies of the Certificate of Incorporation and By-Laws of the Company as amended to date, and the corporate minutes of the Company, have been delivered to the Purchaser and are complete and correct in all material respects.

4.2 Capitalization of the Company. The authorized capital of the Company consists one million (1,000,000) shares of Common Stock, $0.0001 par value, of which five hundred ninety thousand (590,000) shares are issued and outstanding. All of the Securities have been duly authorized and validly issued and are fully paid and non-assessable and have been issued in compliance with all applicable laws. There are not any bonds, debentures, notes or other indebtedness having the right to vote on any matters on which the Company's stockholders may vote ("**Voting Debt**") issued or outstanding. There exists no preemptive right of any kind with respect to the capital of the Company. Schedule 4.2 to the Disclosure Schedule lists all options granted to acquire shares of the Company, including the name of the grantee, the number of options, the date of grant, the expiration dates and the exercise price. All options formerly outstanding, including the options listed on Schedule 4.2 to the Disclosure Schedule, to acquire shares of the Company have been exercised, terminated, or have expired by their terms prior to the date hereof. There exists no subscription, warrant, option, (whether or not presently exercisable), call, right (including phantom stock or stock appreciation rights), commitment, or other agreement of any character to which the Company is party or by which it is bound obligating the Company to issue, deliver or sell, or cause to be issued, delivered or sold, shares of capital stock or any Voting Debt of the Company or any security convertible into shares or any Voting Debt of the Company or obligating the Company to grant or enter into any such subscription, warrant, option, call, right, commitment or agreement. Schedule 4.2 to the Disclosure Schedule sets forth the registered owners of the Securities and the number of Securities owned by each such Person.

4.3 Equity Interest. The Company does not directly or indirectly own, and has not ever directly or indirectly owned, any shares of or other equity interests in any Person and the Company is not a member of or participant in any partnership, joint venture or similar Person.

4.4 Financial Information. Attached hereto as Schedule 4.4(a) to the Disclosure Schedule is the unaudited balance sheet of the Company at September 19, 2003. Attached hereto as Schedule 4.4(b) to the Disclosure Schedule is a pro forma statement of operations of the Luna i–Monitoring Business for the period commencing January 1, 2003 and ended September 19, 2003. (Schedule 4.4(a) and Schedule 4.4(b) to the Disclosure Schedule, collectively, the "**Financial Statements**"). The Financial Statements (i) are correct and complete in all material respects, (ii) are in accordance with the books and records of Luna Innovations and the Company, (iii) have been prepared in conformity with U.S. generally accepted accounting principles ("**GAAP**") applied on a consistent basis throughout the period indicated, except that they do not contain additional financial statements and footnotes required under GAAP, and are subject to normal year-end adjustments, and (iv) present fairly the financial condition and results of operations of the Company and the Luna i–Monitoring Business as of the date thereof and for the period referred to therein. Attached hereto as Schedule 4.4(c) is a statement showing the investment of Luna Innovations in the Luna i–Monitoring Business through July 31, 2003, which statement is correct in all material respects.

4.5 Absence of Undisclosed Liabilities. Neither the Company, nor Luna Innovations with respect to the Luna i–Monitoring Business, has any liabilities of any nature or kind (whether known or unknown, accrued, absolute, contingent, liquidated, unliquidated, matured, unmatured or otherwise and regardless of when asserted), including, but not limited to, accounts payable, accrued expenses and commitments to purchase component parts and accrued employee vacations and other employee obligations, which were not shown or that are in excess of amounts shown on Schedule 4.5 of the Disclosure Schedule.

4.6 Compliance with Laws. The operation of the business of the Company, and of Luna Innovations with respect to the Luna i–Monitoring Business, has been conducted in accordance with all applicable laws, ordinances, regulations, orders, judgments, injunctions, awards, decrees and other requirements of any Governmental Entity, including those with regard to environmental matters and workers' safety and health matters ("**Regulations**"), except where failure to do so would not have a Company Material Adverse Effect. Neither the Company, nor Luna Innovations with respect to the Luna i–Monitoring Business, has received any notice of any asserted present or past material failure by it to comply with such Regulations. The Company owns, holds, possesses or lawfully uses all material permits, licenses, franchises, and other governmental authorizations necessary for the conduct of its business, each of which is listed on Schedule 4.6 of the Disclosure Schedule and each of which is valid and in full force and effect.

4.7 Absence of Conflict. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby will not, and the transfer of Luna Innovations' rights in and to the i–Monitoring Intellectual Property from Luna Innovations to the Company and the Purchaser, as applicable, will not, result in the creation or imposition of any Lien (other than such rights to Licensed Sensor Technology licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates under the Technology Agreement) upon any property or assets of the Company or the Purchaser Transferred Property, including the Luna i–Monitoring Assets, and will not violate, conflict with and or otherwise result in the breach or violation of any of the terms and conditions of, result in a modification of or constitute (or with notice or lapse of time or both would constitute) a default under:

(a) the Certificate of Incorporation or By-Laws of the Company or Luna Innovations;

(b) any material contract, instrument or other agreement to which the Company or Luna Innovations with respect to the Luna i–Monitoring Business is a party or by or to which they or any of their assets or properties are bound or subject; or

(c) any statute or any regulation, order, judgment, injunction, award or decree of any court, arbitrator or other Governmental Entity against or binding upon or applicable to, the Company, or Luna Innovations with respect to the Luna i–Monitoring Business, or upon the properties or business of the Company, or Luna Innovations with respect to the Luna i–Monitoring Business.

4.8 Litigation and Claims. There are no adverse claims pending, or to the knowledge of Luna Innovations, threatened against or affecting the Company, or Luna Innovations with respect to

the Luna i–Monitoring Business. Except as set forth in Schedule 4.8, there are no actions, suits, proceedings or investigations at law or in equity before or by any court or Governmental Entity, pending or, to the knowledge of Luna Innovations, threatened against or affecting the Company, or Luna Innovations with respect to the Luna i–Monitoring Business, any of the Company's officers or directors, any of the Company's properties, assets, operations or business, or the transactions contemplated by this Agreement. There are no actions, suits or proceedings pending in which the Company, or Luna Innovations with respect to the Luna i–Monitoring Business, is a plaintiff. Neither the Company, nor Luna Innovations with respect to the Luna i–Monitoring Business, has engaged in or been party to any action, suit, proceeding or investigation during the five-year period prior to the date hereof. Neither the Company, nor Luna Innovations with respect to the Luna i–Monitoring Business, or any of the Company's or Luna Innovations' (with respect to the i–Monitoring Business) properties, operations, business or assets, are subject to any judgment, order, writ, injunction or decree of any kind of any court or any Governmental Entity.

4.9 Agreements. Schedule 4.9 of the Disclosure Schedule lists each agreement or contract, oral or written (collectively, the "**Contracts**"), (i) to which the Company is a party, by which the Company is bound or to which the Company is subject, or (ii) to which Luna Innovations is a party or by which Luna Innovations is bound or to which Luna Innovations is subject arising out of, relating to or affecting the Luna i–Monitoring Business, in each case including, but not limited to, customer agreements listed in Schedule 4.9(a) of the Disclosure Schedule, supplier agreements listed in Schedule 4.9(b) of the Disclosure Schedule, agreements with respect to the Intellectual Property Rights listed in Schedule 4.9(c) of the Disclosure Schedule and agreements with Luna Innovations and any affiliate of Luna Innovations listed in Schedule 4.9(d) of the Disclosure Schedule.

Copies of all Contracts have been delivered to the Purchaser and are true, complete and correct, and all such Contracts are valid, subsisting agreements, in full force and effect. Each such Contract will continue in full force and effect in all material respects following the transactions contemplated by this Agreement, in each case without the material breach of any of the terms or conditions therein or the forfeiture or impairment of any material rights thereunder or the payment of any penalty or incurrment of any additional obligation or change of any material terms, and without the necessity of consent of any other Person or party. The Company and/or Luna Innovations, as applicable, has performed all material obligations required to be performed by it and is not in default under any Contract, nor, to the best knowledge of Luna Innovations, is any other party to any such Contract in default thereunder, nor does any condition exist which with notice or lapse of time or both would constitute a default thereunder. To Luna Innovations' knowledge, there has been no threatened cancellation of any such Contract nor is there any outstanding dispute thereunder. To Luna Innovations' knowledge, there exists no unperformed Contract, bid or contract proposal made by the Company, or by Luna Innovations with respect to the Luna i–Monitoring Business, which if performed, accepted or entered into might have a Company Material Adverse Effect. Each contract or agreement to which Luna Innovations or any of its affiliates is a party or by which it is bound or to which it is subject, arising out of, relating to or affecting the Luna i–Monitoring Business in any material respect (each, a "**Material LI Contract**") is listed on Schedule 4.9 of the Disclosure Schedule and will be subcontracted by Luna Innovations to the Company after the Closing Date pursuant to Section 6.4. Each such Material LI Contract will continue in full force and effect in all material respects following such transfer to the Purchaser and following the transactions contemplated by this Agreement, in each case without material breach of any of the terms and

conditions therein or the forfeiture or impairment of any material right thereunder or the payment of any penalty or incurrment of any additional obligation or change of any material terms, and without the necessity of consent of any other Person or party.

4.10 Intellectual Property.

(a) Upon the Closing, IHS Sub or the Company shall own, or be licensed or otherwise possess legally enforceable rights to use, all i–Monitoring Intellectual Property, which constitutes all patents, trademarks, trade names, service marks, copyrights, and all applications therefor, schematics, inventions, technology, know-how, computer software programs or applications, trade secrets and tangible or intangible information, content, data or material that are used in the Luna i–Monitoring Business ("**Intellectual Property Assets**"). Except for commercially available off-the-shelf computer software programs ("**Off-The-Shelf Software**"), all right, title and interest in and to any Intellectual Property Assets that are used in the Luna i–Monitoring Business will be effectively assigned or licensed by Luna Innovations to the Company or IHS Sub on the Closing Date. Except for Intellectual Property Assets to be licensed by Luna Innovations to the Company pursuant to the Non-Exclusive Intellectual Property License Agreement, or to be licensed to IHS Sub pursuant to the Exclusive Intellectual Property License Agreement, or as set forth in Schedule 4.10(a), neither Luna Innovations nor any of its affiliates shall retain or otherwise possess any right, title or interest in or to any of the Intellectual Property Assets at and as of the Closing Date. Except for rights to the Licensed Sensor Technology licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates under the Technology Agreement, and except for the rights of Luna Innovations with respect to the Retained IP Assets, neither Luna Energy, LLC, Baker Hughes Incorporated nor any of their respective affiliates has any rights to any i–Monitoring Intellectual Property pursuant to the Technology Agreement or any other agreement with Luna Innovations or any of its affiliates. The Assigned IP does not constitute "Innovations IP" or "Innovations Third Party IP" (as defined in the Technology Agreement), and neither Baker Hughes Incorporated nor Luna Energy, LLC has any rights with respect to the Assigned IP.

(b) Schedule 4.10(b)(i) sets forth a complete list of all patents, registered and unregistered trademarks, registered trade names and service marks, and any applications for any of the foregoing, included in Intellectual Property Assets, and specifies, where applicable, the jurisdiction in which each such Intellectual Property Asset has been issued or registered or in which an application for such issuance and registration has been filed, including the respective registration or application numbers and the names of all registered owners. Except for Off-The-Shelf Software, Schedule 4.10(b)(ii) sets forth a complete list of all Intellectual Property Rights of third parties used in connection with the Luna i–Monitoring Business, together with a correct description of the Company's right, title and interest in such third party Intellectual Property Rights, and of all licenses, sublicenses and other agreements with respect to any such Intellectual Property Rights of any third parties, and includes the identity of all parties thereto, a description of the nature and subject matter thereof, the applicable royalty or other fees and the term thereof. The Company has been authorized to use the Intellectual Property Rights of third parties listed on Schedule 4.10(b)(ii). To Luna Innovations' knowledge, no such third party has indicated an intention or plan to terminate or modify any such agreement or its relationship with the Company. Schedule 4.10(b)(iii) sets forth a complete list of all licenses, sublicenses and other agreements pursuant to which, after the Closing Date, any Person other than the Company, Purchaser or IHS Sub shall be authorized to use at any time any

i– Monitoring Intellectual Property, and includes the identity of all parties thereto, a description of the nature and subject matter thereof, the applicable royalty or other fees and the term thereof.

(c) The Company Products comprise all products and applications developed and/or under development with respect to the Luna i–Monitoring Business. Except with respect to U.S. government rights disclosed in Schedule 4.10(c)(ii), upon the Closing, Purchaser and IHS Sub shall be the exclusive owner of all right, title and interest in and to the Company Products and no Person has any right of renewal, reversion or termination with respect to any such rights or transfers thereof or right thereto. The Company Products and, upon the Closing, the Purchaser's and IHS Sub's rights therein shall: (i) be free of any Lien, or, except with respect to United States Government rights disclosed in Schedule 4.10(c)(ii), any other right of any third party; provided, however, it is understood by the parties hereto that (x), upon the Closing, Luna Innovations shall have the Retained IP Rights and (y) Luna Energy, LLC and Baker Hughes Incorporated have rights to the Licensed Sensor Technology licensed under the Technology Agreement, and (ii) not be subject to any legal or contractual restriction that would prevent the Company Products from being licensed, sublicensed, marketed, modified or otherwise used or sold by the Purchaser and IHS Sub after the Closing without restriction and without any payment or other obligation to any other Person. The sale of the Securities to the Purchaser will not alter any of the rights described in the preceding sentence in any material respect.

(d) Except as disclosed in Schedule 4.10(d), (i) the use, manufacture or sale of the Company Products and the i–Monitoring Intellectual Property does not and will not infringe or misappropriate the Intellectual Property Rights of any third party, and (ii) neither the Company nor Luna Innovations have received any notice of any such claim.

(e) Except as set forth in Schedule 4.10(d), all patents, trademarks, service marks and copyrights included in the i–Monitoring Intellectual Property are held by the Company or Luna Innovations and are valid and subsisting, and upon the Closing, shall be held by the Company, the Purchaser or IHS Sub. All current and former employees of the Company and/or Luna Innovations who have performed work with respect to the Luna i–Monitoring Business have executed proprietary information and confidentiality agreements substantially in the form set forth in Schedule 4.10(e) of the Disclosure Schedule.

(f) Except as set forth on Schedule 4.10(f), and except for the Purchaser Transferred Property to be transferred to IHS Sub upon the Closing and the Company Licensed Sensor IP to be transferred to the Company upon the Closing, there is no software, hardware or technology owned by any Person other than the Company that is included in any of the Company Products. Neither the Company nor Luna Innovations is under any contractual or other obligation to provide developments, enhancements or customized software or to enhance, develop or customize any of the Company Products.

(g) Schedule 4.10(g) lists each customer or potential customer that has received any of the Company Products, together with the terms relating to such customer or potential customer's use of the Company Products or other rights granted to such Person. To Luna Innovation's knowledge, no claims with respect to the Company Products by or against any past or

present employees or other Person have been made, and to the best knowledge of Luna Innovations, no basis for any such claims exists.

(h) Luna Innovations has not previously granted any right, license or interest to any third party inconsistent with the assignment or license, as applicable, in the Purchaser Transfer Documents or in the Non-Exclusive Intellectual Property License Agreement.

(i) No other party, other than those specifically named and listed in the Technology Agreement, has any rights in or to the Licensed Sensor Technology, and, as to those parties, each has only such rights in and to the Licensed Sensor Technology as are set forth in the Technology Agreement.

(j) Luna Innovations possesses the legal authority to enter into the Purchaser Transfer Documents and the Non-Exclusive Intellectual Property License Agreement and to grant the rights granted therein.

(k) Except as expressly set forth in this Agreement, there are no warranties, express or implied, with respect to the Company Products, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose.

4.11 Company Products. Schedule 4.11(a) sets forth the specifications, standards and functionality for each of the Company Products (collectively, the "**Specifications**"). Each of the Company Products has been designed to conform to the respective Specifications. All defects, deficiencies, or other known problems with the Company Products identified as a result of testing or analysis conducted to date have been or are being addressed and the related corrections have been or will be included in the documentation being used for the pilot production. To Luna Innovations' knowledge, there are no defects, deficiencies or other known problems with the Company Products that would materially impair the Company's ability to sell or license of the Company Products in the marketplace. The Company has set forth an estimate of current risks in respect of meeting Specifications in Schedule 4.11(b).

4.12 Title and Sufficiency of Assets. Upon the Closing, except for the Retained Non-IP Assets (as defined below), the Company, the Purchaser or IHS Sub will own and have good and valid title to, or have a valid license to, all of the assets, tangible and intangible, of the Luna i–Monitoring Business including the Luna i–Monitoring Assets, the Company Products and all Intellectual Property Rights in each of the foregoing, free and clear of any Lien (other than the rights of Luna Innovations with respect to the Retained IP Assets and other than such rights licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates to the Licensed Sensor Technology under the Technology Agreement). Except for (a) the Retained IP Assets and (b) the non-intellectual property assets disclosed on Schedule 4.12 of the Disclosure Schedule, which assets are being retained by Luna Innovations, the SBIR contracts set forth in Schedule 4.12 of the Disclosure Schedule, and non-intellectual property assets which may be used, or may have been used, by the Company or Luna Innovations in connection with the Luna i–Monitoring Business which are immaterial to the Luna i–Monitoring Business, such as office supplies and the like, which assets are being retained by Luna Innovations (collectively the "**Retained Non-IP Assets**," and together with the Retained IP Assets, the "**Retained Assets**"), Luna Innovations will validly assign

and transfer or license to the Company and/or IHS Sub, as applicable, at the Closing all right, title and interest of Luna Innovations in and to the Luna i–Monitoring Business, including the Luna i–Monitoring Assets, the Company Products, and all Intellectual Property Rights in each of the foregoing. Upon the Closing, the Company and IHS Sub shall have no obligation of any nature to Luna Innovations or any of its affiliates with respect to assets transferred, leased or licensed by Luna Innovations to the Company or IHS Sub pursuant to the LI Transfer Documents or otherwise, and, other than the rights of Luna Innovations with respect to the Retained Assets and other than such rights licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates to the Licensed Sensor Technology under the Technology Agreement, neither Luna Innovations nor any of its affiliates retains or otherwise possesses any material right, title or interest in or to any of the Luna i–Monitoring Business, including any of the Luna i–Monitoring Assets, the Company Products or any Intellectual Property Rights in each of the foregoing. The Luna i–Monitoring Assets are in good condition and in a good state of maintenance and repair, reasonable wear and tear excepted, and such assets and their use conform in all material respects to all applicable laws, regulations, ordinances, codes, licenses and permits. Except for the Retained Non-IP Assets, the rights, properties and assets of the Company, the Purchaser Transferred Property and the Company Licensed Sensor IP include all rights, properties and other assets necessary to permit the Company, Purchaser and IHS Sub to conduct the Luna i–Monitoring Business on and after the Closing Date in the same manner as it is conducted on the date of this Agreement and as has been conducted by Luna Innovations and/or the Company during the twelve (12) months preceding the date hereof. The Company does not owe any amount to, or have any contract or commitment to, or use any property (real or personal) owned by, any stockholder, director, officer, employee, agent, representative or affiliate of the Company. The Company does not own or lease and has never owned or leased any real property.

4.13 Taxes.

(a) The Company has duly filed in the prescribed manner and within the prescribed time all Tax Returns required to be filed by it. Such Tax Returns are true, correct and complete in all material respects and the Company has made complete and accurate disclosure in such Tax Returns and in all materials accompanying such Tax Returns. The Company has paid all Taxes shown on such Tax Returns as being due and payable and all Taxes payable under any assessment or reassessment. The Company is not and has never been part of a federal consolidated Tax Return.

(b) Except as set forth in Schedule 4.13(b) of the Disclosure Schedule there are no Taxes of the Company which are or may become payable in any jurisdiction in respect of the period ending on the date of this Agreement and or any periods prior thereto, whether or not assessed or disputed. There is no legal proceeding and no assessment, reassessment or request for information in progress, pending or, to Luna Innovations' knowledge, threatened against or affecting the Company in respect of Taxes nor are any issues under discussion with any taxing authority relating to any matters which could result in claims for additional Taxes. The Company has not filed or been required to file any federal income Tax Returns.

(c) There are no agreements, waivers or other arrangements providing for an extension of time with respect to any assessment or reassessment of Tax, the filing of any Tax Return or the payment of any Tax by the Company.

(d) The Company has withheld from each payment made by it the amount of all Taxes and other deductions required under any applicable Tax Legislation to be withheld therefrom and has paid all such amounts withheld and all installments of Taxes due and payable before the date hereof to the relevant taxing or other authority within the time prescribed under any applicable Tax Legislation.

4.14 Employees; Employee Benefits.

(a) Schedule 4.14(a) of the Disclosure Schedule sets forth a true and complete list of all employees of the Company and of Luna Innovations with respect to the Luna i–Monitoring Business as of the date hereof (the "**i–Monitoring Employees**"), including name, title, date of hire, current base salary, last increase, accrued vacation and paid time off and bonus or other incentive arrangement and indicating which such entity is the employer. No i–Monitoring Employee is on disability or other leave or suspension as of the date hereof.

(b) Neither the Company nor Luna Innovations is a party to, or bound by, any collective bargaining agreement covering its employees. Each of the Company, and Luna Innovations with respect to the Luna i–Monitoring Business, is and has at all times been in material compliance with all federal, state, and local laws and regulations (a) respecting employment and employment practices, terms and conditions of employment and wages and hours, and (b) prohibiting discrimination in the work place, including, without limitation, laws and regulations that prohibit discrimination and/or harassment on account of race, national origin, religion, gender, disability, age, workers compensation status or otherwise. There is no labor strike, dispute, slowdown, stoppage or organizational effort pending or, to the best knowledge of Luna Innovations, threatened against or involving the Company or the i–Monitoring Employees. There are no claims of any nature pending or, to the best knowledge of Luna Innovations, threatened involving any of the i–Monitoring Employees or any former employees of the Luna i–Monitoring Business.

(c) Schedule 4.14(c) of the Disclosure Schedule sets forth a true and complete list of all Employee Benefit Plans covering the i–Monitoring Employees. As used in this Agreement, "**Employee Benefit Plans**" means any incentive compensation plans, deferred compensation plans, bonus plans, executive compensation plans, pension plans or retirement plans, employee profit sharing plans, employee stock purchase plans, group life insurance, medical, hospitalization, insurance, key man insurance, welfare plans, and any other plans providing benefits to the i–Monitoring Employees or any former employee of the Luna i–Monitoring Business.

(d) With respect to each of the Employee Benefit Plans:

(i) all required or discretionary (in accordance with historical practices) payments, premiums, contributions or reimbursements or accruals have been made;

(ii) there are no pension plans or retirement plans providing benefits to the i–Monitoring Employees or any former employees of the Luna i–Monitoring Business;

(iii) there have been no material violations of any applicable laws or regulations with respect thereto and the Company and Luna Innovations have performed and complied with all of their respective obligations with respect thereto and each of the Employee Benefit Plans has, at all times, in form, operation and substance complied with its terms in all material respects;

(iv) neither the Company nor Luna Innovations is in violation of any applicable law with respect thereto or which would subject the Purchaser, the Company or any of their directors, officers or employees to any material liability under any such law;

(v) there are no actions, suits, proceedings, hearings or investigations pending (other than routine claims for benefits) and, to the best knowledge of Luna Innovations, no such actions, suits, proceedings, hearings or investigations are threatened; there are no outstanding liabilities for Taxes, penalties or fees with respect thereto;

(vi) no Employee Benefit Plan provides health, medical or life insurance benefits with respect to current or former employees beyond their retirement or other termination of service other than (A) coverage mandated by applicable law, or (B) benefits the full cost of which is borne by the current or former employee (or his or her beneficiary);

(vii) neither Luna Innovations nor the Company has made any representations or communications, oral or written, with respect to participation, eligibility for benefits, vesting, benefit accrual, or coverage under the Employee Benefit Plans to any participant or beneficiary thereof other than those which are in accordance with the terms and provisions of such Employee Benefit Plans. All records and information necessary or appropriate in administering the Employee Benefit Plans or legally required to be kept are maintained in good order in all material respects. All such records are true, accurate and complete in all material respects.

(viii) Luna Innovations has heretofore delivered or caused to be delivered to the Purchaser true, correct and complete copies in all material respects of all material documents that comprise the most current version of each such Employee Benefit Plan. Each of the Employee Benefit Plans can be amended, modified or terminated by the Company within a period of thirty (30) days, without payment of any additional compensation or amount or the additional vesting or acceleration of any such benefits.

(ix) Except as set forth in Schedule 4.14(d)(ix) of the Disclosure Schedule, neither the execution and delivery of this Agreement nor the consummation of any or all of the transactions contemplated by the Transaction Documents will (i) entitle any current or former officer, director or employee of the Company to severance pay or any other payment or other rights, or (ii) accelerate the time of payment or vesting or increase the amount of any compensation due to any such employee or former employee.

4.15 Absence of Certain Changes or Events. Except as set forth on Schedule 4.15, since April 1, 2003, the Company, and Luna Innovations with respect to the Luna i–Monitoring Business, has conducted its business only in the ordinary course and consistent with prior practice, and there has not been:

(a) any material adverse change in the assets, liabilities, properties, business, operations, prospects or condition (financial or other) of the Luna i–Monitoring Business, except changes in the ordinary course of business;

(b) any occurrence or the existence of any transaction, commitment, dispute or other event, fact or condition, or, to the best of the knowledge of Luna Innovations, threat thereof, causing or that could reasonably be expected to cause such a material adverse change set forth in Section 4.15(a) above in the future;

(c) any material damage, destruction, loss or claim, whether or not covered by insurance, materially adversely affecting the assets, properties (tangible or intangible), business, operations, prospects or condition (financial or other) of the Luna i–Monitoring Business;

(d) any sale, transfer or other disposition of, or any mortgage or pledge of, or imposition of any Lien (other than such rights to Licensed Sensor Technology licensed to Luna Energy, LLC, Baker Hughes Incorporated or any of their respective affiliates under the Technology Agreement), on, any of the properties or assets of the Luna i–Monitoring Business, other than in the ordinary course of business;

(e) any capital expenditures or commitments therefor in excess of $5,000 in the aggregate;

(f) any cancellation or nonrenewal of any material contract authorizing the Company or Luna Innovations with respect to the Luna i–Monitoring Business to use Intellectual Property Rights of any third parties;

(g) any acceleration of the billing of customers or the collection of their accounts receivable or the delay in payment of accounts payable or accrued expenses or the deferment of expenses;

(h) any incurrence of indebtedness for borrowed money or for the deferred purchase of property;

(i) any cancellation of material debts owed to or material claims held by the Company or Luna Innovations with respect to the Luna i–Monitoring Business;

(j) any increase in the regular rate of compensation payable by it to any officer, director or employee, other than normal merit and cost of living increases granted in the ordinary course of business; or any increase in the compensation to any officer, director, employee or stockholder by bonus, percentage, compensation service award or in any other way, and no such increase is contractually or legally required;

(k) the establishment, any agreement to establish or any material change in any Employee Benefit Plan, and no such change is contractually or legally required;

(l) any payment, discharge or satisfaction of any claims, liabilities or obligations other than in the usual and ordinary course of business; or

(m) any agreement, whether in writing or otherwise, that in any way legally binds the Company to take any action described in this Section 4.15.

4.16 Absence of Certain Commercial Practices. Neither the Company, nor Luna Innovations with respect to the Luna i–Monitoring Business, nor their respective directors, officers, employees, agents or other Persons acting on its behalf have (a) given or agreed to give any gift or similar benefit of more than nominal value to any customer, supplier, or governmental employee or official or any other Person which is or may be in a position to help or hinder the Company or Luna Innovations or assist the Company or Luna Innovations in connection with any proposed transaction, which gift or similar benefit, if not given in the past, could have had or which could, if not continued in the future, a Company Material Adverse Effect, or (b) used any corporate or other funds for unlawful contributions, payments, gifts or entertainment, or made any unlawful expenditures relating to political activity to government officials or otherwise or established or maintained any unlawful or unrecorded funds. To the best knowledge of Luna Innovations, the Company, and Luna Innovations with respect to the Luna i–Monitoring Business, and their respective directors, officers, employees, other agents or other Persons acting on its behalf have not accepted or received any unlawful contributions, payments, gifts or expenditures.

4.17 Banking. Schedule 4.17 to the Disclosure Schedule lists all Persons to whom the Company has given any power of attorney, whether limited or general, which is continuing in effect. Schedule 4.17 to the Disclosure Schedule also contains the name and location of each bank or other institution in which the Company has any deposit account, lock box or safe deposit box and the names of each Person authorized to draw thereon or having access thereto.

4.18 Authority, Enforceability, No Violation. Such Seller has the full legal right and power to sell the Securities owned of record by such Seller and enter into each of the Transaction Documents to which it is a party, to perform its obligations under each such Transaction Document, and to consummate the transactions contemplated by each such Transaction Document. The execution, delivery and performance by such Seller of each of the Transaction Documents to which it is a party and the consummation of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary action (corporate or otherwise) on the part of such Seller. Each of the Transaction Documents to which such Seller is a party has been duly executed by such Seller and constitutes a valid and binding obligation of such Seller, enforceable against such Seller in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and the rules of law governing specific performance, injunctive relief and other equitable remedies. Neither the execution, delivery and/or performance by each Seller of any of the Transaction Documents to which it is a party, nor the consummation of the transactions contemplated hereby and thereby, nor compliance by such Seller with any of the provisions hereof and thereof will (i) with respect to each such Seller that is not an individual, conflict with or result in breach of any provision of such Seller’s Certificate of Incorporation, By-

Laws or other governing instruments, (ii) to the knowledge of such Seller, violate any statute, or any regulation, order, judgment, injunction, award, or decree of any court, arbitrator or other Governmental Entity, in each case applicable to such Seller or the Securities owned by such Seller, or (iii) conflict with or result in a default or breach of any provision of any material contract or other material agreement to which such Seller is a party or by or to which it or any of its assets or properties is bound or subject or result in the creation or imposition of a Lien upon the Securities owned by such Seller. No approval or consent of any Governmental Entity or of any other Person which consent has not been obtained, is required in connection with the execution and delivery by the Seller of this Agreement and the other Transaction Documents to which such Seller is a party and the consummation and performance by such Seller of the transactions contemplated hereby and thereby.

4.19 Sellers' Ownership of the Securities. Such Seller is the lawful owner, of record and beneficially, of the Securities listed opposite such Seller's name on Schedule 1(a) hereto and has good and marketable title to such Securities, free and clear of any Liens. Upon consummation of the transactions contemplated by this Agreement, the Purchaser will own of record and beneficially all of such Seller's Securities, free and clear of all Liens.

4.20 Litigation and Claims Involving the Sellers. There are no actions, suits, claims, proceedings or investigations at law or in equity before or by any court or Governmental Entity pending or, to the best knowledge of such Seller, threatened against or involving any Securities or threatened against or involving any such Seller or any such Seller's other assets or properties, that question the validity of this Agreement or seek to prohibit, enjoin or otherwise challenge the consummation of the transactions contemplated hereby. There are no judgments, orders, writs, injunctions, or decrees of any kind of any court or of any Governmental Entity against any such Seller or any of its respective assets of properties that prohibit or enjoin the sale of the Securities or the consummation of the transactions contemplated by this Agreement.

4.21 Changes. To Luna Innovations' knowledge, there are no (i) existing or anticipated changes in the policies of suppliers or others which will adversely affect the Company, or (ii) i–Monitoring Employees who do not intend to accept employment with the Company on the Transfer Date or intend to leave the employ of the Company upon the completion of this transaction, provided that Purchaser complies with its obligations under Sections 6.1 and 6.5 hereof.

4.22 Full Disclosure.

(a) The documents and other papers delivered by or on behalf of the Company and Luna Innovations to the Purchaser in connection with this Agreement and the transactions contemplated hereby do not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements made, in the context in which made, not false or misleading. The Company does not engage in, and has not engaged in, any business other than Luna i–Monitoring Business and has never owned any assets other than the Luna i–Monitoring Assets.

(b) The closing certificates and representations and warranties made by such Seller to the Purchaser in connection with this Agreement and the transactions contemplated hereby

do not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements made, in the context in which made, not false or misleading.

4.23 No Broker. Except as set forth in Schedule 4.23 of the Disclosure Schedule, no broker, finder, agent or similar intermediary has acted for or on behalf of such Seller or the Company, in connection with this Agreement or the transactions contemplated hereby, and no broker, finder, agent or similar intermediary is entitled to any broker's, finder's or similar fee or other commission in connection therewith based on any agreement, arrangement or understanding with the Company, or such Seller, or any action taken by the Company, or such Seller. The Sellers are solely responsible for, and shall pay in full, any amounts payable to the Persons disclosed in Schedule 4.23.

ARTICLE V
REPRESENTATIONS AND WARRANTIES OF PURCHASER AND IHS SUB

The Purchaser and IHS Sub represent and warrant to each of the Sellers as follows:

5.1 Due Organization. The Purchaser is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, has all requisite corporate power and lawful authority to own, lease and operate its assets, properties and business and to carry on its business as now conducted, and is duly qualified and in good standing to do business in each jurisdiction in which the nature of its business or the ownership or leasing of its properties makes such qualification necessary, except where the failure to be so qualified would not have a Purchaser Material Adverse Effect. IHS Sub is a corporation duly organized, validly existing and in good standing under the laws of the State of Colorado, has all requisite corporate power and lawful authority to own, lease and operate its assets, properties and business and to carry on its business as now conducted, and is duly qualified and in good standing to do business in each jurisdiction in which the nature of its business or the ownership or leasing of its properties makes such qualification necessary, except where the failure to be so qualified would not have a material adverse effect on IHS Sub. Copies of the Certificate of Incorporation and By-Laws of Purchaser as amended to date, have been delivered to the Sellers and are complete and correct in all material respects.

5.2 Authority, Enforceability, No Violation. The Purchaser and IHS Sub have the full legal right and power and all authority and approval required to enter into, execute and deliver this Agreement and the other Transaction Documents to which each is a party, and to fully perform their obligations under each such Transaction Document and to consummate the transactions contemplated by each such document. The execution, delivery and performance of the Transaction Documents to which each is a party and the consummation of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary action (corporate or otherwise) on the part of Purchaser and IHS Sub. Each of the Transaction Documents to which the Purchaser and IHS Sub is a party has been duly executed and delivered by the Purchaser and IHS Sub, respectively, and constitutes a valid and binding obligation of the Purchaser and IHS Sub, respectively, enforceable against the Purchaser and IHS Sub, respectively, in accordance with its terms. No approval or consent of any Governmental Entity or of any other Person, which consent has not been obtained, is required in connection with the execution and delivery by the Purchaser of this Agreement and the other Transaction Documents to which it is a party and the consummation and performance by the Purchaser or IHS Sub of the transactions contemplated hereby and thereby.

5.3 Absence of Conflict. The execution, delivery and performance by Purchaser and IHS Sub of this Agreement and any of the other Transaction Documents, and the consummation of the transactions contemplated hereby and thereby, and the compliance of Purchaser and IHS Sub with any of the provisions hereof and thereof, will not (i) result in the creation or imposition of any Lien upon any property or assets of the Purchaser or IHS Sub, respectively, or (ii) violate, conflict with and or otherwise result in the breach or violation of any of the terms and conditions of, result in a modification of or constitute (or with notice or lapse of time or both would constitute) a default under:

(a) the Certificate of Incorporation or By-Laws or other governing instruments of the Purchaser or IHS Sub, respectively;

(b) any material contract, instrument or other agreement to which Purchaser or IHS Sub is a party or by or to which it or any of their assets or properties is bound or subject; or

(c) any statute or any regulation, order, judgment, injunction, award or decree of any court, arbitrator or other Governmental Entity against or binding upon or applicable to, the Purchaser or IHS Sub or upon the properties or business of the Purchaser or IHS Sub.

5.4 No Broker. No broker, finder, agent or similar intermediary has acted for or on behalf of the Purchaser or IHS Sub in connection with this Agreement or the transactions contemplated hereby, and no broker, finder, agent or similar intermediary is entitled to any broker's, finder's, agent's or similar fee or other commission in connection therewith based on any agreement, arrangement or understanding with the Purchaser or IHS Sub or any action taken by the Purchaser or IHS Sub.

5.5 Funds Available, Compliance, Liabilities. Purchaser has the funds available required to pay the Purchase Price, to consummate the transactions contemplated hereby and to provide the funding pursuant to Section 6.2 below. Purchaser and IHS Sub have no liabilities outstanding or litigation pending or, to Purchaser's and IHS Sub's knowledge, litigation threatened, which would be materially adverse to the operations of the Luna i–Monitoring Business by the Company, or the ability of the Sellers to earn the Earn-Out Consideration following the acquisition by the Purchaser of the Securities. To the knowledge of Purchaser and IHS Sub, the operation of the business of Purchaser is and has been conducted in all material respects in accordance with all Regulations, except where the failure to do so would not have a Purchaser Material Adverse Effect.

5.6 Full Disclosure. The documents and other papers delivered by or on behalf of Purchaser and IHS Sub to the Sellers in connection with this Agreement and the other Transaction Documents do not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements made, in the context in which made, not false or misleading.

ARTICLE VI
POST-CLOSING COVENANTS

6.1 Employees and Employee Benefits.

(a) Employment.

(i) Except as otherwise set forth in the Key Employment Agreements for the Key Employees, Purchaser shall, on the Closing Date, cause the Company to offer employment, effective as of October 1, 2003 (the "**Transfer Date**"), to all of the i–Monitoring Employees employed by Luna Innovations as of the Closing Date, at the salaries of such i–Monitoring Employees in effect as of the Closing Date and with comparable benefits as those extended to Purchaser's employees occupying similar positions with Purchaser. With respect to each i–Monitoring Employee who accepts the Company's offer of employment or continues to be employed by the Company after the Closing Date and each Key Employee (each, a "**Transferred Employee**"), each such Transferred Employee's years of employment with Luna Innovations shall be carried over and the Transferred Employee will be given credit towards those employee benefits and employee benefit plans of Purchaser in effect as of the Closing Date in which such Transferred Employees will participate as employees of the Company, and Purchaser shall cause the Company to assume all accrued vacation and accrued paid time off for such Transferred Employees in the amounts listed in Schedule 4.14(a). Purchaser agrees to pay and be responsible for all cost or expense for severance payments that arise from any subsequent termination of a Transferred Employee's employment by the Company after the Transfer Date and, notwithstanding any other provisions of this Agreement, to be responsible for, and promptly reimburse Sellers with respect to all liability, cost or expense for severance, or any other termination related costs incurred by Sellers, under Luna Innovations' Employee Benefit Plans with respect to any i–Monitoring Employees employed by Luna Innovations as of the Closing Date who are not offered employment by the Company in violation of the terms of this Section 6.1(a). Luna Innovations agrees to pay and be responsible for any cost or expense for severance or any other termination related costs with respect to any i–Monitoring Employees who are offered employment by the Company in accordance with this Section 6.1 but do not accept such offer of employment.

(ii) Purchaser agrees to indemnify and hold Sellers harmless from any liability, claim or obligation relating to Transferred Employees, or beneficiaries of Transferred Employees, which in any way arise under or with respect to any Purchaser Employee Benefit Plans (as defined in Section 6.1(c) below) or any Purchaser employee benefit policies. Luna Innovations agrees to indemnify and hold Purchaser harmless from any liability, claim or obligation relating to Transferred Employees, or beneficiaries of Transferred Employees, which in any way arise under or with respect to any Employee Benefit Plans or employee benefit policies of Luna Innovations prior to the Closing Date.

(b) Health Care Continuation Liability. Purchaser agrees to provide continuation coverage required by Section 4980B of the Internal Revenue Code of 1986, as amended, or Section 601 through 608 of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**") to all Transferred Employees and their covered beneficiaries who incur a "qualifying event" (as such term is defined in ERISA) on or after the Transfer Date.

(c) Employee Welfare Plans. Purchaser and Luna Innovations shall cooperate to maintain Luna Innovations' medical insurance plan as in effect as of the Closing Date, for the period from the Transfer Date up to and including December 31, 2003 (the "**Innovations Medical Plan Extension**") for all Transferred Employees; provided, that Purchaser shall bear all costs of such Innovations Medical Plan Extension; provided further, that the Luna Innovations carrier agrees to such extension. Purchaser shall use its best efforts to provide medical insurance for the Transferred

Employees that provides both Lewis-Gale and Carilion as preferred providers during the eighteen (18) month period commencing December 31, 2003, provided such insurance can be obtained at comparable cost to the medical plans provided during such period to Purchaser's United States employees generally. Purchaser shall be responsible for all claims incurred by Transferred Employees under the Innovations Medical Plan Extension, and shall provide coverage for the Transferred Employees under its medical, group life insurance, disability, cafeteria and other health and welfare plans, and shall provide vacation and other paid time off benefits, which current plans and benefits are listed on Schedule 6.1(c)(i) (collectively with the Innovations Medical Plan Extension, the "**Purchaser Employee Benefit Plans**"). Subject to the terms of this Section 6.1(c) Purchaser shall have the right to modify or terminate the Purchaser Employee Benefit Plans at any time.

(d) Employee Transition.

(i) Luna Innovations agrees to use reasonable efforts to facilitate the transition of Transferred Employees to employment with the Company at and as of the Transfer Date.

(ii) Except to the extent prohibited by law and subject to the written consent of such Transferred Employees, as soon as practicable after the Transfer Date, Luna Innovations shall deliver to Purchaser copies of all personnel files and records relating to Transferred Employees.

(iii) Luna Innovations hereby agrees that it shall cause the accounts, if any, of Transferred Employees in the Seller's 401(k) Plan to be distributed on account of a separation of service as provided by Code Section 401(k)(2)(B)(i)(I) and Internal Revenue Service Revenue Ruling 2000-27.

(iv) Purchaser agrees that it will retain all records relating to Transferred Employees for so long as may be required by applicable laws and standards.

6.2 Funding of Costs. During the Earn-Out Period, Purchaser shall in good faith provide the Company reasonably adequate resources and support in order to enable the Company to generate Revenues and incur Direct Manufacturing Costs so as to enable the Sellers to earn the Earn-Out Consideration from the sale, license or development of Wireless Sensing Products. Notwithstanding the foregoing, Purchaser shall not be obligated to Fund (as defined below) in excess of Two Million Dollars ($2,000,000) in working capital to cover the Costs (as defined below). For purposes of this Section 6.2, the Sellers and Purchasers acknowledge and agree that Two Million Dollars ($2,000,000) represents a reasonable estimate of the minimum amount of Funds necessary to provide sufficient resources to operate the Company in its first year of operations. Prior to a Company Change of Control, Purchaser shall make appropriate provision or cause appropriate provision to be made so that Purchaser's obligations under Section 2.2, Articles VI and IX are expressly assumed by the acquiring Person. For purposes of this Section 6.2, "**Costs**" shall include all costs, expenses and expenditures necessary to operate the Company's business as carried on by the Company, Purchaser, and any successor corporations or any affiliates of the foregoing after the Closing Date, including (x) any amounts incurred pursuant to obligations of the Company entered into prior to the Closing

Date, and (y) all costs of the Company, Purchaser, and any successor corporations or any affiliates of the foregoing associated with the development, manufacture, marketing, sales and support of Wireless Sensing Products of the Company after the Closing Date. For purposes of this Section 6.2, "**Fund**" or "**Funded**" shall mean to provide or to have provided an aggregate amount of cash, including cash generated from the operation of the Company, to finance the Company's working capital needs and capital expenditures necessary to develop, manufacture, market and sell and support Wireless Sensing Products.

6.3 Future Technologies. Luna Innovations shall use commercially reasonable efforts for three (3) years following the Closing Date to inform Purchaser of technologies developed by it that may be directly applicable to the Luna i–Monitoring Business in the Upstream Petroleum Market; provided, that such disclosure does not conflict with any licensing agreements between Luna Innovations and any other Person in effect on and as of the Closing Date.

6.4 SBIR Contracts. In consideration of the Purchase Price, Luna Innovations and Purchaser acknowledge and agree, with respect to existing Luna Innovations Small Business Innovation Research (SBIR) contracts set forth on Schedule 6.4 of the Disclosure Schedule (the "**Subcontracted SBIR Contracts**"), which contracts are being completed by the Company as of the date hereof, as follows:

(a) Luna Innovations shall subcontract to the Company the Subcontracted SBIR Contracts within sixty (60) days of the Closing Date (the "**Subcontracts**");

(b) Subject to such rights as the customer under the Subcontracted SBIR Contracts may acquire pursuant to such contract for such engagement, or pursuant to federal law or regulations, all Intellectual Property Rights developed in connection with and through the completion of the Subcontracted SBIR Contracts and existing as of the date hereof, as well as any Intellectual Property Rights developed after the date hereof in connection with and through the completion of the Subcontracted SBIR Contracts, including any derivatives thereof, shall be assigned to the Company concurrently with the subcontract of such Subcontracted SBIR Contracts to Purchaser;

(c) Within thirty (30) days of Luna Innovations' receipt of payment from the customers for the Company's completion of both Subcontracted SBIR Contracts, Luna Innovations shall pay the Company, in cash, by check or by wire transfer, the amount to be negotiated in good faith by Luna Innovations and the Company after the Closing Date, for the Company's completion of such Subcontracted SBIR Contracts it being understood that the Company shall not be required to incur any net loss in connection with completion of the Subcontracted SBIR Contracts;

(d) The Company shall be responsible for, subject to, to the extent permitted by the government prime contract, force majeure and other reasonable conditions to be agreed by the parties in the Subcontracted SBIR Contracts, the completion of all hardware and the software set forth in the applicable Statement of Work to each Subcontracted SBIR Contracts no later than May 31, 2004, including, without limitation, the firmware, concentration & communication unit Ethernet version with software, personal digital assistant software, the digital signal processing code, and design verification testing and demonstration; and

(e) Luna Innovations shall be responsible for all project management, material, travel and customer reports and documentation in connection with the Company's completion of such Subcontracted SBIR Contracts.

6.5 Cooperation and Shared Services for Transition Period. During the period following the Closing and continuing until the Transfer Date, all of the i–Monitoring Employees employed by Luna Innovations as of the Closing Date (each a "**Transition Employee**") will continue to be employed by Luna Innovations. Purchaser shall reimburse Luna Innovations in an amount equal to the salaries of such Transition Employees in effect as of the Closing Date plus the cost of all of the employee benefits for such Transition Employees listed in Schedule 4.14(c) for the period beginning on the Closing Date and ending on the Transfer Date. In addition, Luna Innovations shall provide the Transition Employees and Transferred Employees, as applicable, during the period following the Closing and continuing until November 30, 2003 and without cost to the Company or Purchaser, with access to and use of the Luna Innovations facilities, offices, and equipment to the same degree that Luna Innovations provides the i–Monitoring Employees access to and use of the Luna Innovations facilities, offices and equipment as of the date of this Agreement. Nothing in this Section 6.5 shall affect the at-will nature of the Transition Employees' or Transferred Employees' employment.

6.6 Non-Competition. In consideration of Purchaser's payment of the Purchase Price, Luna Innovations and Purchaser hereby covenant and agree:

(a) Except as set forth in Sections 6.6(b), 6.6(c) and 6.6(d) below, during the three (3) year period commencing on the Closing Date (the "**Non-Compete Period**"), Luna Innovations and Murphy shall not directly or indirectly engage in, own an interest in or control any Person engaging in, the development, manufacture, sale, license and/or other distribution of any wireless sensing devices or wireless sensing device technology for any market that is directly competitive with any i–Monitoring Intellectual Property and/or Wireless Sensing Products, nor will they assist any other Person in any way in engaging or attempting to engage in any of the foregoing activities (the "**Restricted Market**").

(b) Notwithstanding anything set forth in this Agreement to the contrary, Luna Innovations shall be permitted to directly or indirectly engage in, own an interest in or control any Person engaging in, activities that would otherwise be prohibited pursuant to subsection 6.6(a) other than in the Upstream Petroleum Market (the "**Non-Upstream Petroleum Luna i–Monitoring Business**") as follows:

(i) in connection with an award of a contract by the National Oceanic and Atmospheric Administration (the "**NOAA**") pursuant to Luna Innovations' proposal, dated July 12, 2003, to the NOAA (the "**NOAA Contract**"). Purchaser hereby covenants and agrees to sell radio modules to Luna Innovations, upon commercially reasonable terms, in connection with Luna Innovations' fulfillment of the NOAA Contract, provided no Intellectual Property Rights with respect to such modules shall be transferred to NOAA or Luna Innovations, except any such rights as NOAA may acquire pursuant to such engagement or pursuant to federal law or regulations. Any other services, devices or rights to be provided by the Company to Luna Innovations in connection with the NOAA Contract shall be subject to mutual agreement of the parties.

(ii) in connection with Luna Innovations' engagement under any United States Government Small Business Innovation Research Program ("**SBIR Program**"), Small Business Technology Transfer Program ("**STTR Program**"), or other small business set-aside government program under the U.S. Small Business Administration ("**Small Business Programs**"), subject to the provisions of this subsection. In the event any engagement in Small Business Programs on or after the Closing Date results in the development of technology that is directly related to wireless sensing technology and products ("**Developed Technology**") and Purchaser or its affiliates made any Intellectual Property Rights available to Luna Innovations in connection with Luna Innovations' fulfillment of such engagement and such Developed Technology is derived from or constitutes modifications or enhancements to such Intellectual Property Rights, then Luna Innovations shall assign to Purchaser all Intellectual Property Rights in such Developed Technology, subject to (i) Luna Innovations' obtaining any required consent from Baker Hughes Incorporated and Luna Energy, LLC and (ii) any Intellectual Property Rights that the customer under such engagement may acquire pursuant to the contract for such engagement or pursuant to federal law or regulations. In the event any engagement in Small Business Programs on or after the Closing Date results in the development of Developed Technology and Purchaser or its affiliates made any Intellectual Property Rights available to Luna Innovations in connection with Luna Innovations' fulfillment of such engagement and such Developed Technology is not derived from such Intellectual Property Rights, then Luna Innovations shall grant Purchaser a perpetual, nonexclusive, royalty-free license to such Developed Technology, (i) subject to Luna Innovations' obtaining any required consent from Baker Hughes Incorporated and Luna Energy, LLC and (ii) any Intellectual Property Rights as the customer under such engagement may acquire pursuant to the contract for such engagement or pursuant to federal law or regulations. Without limiting the generality of the foregoing, Luna Innovations shall have the right to subcontract any portion of its contracts under such Small Business Programs. Purchaser hereby covenants and agrees to use commercially reasonable efforts to provide and make available to Luna Innovations, upon commercially reasonable terms, such Intellectual Property Rights as Luna Innovations shall reasonably require in connection with Luna Innovations' fulfillment of its contracts under such Small Business Programs. Notwithstanding anything in this Section 6.6(b)(ii) to the contrary, Purchaser shall not be required to provide or make available to Luna Innovations any Intellectual Property Rights with respect to contracts under such Small Business Programs that are expected to lead to the development of "Innovations Newly-Developed IP" in the "Field" (as such terms are defined in the Technology Agreement). In the event that, during the Non-Compete Period, Luna Innovations develops Developed Technology under a contract under such Small Business Programs that is directly applicable to the Luna i–Monitoring Business in the Upstream Petroleum Market, then Luna Innovations shall grant Purchaser a perpetual, non-exclusive, royalty-free license to such Developed Technology, regardless of whether Purchaser or the Company provided or made available to Luna Innovations any Intellectual Property Rights in connection with such contract, subject to any Intellectual Property Rights that the customer may acquire pursuant to the contract for such engagement or pursuant to federal law or regulations.

(iii) except in connection with the NOAA Contract under Section 6(b)(i), and in connection with an engagement under any SBIR Program, STTR Program or other Small Business Programs under Section 6(b)(ii), in connection with (A) specific customer sales opportunities to provide wireless sensing devices and technology to specifically identified end-user customers, or (B) Luna Innovations' entry into a vertical market in the Non-Upstream Petroleum

Luna i–Monitoring Business, either as part of Luna Innovations' business or through a separate entity by means of a spin-off, joint venture, third party license, and similar arrangement (each, an "**LI Opportunity**"), in each case upon (x) Luna Innovations' prior written notice (the "**LI Notice**") to Purchaser of Luna Innovations' desire to pursue such LI Opportunity and such information with respect to the LI Opportunity as the Purchaser may reasonably request, and (y) Purchaser's prior written consent, which consent shall not be unreasonably withheld, if Purchaser reasonably determines that Purchaser shall not itself or through a third party meaningfully pursue such LI Opportunity using commercially reasonable efforts and deploying reasonably sufficient resources within a commercially reasonable period from the date of such LI Notice. Purchaser shall notify Luna Innovations as to whether or not it consents to Luna Innovations pursuing an LI Opportunity pursuant to Section 6.6(b)(iii)(A) above within thirty (30) days of receipt of an LI Notice. Purchaser shall notify Luna Innovations as to whether or not it consents to Luna Innovations pursuing an LI Opportunity pursuant to Section 6.6(b)(iii)(B) above within ninety (90) days of receipt of an LI Notice. Luna Innovations may not provide more than two LI Notices, each for a specifically identified LI Opportunity, pursuant to Section 6.6(b)(iii)(B) above during any twelve-month period. Notwithstanding anything in this Section 6.6(b)(iii) to the contrary, no LI Notice or Purchaser consent shall be required in connection with an LI Opportunity that involves only fiber optic sensors.

In the event that Purchaser does not provide consent to Luna Innovations to pursue an LI Opportunity upon receipt on an LI Notice pursuant to this Section 6.6(b)(iii), Purchaser agrees to cooperate in good faith with Luna Innovations in verifying that Purchaser or a third party is actually pursuing such LI Opportunity pursuant to the terms of this Section 6.6(b)(iii) or, if Purchaser or a third party is not intending to pursue such LI Opportunity, Purchaser agrees to provide to Luna Innovations in reasonable detail the reason(s) for Purchaser not granting its consent. Without limiting the generality of the foregoing, Purchaser shall not be required to consent to any LI Opportunity that would permit a third party to compete with the Company Entities or the Purchaser Entities. In the event that Purchaser provides Luna Innovations consent to pursue an LI Opportunity pursuant to this Section 6.6(b)(iii), and provided Purchaser is willing to make Intellectual Property and/or Wireless Sensing Products available to Luna Innovations in connection with the LI Opportunity, then Luna Innovations and Purchaser covenant and agree that the parties shall negotiate in good faith for Luna Innovations to (x) purchase or license such Wireless Sensing Products from Purchaser, and (y) license such Intellectual Property Rights from Purchaser, in each case upon commercially reasonable terms, as are reasonably required for Luna Innovations to pursue such LI Opportunity. In the event Purchaser provides consent to Luna Innovations to pursue an LI Opportunity, Luna Innovations agrees to cooperate with Purchaser in verifying that Luna Innovations is actually pursuing such LI Opportunity using commercially reasonable efforts and deploying reasonably sufficient resources within a commercially reasonable time from the date of such LI Notice.

(c) Nothing in this Section 6.6 shall restrict Luna Innovations or Murphy from engaging in the Restricted Market during the Non-Compete Period in connection with Luna Innovations' ownership interest in Luna Energy, LLC, provided Luna Innovations will not provide development or other services to Luna Energy, LLC for wireless communications during the Non-Compete Period.

(d) Notwithstanding anything set forth in this Section 6.6 and this Agreement to the contrary, nothing herein shall preclude Luna Innovations or Murphy, as applicable, or any of their affiliates from (i) licensing any Intellectual Property Rights which Luna Innovations or its affiliates retain rights to or ownership of (excluding Intellectual Property Rights for which rights were licensed or otherwise transferred to the Company or IHS Sub by Luna Innovations) to any person or entity, so long as such licensing by Luna Innovations is not in violation of the terms and conditions of this Agreement (including this Section 6.6) or any other Transaction Documents, (ii) acquiring and thereafter operating, or investing in, any business or entity (an "**Acquired Business**"), provided that not more than ten percent (10%) of the revenues of the Acquired Business is not, at the time of acquisition by Luna Innovations or its affiliates, derived from activities which would be precluded under this Section 6.6, and the activities which are precluded are either terminated or divested to an independent third party within six (6) months of the acquisition, or (iii) being a passive owner of not more than one percent (1%) of the outstanding stock of any class of a competing corporation of Purchaser in the Luna i–Monitoring Business that is publicly traded, so long as Luna Innovations has no active participation in the business of such corporation.

(e) During the (i) two (2) year period following the Closing Date with respect to the Key Employees, and (ii) one (1) year period following the Closing Date with respect to all Transferred Employees other than the Key Employees, Luna Innovations and Murphy shall not directly or indirectly hire or solicit for employment or consulting or other services on their own behalf or on behalf of any other Person any Transferred Employee unless such Transferred Employee is terminated by the Company or resigns from the Company as a result of (A) a Business Termination Decision, (B) a non-performance-related lay-off or reduction in force, (C) a reduction in such Transferred Employee's base salary of more than five percent (5%), or (D) the relocation of the Company's business more than thirty (30) miles from Roanoke, Virginia or Blacksburg, Virginia; provided, however, nothing in this Section 6.6(e) shall prevent the Key Employees from serving on boards of directors, committees of boards of directors, advisory boards or other advisory roles as permitted under the Key Employee Agreements.

(f) Notwithstanding any other provision of this Agreement, it is understood and agreed that any remedies at law would be inadequate in the case of any breach of the covenants contained in this Section 6.6. The Purchaser Entities and the Company Entities shall be entitled to equitable relief, including the remedy of specific performance, with respect to any breach or attempted breach of the covenants contained in this Section, without the necessity of posting bond.

(g) The parties hereto agree that the duration and area for which the covenant not to compete set forth in this Section 6.6 is to be effective are reasonable. In the event that any court determines that the time period or the area, or both of them, are unreasonable and that such covenant is to that extent unenforceable, the parties hereto agree that the covenant shall remain in full force and effect for the greatest time period and in the greatest area that would not render it unenforceable. The parties intend that this covenant shall be deemed to be a series of separate covenants, one for each and every political subdivision of each and every state of the United States of America and each and every political subdivision of each and every country throughout the world where this covenant is intended to be effective.

6.7 Consistent Operations; Adequate Capital. In addition to the terms of Section 6.2 above, at and after the Closing Date and during the Earn-Out Period, the Purchaser Entities shall use commercially reasonable efforts to operate the Company's business in good faith so as to not materially adversely impact (i) the ability of the Company to develop, manufacture, market and sell Wireless Sensing Products, and (ii) the Earn-Out Consideration to be earned by Sellers during the Earn-Out Period. Subject to Sections 2.2 and 6.2 hereof, the Purchaser Entities shall not be liable to the Sellers hereunder with respect to any decision, and any exercise thereof, to cease operations of the Company's business and/or the sale, license and/or development of Wireless Sensing Products that is made in good faith and in the exercise of reasonable business judgment (each, a "**Business Termination Decision**"); provided, however, a Company Change of Control, a Subsequent Company Change of Control or a Purchaser Change of Control shall not be deemed a Business Termination Decision hereunder if such successor entities in good faith continue the operations of the Company's business and/or the sale, license and development of Wireless Sensing Products. In the exercise of such judgment, Purchaser may consider appropriate market factors, including the ability to develop Wireless Sensing Products that meet the functionality and performance required by the Upstream Petroleum Market and the degree of acceptance of the Wireless Sensing Products by the Upstream Petroleum Market.

6.8 Effect of a Business Termination Decision. In the event that any Purchaser Entity exercises Purchaser's Business Termination Decision pursuant to Section 6.7 hereof and ceases the operations of the Company's business and/or the sale, license and/or development of Wireless Sensing Products during the Earn-Out Period, then the Purchaser, IHS Sub and the Sellers acknowledge and agree as follows:

(a) Sections 6.3, 6.5, 6.6 and 9.11 hereof shall become null and void and shall have no further force or effect.

(b) The Key Employee Agreements shall become null and void and shall have no further force or effect; provided, Purchaser shall be obligated to pay all compensation, bonus and benefits earned and other obligations of the Company as provided for under the Key Employee Agreements.

(c) The Subcontracts shall become null and void and shall have no further force or effect.

6.9 Additional Transaction Costs. In the event of any fees, expenses, costs or expenditures incurred by the Company from the Closing Creditors in connection with the Agreement in addition to the Transaction Costs, Sellers shall be responsible for and shall pay all such amounts.

ARTICLE VII
TERMINATION, AMENDMENT AND WAIVER

7.1 Termination. Except as provided in Section 7.3 this Agreement may be terminated and the transactions contemplated hereby abandoned at any time prior to the Closing:

(a) by mutual written consent duly authorized by Purchaser and the Seller Majority;

(b) by either Purchaser or the Seller Majority if the Closing Date shall not have occurred for any reason by October 31, 2003, (the "**End Date**"); provided, however, that the right to terminate this Agreement under this Section 7.1(b) shall not be available to any party whose (or whose affiliate's) action or failure to act has been a principal cause of or resulted in the failure of the Closing Date to occur on or before such date and such action or failure to act constitutes a material breach of this Agreement;

(c) by either Purchaser or the Seller Majority if a Governmental Entity shall have issued an order, decree or ruling or taken any other action, in any case having the effect of permanently restraining, enjoining or otherwise prohibiting the transactions contemplated hereby, which order, decree, ruling or other action is final and nonappealable;

(d) by Purchaser, upon a breach in any material respect of any representation, warranty, covenant or agreement on the part of Sellers set forth in this Agreement, or if any representation or warranty of Sellers shall have become untrue in any material respect, in either case such that the conditions set forth in Section 3.2(a) would not be satisfied by the End Date, provided, that if such inaccuracy in Sellers' representations and warranties or breach by Sellers is curable by Sellers through the exercise of their commercially reasonable efforts, then Purchaser may not terminate this Agreement under this Section 7.1(d) prior to the End Date, provided Sellers continue to exercise commercially reasonable efforts to cure such breach (it being understood that Purchaser may not terminate this Agreement pursuant to this paragraph (d) if it shall have materially breached this Agreement or if such breach by Seller is cured prior to the End Date); and

(e) by the Seller Majority, upon a breach in any material respect of any representation, warranty, covenant or agreement on the part of Purchaser set forth in this Agreement, or if any representation or warranty of Purchaser shall have become untrue in any material respect, in either case such that the conditions set forth in Section 3.2(b) would not be satisfied by the End Date, provided, that if such inaccuracy in Purchaser's representations and warranties or breach by Purchaser is curable by Purchaser through the exercise of its commercially reasonable efforts, then the Seller Majority may not terminate this Agreement under this Section 7.1(e) prior to the End Date, provided Purchaser continues to exercise commercially reasonable efforts to cure such breach (it being understood that the Seller Majority may not terminate this Agreement pursuant to this paragraph (e) if any Seller shall have materially breached this Agreement or if such breach by Purchaser is cured prior to the End Date).

7.2 Notice of Termination. Any termination of this Agreement under Section 7.1 will be effective immediately upon the delivery of written notice thereof by the terminating party to the other parties hereto (or, in the case of termination pursuant to Section 7.1(d) or Section 7.1(e), on the date specified therein).

7.3 Effect of Termination. In the event of termination of this Agreement as provided in Section 7.1, this Agreement shall forthwith become void and there shall be no liability or obligation on the part of any party hereto, or its affiliates, officers, directors or stockholders, provided that each

party shall remain liable for any breaches of this Agreement prior to its termination; provided that Article IX and this Section 7.3 of this Agreement shall remain in full force and effect and survive any termination of this Agreement. Notwithstanding the foregoing, no termination of this Agreement shall relieve any party from liability for any breach hereof prior to such termination.

7.4 Amendment. This Agreement may be amended by the parties hereto at any time by execution of an instrument in writing signed on behalf of Purchaser and the Seller Majority.

7.5 Extension; Waiver. At any time prior to the Closing, Purchaser, on the one hand, and Seller Majority, on the other hand, may, to the extent legally allowed, (i) extend the time for the performance of any of the obligations of the other party hereto, (ii) waive any inaccuracies in the representations and warranties made to such party contained herein or in any document delivered pursuant hereto, and (iii) waive compliance with any of the agreements or conditions for the benefit of such party contained herein. Any agreement on the part of a party hereto to any such extension or waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party.

ARTICLE VIII
INDEMNIFICATION

8.1 Survival of Representations, Warranties and Covenants. The representations and warranties of the parties contained in this Agreement or in any instrument delivered pursuant hereto shall survive the Closing Date and shall be effective with respect to any breach thereof, and will remain in full force and effect for a period of eighteen (18) months from the Closing Date, provided, however, that (i) the representations and warranties of Luna Innovations contained in Sections 4.2, 4.6 (with respect to environmental matters), 4.10(a), 4.10(d), and 4.12, the Sellers contained in 4.19, and the representations and warranties of Purchaser contained in Sections 5.2 and 5.5 shall survive for the longer of the period of three (3) years from the Closing Date or any applicable statute of limitations period; and (ii) the representations and warranties made by Luna Innovations with respect to Tax obligations and liabilities shall survive for such period of time as shall be available to taxing authorities for the assessment of Taxes (including any extension of such period by waiver or otherwise) and for six (6) months after the end of such period. The covenants and agreements of the parties contained in this Agreement or in any instrument delivered pursuant hereto shall survive the Closing Date and shall be effective without limit to their term.

8.2 Indemnification by the Sellers.

(a) Subject to Sections 8.2(c) and 8.4 hereof, the Sellers agree severally, but not jointly, to indemnify and hold harmless the Purchaser and its directors, officers, employees, affiliates (including, without limitation, the Company) successors and permitted assigns (the "**Purchasers Indemnitees**") from and against any claims, losses, damages and out-of-pocket expenses (including legal expenses) (collectively, "**Losses**") which may be sustained, suffered or incurred by reason of or arising from a breach of any representation, warranty, covenant or agreement of Luna Innovations and/or any other Seller contained in this Agreement or the Transaction Documents, or a claim by a third party that, without regard to the merits of the claim, would constitute such a breach.

(b) Subject to Section 8.2(c) and 8.4 hereof, and except for the liabilities and obligations set forth on Schedule 4.5, Luna Innovations agrees to indemnify and hold harmless the Purchaser Indemnitees from and against any Losses which may be sustained, suffered or incurred by reason of or arising from (i) any unpaid Taxes of the Company prior to the Closing Date or (ii) any other obligations arising out of or relating to the operation of the Luna i–Monitoring Business or the ownership of the Luna i–Monitoring Assets prior to the Closing Date.

(c) Notwithstanding anything to the contrary in Section 8.2(a) or 8.2(b) hereof, (i) the Sellers shall not be required to make any payment with respect to indemnification pursuant to Section 8.2(a) for breach of any representation or warranty, or pursuant to Section 8.2(b), until the aggregate amount of losses, damages and expenses sustained, suffered or incurred by the Purchaser Indemnities pursuant to Section 8.2(a) by reason of or arising from breaches of representations and warranties, or pursuant to Section 8.2(b), exceeds on a cumulative basis $25,000, in which case the Sellers shall be responsible for all losses, damages and expenses above the first $25,000 thereof, and (ii) the obligation of Sellers to indemnify the Purchaser Indemnities pursuant to Section 8.2(a) for breach of any representation or warranty, or pursuant to Section 8.2(b), shall be limited in the aggregate to the cash Purchase Price actually paid to the Sellers (the "**Indemnification Limitation**"); provided, however, nothing in this Section 8.2(c) shall prevent Purchaser from exercising any right of off-set against Earn-Out Consideration Purchaser is otherwise obligated to pay to the Sellers; and, provided further, however, the Indemnification Limitation shall not apply to Losses that result from Sellers' fraud or fraudulent misrepresentations. The liability of each Seller pursuant to Section 8.2(a) and 8.2(b) shall be several and not joint and (A) with respect to claims for Losses made by Purchaser Indemnitees prior to nine (9) months after the Closing Date, shall be calculated pro rata based on such Seller's pro rata share of the Purchase Price actually paid to the Sellers and (B) with respect to claims for Losses made by Purchaser Indemnitees between nine (9) months after the Closing Date and the end of the applicable indemnification period, shall be calculated as follows: (x) with respect to Luna Innovations, one hundred percent (100%) of the share of the Purchase Price actually paid to Luna Innovations, and (y) with respect to the Sellers other than Luna Innovations, fifty percent (50%) of such Seller's share of the Purchase Price actually paid to such Seller.

(d) The obligations of the Sellers to indemnify the Purchaser Indemnitees pursuant to Section 8.2 are primary obligations of the Sellers. Each Seller hereby waives any rights to seek or obtain indemnification, contribution or any other payment from the Company for claims, losses, damages or expenses which may be sustained, suffered or incurred pursuant to Section 8.2 whether such rights arise under any agreement between any Seller and the Company, the Company's certificate of incorporation or by-laws or otherwise.

8.3 Indemnification by the Purchaser.

(a) Subject to Section 8.3(b) and 8.4 hereof, the Purchaser agrees to indemnify and hold harmless the Sellers and their respective directors, officers, employees, affiliates, successors and assigns (the "**Seller Indemnitees**") from and against any Losses which may be sustained, suffered or incurred by reason of or arising from a breach of any representation, warranty, covenant or agreement of the Purchaser contained in this Agreement, or a claim by a third party that, without regard to the merits of the claim, would constitute such a breach.

(b) Notwithstanding anything to the contrary in Section 8.3(a), (i) Purchaser shall not be required to make any payment with respect to indemnification pursuant to Section 8.3(a) for breach of any representation or warranty, until the aggregate amount of losses, damages and expenses sustained, suffered or incurred by the Seller Indemnities pursuant to Section 8.3(a) by reason of or arising from breaches of representations and warranties exceeds on a cumulative basis $25,000, in which case the Purchaser shall be responsible for all losses, damages and expenses above the first $25,000 thereof, and (ii) the obligation of Purchaser to indemnify the Seller Indemnities pursuant to Section 8.3(a) for breaches of representations and warranties shall be limited in the aggregate Nine Million Dollars ($9,000,000); provided, however, the Indemnification Limitation shall not apply to Losses that result from Purchasers' fraud or fraudulent misrepresentations.

8.4 Procedure for Indemnification. Any notice of a claim for indemnification under Section 8.2 or 8.3 (which shall be given as promptly as possible) shall state with reasonable specificity the provision(s) of this Agreement with respect to which the claim is made, the facts giving rise to the claim, and if ascertainable, the amount of the liability asserted by reason of the claim. Promptly after receipt by an indemnified party under Section 8.2 or 8.3 of notice of the commencement of any legal action, the indemnified party shall, if a claim in respect of the action is to be made against an indemnifying party under Section 8.2 or 8.3, as the case may be, give notice to the indemnifying party of the commencement of the action, but a failure to so notify the indemnifying party shall not relieve it of any liability it may have to any indemnified party, except to the extent that the indemnifying party demonstrates that the defense of the action is prejudiced by the delay (it being understood that any notice of claim for misrepresentation or breach of warranty must be given within the applicable time period set forth in Section 8.1). In case any such action shall be brought against an indemnified party and it shall give notice to the indemnifying party of the commencement of the action, the indemnifying party shall be entitled to participate in the action and, to the extent that it shall wish, to assume the defense of the action with counsel reasonably satisfactory to the indemnified party. If the indemnifying party notifies the indemnified party of its election so to assume the defense of the action, the indemnifying party shall control the defense of the action and shall not be liable to the indemnified party under Section 8.2 or 8.3, as the case may be, for any fees of other counsel or any other expenses, in each case subsequently incurred by the indemnified party in connection with the defense of the action (it being understood, however, that the indemnified party shall be entitled to participate in the action at its own cost and expense). If an indemnifying party assumes the defense of an action, no compromise or settlement of the action may be effected by the indemnifying party without the indemnified party's consent, unless (a) there is no finding or admission of any violation of law and no effect on the business of the indemnified party and on any other claim that may be made against the indemnified party, and (b) the sole relief provided is monetary damages that are paid in full by the indemnifying party. If notice is given to an indemnifying party of the commencement of any action and it does not, within ten days after the indemnified party's notice is given, give notice to the indemnified party of its election to assume the defense of the action, the indemnified party may assume the defense of the action and the indemnifying party shall be bound by any determination made in such action. The parties shall cooperate with each other in the defense of any third party claims described in this Section 8.

ARTICLE IX
MISCELLANEOUS

9.1 Notices. All notices, consents and other communications under this Agreement shall be in writing and shall be deemed to have been duly given when (a) delivered by hand, (b) sent by telecopier (with receipt confirmed), provided that a copy is also sent as provided in (a) or (b) of this Section, or (c) sent by Express Mail, Federal Express or other generally recognized express delivery service (receipt requested), in each case to the appropriate addresses, and telecopier numbers set forth below (or to such other addresses and telecopier numbers as a party may designate as to itself by notice to the other parties):

(a) If to the Purchaser or to IHS Sub:

IHS Energy Group Inc.
15 Inverness Way East
Englewood, CO 80112
Telecopier No.: (303) 736-3800
Attention: President

with a copy to:

IHS Group Services Inc.
1350 Avenue of the Americas, Suite 840
New York, New York 10019
Telecopier No.: (212) 850-8540
Attention: General Counsel

(b) If to Sellers:

Luna Innovations Incorporated
2851 Commerce Street
Blacksburg, VA 24060
Attention: Kent A. Murphy, Ph.D.
Telecopier No.: (540) 951-0760

with a copy to:

Wilson Sonsini Goodrich & Rosati, PC
11921 Freedom Drive, Suite 600
Reston, VA 20190
Attn: Trevor Chaplick, Esq.
Telecopier No.: (703) 734-3199

9.2 Jurisdiction. Subject to Section 2.2(f), any action or proceeding seeking to enforce any provision of, or based on any right arising out of, this Agreement may be brought against any of the parties in the courts of the State of Colorado or, if it has or can acquire jurisdiction, in the United States District Court for Colorado, and each of the parties hereby consents to the nonexclusive jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. Process in any action or proceeding referred to in this Section may be served on any party through the procedures established for notice herein.

9.3 Entire Agreement. This Agreement, and the Exhibits, Schedules and Disclosure Schedule hereto (all of which are an integral part of this Agreement), constitute the entire agreement and understanding of the Sellers and the Purchaser with respect to the matters herein set forth, and all prior negotiations, understandings, communications, representations, and agreements of the parties hereto relating to the subject matter of this Agreement, whether written or oral, are merged herein and are superseded and canceled by this Agreement, including, without limitation, any financial or other projections or predictions regarding the Luna i–Monitoring Assets, the Luna i–Monitoring Business or the Earn-Out Consideration. Prior drafts shall have no interpretive effect.

9.4 Construction. When the context so requires, references herein to the singular number include the plural and vice versa and pronouns in the masculine or neuter gender include the feminine. The headings contained in this Agreement and the tables of contents, exhibits and schedules are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

9.5 Assignment. This Agreement may not be assigned without the prior written consent of the Purchaser and the Seller Majority, which consent shall not unreasonably be withheld, except that, subject to Sections 2.2 and 6.2 hereof, Purchaser may assign this Agreement without any consent to an acquiring Person in connection with a Company Change of Control or pursuant to Section 9.10 hereof.

9.6 Waivers and Amendments. This Agreement may be amended, modified, superseded, canceled, renewed or extended, and the terms and conditions hereof may be waived, only by a written instrument signed by the Purchasers and the Seller Majority hereto or, in the case of a waiver, by either Purchaser or the Seller Majority, as the applicable party waiving compliance. No delay on the part of any party in exercising any right, power or privilege hereunder, nor any single or partial exercise of any right, power or privilege hereunder, shall preclude any other right, power or privilege hereunder. The rights and remedies herein provided are cumulative and are not exclusive of any rights or remedies that any party may otherwise have under applicable law.

9.7 Further Assistance. Each party shall from time to time at and after the date hereof execute and deliver such documents and other papers and perform such further acts, as the other party may reasonably request to carry out the purpose and intent of this Agreement, including any such further documents and acts as Purchaser may reasonably request in connection with the LI Transfer Documents.

9.8 Headings. The headings in this Agreement, and in the Exhibits, Schedules and Disclosure Schedules hereto, are for the convenience of reference only and shall not limit or otherwise affect any of the terms or provisions hereof.

9.9 Severability. If and to the extent that any court of competent jurisdiction holds any provisions (or any part thereof) of this Agreement to be invalid or unenforceable, such holding shall in no way affect the validity of the remainder of this Agreement.

9.10 Binding Effect. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns. The Purchaser may assign its right to

purchase the Securities to an affiliate of the Purchaser; provided, however, such assignment shall not limit the Purchaser's obligations hereunder. IHS Sub may assign its right to purchase the Purchaser Transferred Property to an affiliate of Purchaser; provided, however, such assignment shall not limit the Purchaser's or IHS Sub's obligations hereunder.

9.11 Nondisclosure. Each of the Sellers agrees that it will not, at any time hereafter, make use of or disclose (except to the Purchaser or IHS Sub) any proprietary information (except that which is in the public domain) relating to the business, technology products, customers, suppliers or other affairs of the Company and/or the Luna i–Monitoring Business, the ("**Proprietary Information**"), except that disclosure of the Proprietary Information may be made (i) as required by law, regulation, rule or order, subpoena, judicial order or similar order, provided the Purchaser is given prior notice and the opportunity to seek a protective order or other limitation on such disclosure; (ii) to Sellers' respective legal counsel or accountant and any professional tax advisor to the extent that they need to know the Proprietary Information in order to provide such legal counsel, tax advice or tax treatment or to prepare tax returns, as applicable, provided such advisors are required to maintain the confidentiality of the Proprietary Information; (iii) by Luna Innovations to the extent, if any, permitted by any license which Luna Innovations has to any Intellectual Property Rights of the Company pursuant to a license entered into between Luna Innovations and the Company subsequent to the Closing Date; (iv) by Luna Innovations in connection with its obligations under the Subcontracted SBIR Contracts mentioned in Section 6.4; and (v) by Luna Innovations in connection with its use of Retained Assets, subject to Section 3 of the Non-Exclusive Intellectual Property License Agreement and subject to the Exclusive Intellectual Property License Agreement.

9.12 Expenses. Except as herein otherwise provided, the Sellers, IHS Sub and the Purchaser shall bear their respective direct and indirect legal and other fees and expenses incurred in connection with the negotiation, preparation or execution of this Agreement, including, but not limited to, all fees and expenses of agents, representatives, counsel and accountants. Without limiting the generality of the foregoing, the Company shall not be charged for any of the foregoing expenses.

9.13 Public Announcements. Neither Sellers, Purchaser, IHS Sub, their respective affiliates, nor the agents and representatives of Purchaser, Sellers, IHS Sub, or their affiliates, will make any press release or public announcement concerning the existence of this Agreement or the transactions contemplated hereby, except to the extent legally required to do so after consultation with the other party hereto, or with the prior consent of the other party hereto.

9.14 No Third-Party Rights. This Agreement is intended for the exclusive benefit of the parties hereto and their respective successors and assigns. Except as expressly noted, nothing contained in this Agreement shall be construed as granting any rights or benefits in or to any third party, and no Person shall assert any rights as third-party beneficiary hereunder.

9.15 Acknowledgement. The parties each acknowledge that all the terms and conditions in this Agreement and the other Transaction Documents have been the subject of active and complete negotiation between the parties and represent the parties' agreement based upon all relevant considerations. The parties agree that the terms and conditions of this Agreement and such other

documents shall not be construed in favor of or against any party by reason of the extent to which any party or its professional advisors participated in the preparation hereof or thereof.

9.16 Governing Law. This Agreement shall be governed by, and be construed in accordance with, the laws of the State of Delaware, without regard to the conflict of laws principles thereof.

9.17 Failure to Close. If for any reason this Agreement is terminated prior to Closing, Purchaser shall promptly upon the request of Sellers return to Sellers and the Company all documents and other information, including all originals and all copies thereof, theretofore delivered to Purchaser by or on behalf of Sellers or the Company and shall destroy any notes made therefrom.

9.18 Exhibits and Schedules. The Exhibits, Schedules and Disclosure Schedules attached hereto are incorporated into this Agreement and shall be deemed a part hereof as if set forth herein in full. References herein to "this Agreement" and the words "herein," "hereof" and words of similar import refer to this Agreement (including Exhibits, Schedules and Disclosure Schedules) as an entirety. In the event of any conflict between the provisions of this Agreement and any such Exhibit, Schedule or Disclosure Schedule, the provisions of this Agreement shall control.

9.19 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Share Purchase and Asset Transfer Agreement to be duly executed as of the day and year first above written.

PURCHASER:

IHS ENERGY GROUP INC.

By: _____
Name: _____
Title: _____

SELLERS:

LUNA INNOVATIONS INCORPORATED

By: _____
Name: _____
Title: _____

_____
Kent A. Murphy, in his individual capacity

_____
Kenneth D. Ferris, in his individual capacity

_____
Roberta Denise Couch, in her individual capacity

_____
Walter Daub, in his individual capacity

_____
Robert L. Martinet, in his individual capacity

_____
Michael F. Gunther, in his individual capacity

_____
Robert M. Harman, in his individual capacity

IHS SUB:

IHS ENERGY INNOVATIONS, INC.

By: _____

Name: _____

Title: _____

SIGNATURE PAGE TO SHARE PURCHASE AND ASSET TRANSFER AGREEMENT

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 21, 2006, accompanying the consolidated financial statements of Luna Innovations, Incorporated, contained in the Registration Statement (Form S-1 No. 333-131764) and Prospectus. We consent to the use of the aforementioned reports in Amendment No. 2 to the Registration Statement and Prospectus, and to the use of our name as it appears under the caption "Experts."

/S/ Grant Thornton LLP

Vienna, Virginia
April 26, 2006

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Registration Statement on Form S-1 (Registration No. 333-131764) of Luna Innovations Incorporated of our report dated September 22, 2005 relating to the financial statements of Luna Technologies, Inc. as of December 31, 2004 and for the year then ended appearing in the Prospectus, which is part of this Registration Statement. We also consent to the reference to us under the heading "Experts" in such Prospectus.

/S/ Brown, Edwards & Company, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

Christiansburg, Virginia
April 26, 2006

Wilson Sonsini Goodrich & Rosati
Professional Corporation
Two Fountain Square, Reston Town Center
11921 Freedom Drive, Suite 600
Reston, Virginia 20190
(703) 734-3100 telephone
(703) 734-3199 telecopy

April 26, 2006

VIA EDGAR AND OVERNIGHT DELIVERY

Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549-6010

Mail Stop 6010

Attention: Mr.Jeffrey P. Riedler
Ms. Sonia Barros
Ms. Suzanne Hayes
Ms. Tabitha Akins
Mr. Oscar Young

Re: Luna Innovations Incorporated
Registration Statement on Form S-1 (File No. 333-131764)
Initially filed on February 10, 2006
Amendment No. 2 filed on April 10, 2006

Ladies and Gentlemen:

On behalf of Luna Innovations Incorporated (the "**Company**") we are transmitting for filing Amendment No. 3 to the above referenced registration statement ("**Amendment No. 3**"). We are also submitting with Amendment No. 3 the Company's response (the "**Company Response**") to the comments from the staff of the Securities and Exchange Commission received by letter dated April 24, 2006 (the "**Staff Letter**").

For the convenience of the Staff, we are supplementally providing marked copies, complete with exhibits, of Amendment No. 3, as well as supplemental copies of the Company Response.

Please direct any questions or comments regarding Amendment No. 3 and the Company Response to me at (703) 734-3105.

Very truly yours,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

Mark R. Fitzgerald

April 27, 2006

VIA EDGAR AND OVERNIGHT DELIVERY

Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549-6010

Mail Stop 6010

Attention: Mr. Jeffrey P. Riedler
Ms. Sonia Barros
Ms. Suzanne Hayes
Ms. Tabitha Akins
Mr. Oscar Young

Re: Luna Innovations Incorporated
Registration Statement on Form S-1 (File No. 333-131764)
Initially filed on February 10, 2006
Amendment No. 2 filed on April 10, 2006

Ladies and Gentlemen:

On behalf of Luna Innovations Incorporated (the "**Company**"), we respectfully submit this letter in response to comments from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**Commission**") received by letter dated April 24, 2006, relating to the Company's Amendment No. 2 ("**Amendment No. 2**") to Registration Statement on Form S-1 (File No. 333-131764) filed with the Commission on April 10, 2006 (the "**Registration Statement**").

The Company is concurrently filing via EDGAR Amendment No. 3 to the Registration Statement ("**Amendment No. 3**"), marked in accordance with Rule 310 of Regulation S-T. For the convenience of the Staff, we are supplementally providing marked copies, complete with exhibits, of Amendment No. 3.

In this letter, we have recited the comments from the Staff in italicized, bold type and have followed each comment with the Company's response thereto. Except as otherwise specifically indicated, page references in the Company's response are to the corresponding page in Amendment No. 3. References to "we," "our" or "us" mean the Company or its advisors, as the context may require.

Use of Proceeds, page 28

1. *We note your response to our prior comment 17 and reissue that comment in part. Please estimate the amount of funds you anticipate using for each project and identify the stage of development you expect to achieve with those funds. You state that you intend to use the net proceeds of this offering to partially fund FDA clinical trials of your MRI contrast agent and ultrasound medical device products, but that due to the uncertainties inherent in the clinical trial process you are unable to estimate the total costs that will be required to complete FDA clinical trials. You do not have to provide an estimate of the total costs to complete FDA clinical trials. You must, however, disclose any amounts you currently expect to spend on this project and the stage of development you expect to achieve with these funds.*

RESPONSE TO COMMENT 1:

The Company has revised the disclosure at page 28 of Amendment No. 3 in accordance with the Staff's comment.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 35

2. *Please revise your disclosure on page 36 to disclose the amount paid by Baker Hughes in December 2004 to acquire your remaining equity interest in Luna Energy at that time. We note your statement in footnote 5 to the financial statements that Baker Hughes acquired all of the remaining equity interest for a non-refundable payment of $990,000.*

RESPONSE TO COMMENT 2:

The Company has revised the disclosure at page 36 of Amendment No. 3 in accordance with the Staff's comment.

3. *We note your response to our prior comment 19 and reissue that comment in part. Please supplementally explain to us the basis for your statement that you do not anticipate that the amounts you may receive in the future from Luna i-Monitoring will be material to your business. It appears that IHS Energy Group may have to*

pay you up to an aggregate of $2.5 million based on a percentage of Luna i-Monitoring sales from December 1, 2003 through November 30, 2008. In addition, to the extent these future payments are material, please file the relevant agreement with IHS Energy Group as an exhibit to the registration statement and summarize the material provisions in your business section.

RESPONSE TO COMMENT 3:

The Company has revised the disclosure at page 36 of Amendment No. 3 to clarify that based on historical Luna i-Monitoring sales, as well as an $8.6 million aggregate sales minimum threshold before the Company is entitled receive any additional payments based on Luna i-Monitoring sales, the Company believes it is unlikely to receive payments in the future that will be material to its business. However, notwithstanding what the Company believes to be a low likelihood of receiving material payments, because the absolute dollar amount of the potential $2.5 aggregate payment amount is material as set forth in the Share Purchase and Asset Transfer Agreement by and among IHS Energy Group, Inc., IHS Energy Innovations, Inc., the Company and the other selling stockholders (the "**IHS Energy Agreement**"), the Company has elected to file the IHS Energy Agreement with Amendment No. 3 as Exhibit 10.33 thereto. The Company has included a summary of the material provisions of the IHS Energy Agreement relating to potential future payments to the Company in the business section of the Registration Statement at page 52 of Amendment No. 3.

Critical Accounting Policies and Estimates, page 38

4. *The additional disclosures on pages 38 through 41 do not appear to have sufficiently addressed prior comment 22. As such, for each of your critical accounting estimates, please provide all of the information we had requested. Otherwise, as was contemplated by prior comment 23, please justify the extent to which any specific information is either inapplicable to a particular estimate or impracticable to provide. Based on the extent of your contract research revenues and your disclosure that its recognition inherently involves estimation, all of the information we requested appear to be applicable and practicable.*

RESPONSE TO COMMENT 4:

The Company has revised the disclosures at pages 38-41 of Amendment No. 3 in accordance with the Staff's comment to focus on critical policies that are subject to significant judgment and estimates.

Results of Operations, page 41

Other Income (Expense), page 42

5. *We note your statement that prior to your acquisition of Luna Technologies in September 2005, your pro rata portion of the losses of Luna Technologies were reported in "operating income." This does not appear to explain the reason for the decrease in other expenses. If you meant to refer to "other income" please revise. Also, if the decrease in other expenses was also due to the fact that Luna Technologies had no losses for the nine months ended September 30, 2005, please add this to the explanation.*

RESPONSE TO COMMENT 5:

The Company has revised the disclosure at page 43 of Amendment No. 3 to clarify that the decrease in other expense in 2005 was a result of consolidating the operating activity of Luna Technologies following the Company's acquisition of the remaining outstanding equity of Luna Technologies in 2005. For 2004, the Company's pro rata portion of the losses of Luna Technologies was reflected in other income (expense) because Luna Technologies was accounted for as an equity-method investment. The Company's share of losses in Luna Technologies from January 1, 2005 to September 30, 2005, the acquisition date, was nominal. Luna Technologies' operating results from the acquisition date through the end of the period have been included in the Company's operating results.

Summary of Contractual Obligations, page 45

6. *Please revise your table to include the Carilion Health Systems and the Virginia Tech Foundation notes, as well as any expected interest payments, consistent with Item 303(a)(5) of Regulation S-K and Financial Reporting Release 67.*

RESPONSE TO COMMENT 6:

The Company has revised the disclosure at page 47 of Amendment No. 3 in accordance with the Staff's comment.

Business, pages 46

Products Group, page 53

Luna nanoWorks Division, pages 55-57

7. On page 55 you state that Luna nanoWorks is developing advanced carbon nanomaterials, which include Trimetasphere™ nanomaterials, fullerenes and carbon nanotubes. You then state that you have an exclusive license for Trimetasphere.™ You do not, however, address whether you own, license or are still developing the intellectual property for fullerenes and carbon nanotubes. Please revise your disclosure to provide this information for fullerenes and carbon nanotubes.

RESPONSE TO COMMENT 7:

The Company has revised the disclosures at pages 57-58 of Amendment No. 3 in accordance with the Staff's comment.

8. We note your disclosure on page 57 that your Luna nano Works division is investigating the use of carbon nanotubes. In various press releases and on your website, however, you indicate that you are already manufacturing these carbon nanotubes at your Danville facility. Please provide us an explanation of this discrepancy.

RESPONSE TO COMMENT 8:

The Company has revised the disclosure at page 59 of Amendment No. 3 in accordance with the Staff's comment.

Intellectual Property, pages 59-63

9. We note your response to our prior comment 26 and reissue that comment in part. Please disclose the following:

- ***aggregate potential milestone payments under the Virginia Tech agreement as we consider aggregate potential milestone payments to be material information,***

- ***the annual expenditures you are required to make toward development of the licensed products under the Virginia Tech agreement,***
- ***all amounts paid to date under each agreement,***
- ***all minimum annual royalty payments, and***
- ***term and termination provisions for the June 2005 Joint Cooperation Agreement.***

Please note that this is not the type of information for which we are willing to grant confidential treatment. We generally are willing to grant confidential treatment for milestone payments as long as the amounts paid to date and the amount of aggregate potential payments are disclosed.

RESPONSE TO COMMENT 9:

The Company has revised the disclosures at pages 37, 60, and 63-64 of Amendment No. 3 in accordance with the Staff's comment.

Index to Financial Statements, page F-l

Luna Innovations Incorporated and Subsidiaries consolidated financial . . ., page F-2

Notes to consolidated financial statements, page F-7

Contract Research Revenues, page F-7

10. Regarding the third paragraph of your response to prior comment 40, please elaborate on why the proportional performance model is the best method to measure the satisfaction of your obligations to the customer under contracts that involve the delivery of only research reports. In this regard, it is unclear whether each report represents a separate unit of accounting under EITF 00-21 and whether recognition should be deferred until the delivery of all reports within one unit of accounting. To the extent you use the proportional performance model, an input-based model, for other types of contracts, please clarify the terms, deliverables, milestones and other outputs of those contracts and how they support using the proportional performance model over an output-based model.

RESPONSE TO COMMENT 10:

The Company respectfully submits to the Staff that it does not believe that the provisions of EITF 00-21 *Revenue Arrangements with Multiple Deliverables* would apply to fixed price research contracts, as the interim deliverables do not constitute multiple elements since they are only used as a means to measure performance and have no standalone value. Under the proportional performance model, the Company's performance is measured based upon the ratio of costs incurred to total estimated costs. The Company believes this to be appropriate as it reasonably measures progress of satisfying the milestones under such contracts. The Company's fixed price research contracts are primarily Phase I SBIR and STTR projects that are generally labor intensive with labor costs being fairly constant throughout the life of the contract. Additionally, these contracts do not generally include any significant up-front costs. Due to the nature of these contracts the proportional performance methodology approximates straight-line revenue recognition.

The Company also advises the Staff that it does not use the proportional performance method for other types of contracts.

9. Stockholders' Equity, page F-l9

11. In the conclusion to your response to prior comment 55, you noted that the increase in the fair value of the stock could not be attributed to a single factor but reflects a number of factors. As such, please elaborate on the extent to which each of the factors contributed to the increase, with as much quantification as possible. In addition, please update your analysis through the date of your next and any subsequent responses or amendments. When you have an estimate of the IPO price, please ensure that you have sufficiently discussed the factors contributing to the difference between the fair value of the stock at the issuance date and the estimated IPO price, as contemplated by part f. of our comment.

RESPONSE TO COMMENT 11:

In response to the Staff's comment, the Company is supplementally providing the following information for the Staff's consideration in connection with the Company's pricing of stock option grants made during the period from December 31, 2004 through the date of this letter (the "**Updated Review Period**").

Below is an updated tabular presentation that summarizes all equity awards granted by the Company's Board of Directors (the "**Board**") to employees, directors and consultants of the Company during the Updated Review Period. The table includes automatic stock option grants

on March 14, 2006 that were not reflected in the tabular presentation in the Company's response letter to the Staff dated April 10, 2006 (the "**Prior Response Letter**"). Except as noted, all equity awards made during the Updated Review Period were stock option awards. As discussed in the Prior Response Letter and summarized under "*Stock-Based Compensation Charge*" below, given the significant events that were occurring in 2005, the Company engaged an independent valuation specialist, ClawsonGroup ("**Clawson**"), in October of 2005 to reassess the value of the Company's non-voting Class B Common Stock as of certain prior grant dates and to assist the Board by providing contemporaneous valuations at interim dates, prospectively. In connection with these valuations, the Board directed management to reassess the amount of expense recorded for previous stock option grants captured in the periods covered by the retrospective valuations. The table below includes the amounts recorded as stock-based compensation expense as a result of those evaluations and as a result of the Company's adoption, effective January 1, 2006, of Financial Accounting Standards No. 123R, *Share Based Payment* (SFAS No. 123R). All share and per share numbers in the table reflect a 1-for-1.7691911 reverse stock split that the Company will effect immediately prior to the effective date of the Registration Statement.

Grant Date	Number of Shares Granted	Per Share Value of Stock as Determined by the Board on the Grant Date	Reassessed Estimated Fair Value for Financial Accounting Purposes	Share Based Payment Expense
1/1/05	310,662	$ 0.35	$ 0.58	$ 71,450
03/21/05	1,130	$ 0.35	$ 0.58	$ 260
04/18/05	2,826	$ 0.35	$ 0.58	$ 650
05/20/05	1,048,363	$ 0.35	$ 0.58	$ 241,120
5/20/05	113,046	$ 0.39[1]	$ 0.58	$ 22,000
06/01/05	2,826	$ 0.35	$ 0.58	$ 650
06/03/05	22,609	$ 0.35	$ 0.58	$ 5,200
07/01/05	56,523	$ 0.35	$ 0.81	$ 26,000
07/21/05	11,305	$ 0.35	$ 0.81	$ 5,200
08/01/05	108,242	$ 0.35	$ 0.81	$ 49,790
11/11/05	897,303	$ 1.77	$ 1.77	$ -0-
2/8/06	868,900	$ 1.77	$ 1.77	$ 9,141[2]
3/14/06	113,046	$ 1.77	$ 6.79	$ 27,514[2]
			TOTAL:	$ 458,975

[1] This grant was made to Dr. Kent Murphy, who holds a significant interest in the Company. As a result, options granted to Dr. Murphy must have a strike price of at least 110% of fair market value to receive tax treatment as an incentive stock option under the Internal Revenue Code.

[2] Effective January 1, 2006, the Company adopted Financial Accounting Standards No. 123R, *Share Based Payment* (SFAS No. 123R) using the modified prospective transition method. Under such transition method, the Company's

financial statements for periods prior to January 1, 2006 will not be restated. However, new awards and awards modified, repurchased or cancelled after January 1, 2006 will trigger compensation expense based on the fair value of the stock option as determined by a Black-Scholes option pricing model. The Company will amortize stock-based compensation for such awards on a straight-line method over the related service period of the awards taking into account the effects of the employees' expected exercise and post-vesting employment termination behavior.

In determining the exercise prices of all stock options granted following the initial engagement of Clawson, the Board relied on Clawson's most recent independent third party per-share valuation of the Company's non-voting Class B Common Stock in the Board's determination of fair value of the Company's equity.

The following table summarizes the per-share valuation of the Company's non-voting Class B Common Stock during the Updated Review Period and as of the effective date of the Company's initial public offering based on (i) independent third-party valuations provided by Clawson and (ii) the estimated initial public offering price of the Company's common stock, based on the mid-point of the range set forth on the cover of the preliminary prospectus included in Amendment No. 3:

Source	Date of Valuation	Valuation of One Share of Company's Non-Voting Class B Common Stock*
Clawson	January, 1, 2005	$ 0.58
Clawson	June 30, 2005	$ 0.81
Clawson	September 30, 2005	$ 1.63
Clawson	December 31, 2005	$ 1.65
Clawson	March 31, 2006	$ 6.79
Estimated IPO Price	Effective Date	$12.00

* Reflects a 1-for-1.7691911 reverse stock split that the Company will effect immediately prior to the effective date of the Registration Statement. The share and per share numbers in the Prior Response Letter are on a pre-split basis.

As discussed in the Prior Response Letter, the increase in the estimated fair value of the Company's non-voting Class B Common Stock during the Updated Review Period is not attributable to any single event. Instead, the increase reflects a number of factors affecting the final per share value calculation at various dates during the Updated Review Period. In its independent third party per-share valuations of the Company's non-voting Class B Common Stock, Clawson identified the following factors as contributing to the increase in the estimated per-share fair value:

- Determination of enterprise value based upon a discounted cash flow model

- Excess operating cash, if any
- Long term debt
- Cash inflows from option exercises
- Total outstanding shares and options
- Marketability discount
- Minority interest discount

During the Updated Review Period, Clawson's per-share valuation of the Company's non-voting Class B Common Stock rose from $0.58 to $6.79. The majority of the increase was due to the determination that the enterprise value of the Company had increased substantially from the beginning to the end of such period. As a result of the advancement in the development of Company technologies, the addition of new key personnel, the infusion and use of funds obtained from the Carilion investment and other factors, Clawson determined that the Company was more likely to achieve its projected future cash flow. These factors also justified decreasing the discount rate utilized to discount to present value the Company's projected future cash flow, and also affected the determination of the terminal value projected in the outlying years. In essence, as the Company makes internal advances and applies invested funds, the likelihood of achieving future cash flows increases and correspondingly increases the enterprise value. This is not to say that the projected future cash flows will be achieved, only that the likelihood that they will be achieved has increased.

The following summarizes Clawson's analysis of the change in the per-share valuation of the Company's non-voting Class B Common Stock between January 1, 2005 and December 31, 2005, as a result of the changes in the various factors Clawson identified as contributing to the increase in the estimated per-share fair value:

Value per share as of January 1, 2005	**$ 0.58**
Increase in enterprise value	2.23
Increase in excess operating cash	0.65
Increase in long term debt	(0.57)
Increase in cash inflows if options are exercised	0.05
Increase in total outstanding shares and options	(1.29)
Marketability discount (no change)	0.00
Minority interest discount (no change)	0.00
Net Change	1.07
Value per share as of December 31, 2005	**$ 1.65**

The following summarizes Clawson's analysis of the change in the per-share valuation of the Company's non-voting Class B Common Stock between December 31, 2005 and March 31, 2006, as a result of the changes in the various factors Clawson identified as contributing to the increase in the estimated per-share fair value.

Value per share as of December 31, 2005	**$ 1.65**
Increase in enterprise value	4.49
Decrease in excess operating cash	(0.05)
Long term debt (no material change)	0.00
Increase in cash inflows if options are exercised	0.16
Increase in total outstanding shares and options	(0.62)
Decrease in marketability discount	1.17
Minority interest discount (no change)	0.00
Net Change	5.15
Value per share as of March 31, 2006	$ 6.79

The Company has not engaged Clawson to evaluate the estimated initial public offering price of $12.00 per share. However, the Company respectfully submits that the increase in the per-share valuation of the Company's common stock from $6.79 per share of non-voting Class B Common Stock as of March 31, 2006 to $12.00 per share of voting common stock as of the effective date of the initial public offering can be attributed to most of the same factors Clawson identified in each of the independent valuation reports: increase in enterprise value, increase in excess operating cash, lack of a material change in long term debt, increase in cash flows if options are exercised, and decrease in marketability discount.

Stock-Based Compensation Charge

As previously discussed, the exercise prices of certain option grants issued in 2005 were lower than the fair value of the Company's common stock on the grant date. Additionally, the Company was required to adopt SFAS 123R effective January 1, 2006 and was required to apply fair value accounting to options issued through March 31, 2006. As such, the Company anticipates recording aggregate share-based payment expense from outstanding options of approximately $459 thousand.

10. Commitments and Contingencies, page F-21

Governor's Opportunity Fund, page F-22

12. Please refer to your response to prior comment 57. Please clarify whether the $450,000 related to leasehold improvements will be recorded as an offset to your leasehold improvements when you satisfy the terms of the grant. If not, please tell us how it will be recorded and why that recognition would be appropriate.

RESPONSE TO COMMENT 12:

The Company has revised the disclosure at pages F-24 to F-25 of Amendment No. 3 in accordance with the Staff's comment.

Luna Technologies, Inc. financial statements . . ., page F-26

13. Regarding the revisions you made in response to prior comment number 62, please further revise the interim financial statements of Luna Technologies so that they are as of the end of and through the latest interim date prior to the acquisition. As the acquisition occurred on September 30, 2005, it would not appear appropriate for the interim financial statements to be as of and through that date because they would presumably have to reflect either the acquisition or only some of the transactions that occurred that day. Neither would appear to be consistent with Rules 3-05(b) and 3-02 of Regulation S-X

RESPONSE TO COMMENT 13:

The Company has revised the interim financial statements of Luna Technologies so that they are as of the end of and through the interim period ended September 29, 2005, in accordance with discussions with the Staff.

Statements of operations, page F-28

14. Please show the net loss attributable to common shareholders, as required by paragraph 40(b) of SFAS 128 and by SAB Topic 6.B. Further, please tell us how, in light of the accretion of their preferred stock, the calculation of their earnings per share complies with paragraphs eight and nine of SFAS 128 and the measurement provisions of EITF D-98.

RESPONSE TO COMMENT 14:

The Company has reviewed the Luna Technologies statements of operations at page F-30 of Amendment No. 3 and eliminated the line items captioned "Net loss per share—basic and diluted" and "Weighted average number of common shares outstanding—basic and diluted" in consideration of the Staff's comment. The Company notes that the requirements of Statement of Financial Accounting Standards No. 128, *Earnings per Share*, are not applicable to Luna Technologies because its securities are not publicly traded, and has eliminated the referenced line items to avoid presenting irrelevant information that could potentially be confusing to a reader of the financial statements.

Exhibit 23.2 – Consent of Independent Registered Public Accounting Firm

15. Please include a consent that has been updated by Brown, Edwards & Company, L.L.P.

RESPONSE TO COMMENT 15:

The Company has filed an updated consent of Brown, Edwards & Company, L.L.P. with Amendment No. 3 as Exhibit 23.2 thereto.

* * *

Please direct your questions or comments to the undersigned at (703) 734-3105 or to Trevor J. Chaplick at (703) 734-3106. In addition, we would request that you provide a facsimile of any additional comments you may have to the attention of Mr. Chaplick and the undersigned at (703) 734-3199. Thank you for your assistance.

Very truly yours,
WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

Mark R. Fitzgerald

cc: Kent A. Murphy, Ph.D.
Aaron S. Hullman, Esq.
Luna Innovations Incorporated

Trevor J. Chaplick, Esq.
Wilson Sonsini Goodrich & Rosati, Professional Corporation

Marjorie Sybul Adams, Esq.
Daniel I. Goldberg, Esq.
DLA Piper Rudnick Gray Cary US LLP