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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2017

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-36481

ASPEN AEROGELS, INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**04-3559972** **(I.R.S. Employer Identification No.)**
30 Forbes Road, Building B **Northborough, Massachusetts** **(Address of principal executive offices)**	**01532** **(Zip Code)**

Registrant's telephone number, including area code: (508) 691-1111

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of August 1, 2017, the registrant had 23,594,440 shares of common stock outstanding.

ASPEN AEROGELS, INC.

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Trademarks, Trade Names and Service Marks

We own or have rights to use "Aspen Aerogels," "Cryogel," "Pyrogel," "Spaceloft," the Aspen Aerogels logo and other trademarks, service marks and trade names of Aspen Aerogels, Inc. appearing in this Quarterly Report on Form 10-Q. Solely for convenience, the trademarks, service marks and trade names referred to in this report are presented without the ® and TM symbols, but such references are not intended to indicate, in any way, that the owner thereof will not assert, to the fullest extent under applicable law, such owner's rights to these trademarks, service marks and trade names. This report contains additional trademarks, service marks and trade names of other companies, which, to our knowledge, are the property of their respective owners.

PART I — FINANC IAL INFORMATION

Item 1. Financial Statements.

ASPEN AEROGELS, INC.

Consolidated Balance Sheets

(Unaudited)

	June 30, 2017	December 31, 2016
	(In thousands, except share and per share data)	
Assets		
Current assets:		
Cash and cash equivalents	$ 6,951	$ 18,086
Accounts receivable, net of allowances of $91 and $93	16,492	17,535
Inventories	13,255	12,868
Prepaid expenses and other current assets	1,343	1,697
Total current assets	38,041	50,186
Property, plant and equipment, net	80,523	84,394
Other long-term assets	94	89
Total assets	$ 118,658	$ 134,669
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 8,408	$ 13,065
Accrued expenses	4,751	3,987
Deferred revenue	806	1,043
Capital leases, current portion	12	35
Total current liabilities	13,977	18,130
Capital leases, excluding current portion	—	4
Deferred rent	1,335	971
Total liabilities	15,312	19,105
Commitments and contingencies (Note 6)		
Stockholders' equity:		
Preferred stock, $0.00001 par value; 5,000,000 shares authorized, no shares issued and outstanding at June 30, 2017 and December 31, 2016	—	—
Common stock, $0.00001 par value; 125,000,000 shares authorized, 23,594,440 and 23,369,838 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	—	—
Additional paid-in capital	535,720	533,088
Accumulated deficit	(432,374)	(417,524)
Total stockholders' equity	103,346	115,564
Total liabilities and stockholders' equity	$ 118,658	$ 134,669

See accompanying notes to unaudited consolidated financial statements.

ASPEN AEROGELS, INC.

Consolidated Statements of Operations

(Unaudited)

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
	(In thousands, except share and per share data)			
Revenue:				
Product	$ 24,562	$ 27,123	$ 46,888	$ 59,409
Research services	507	595	1,183	1,130
Total revenue	25,069	27,718	48,071	60,539
Cost of revenue:				
Product	21,121	20,723	41,591	46,715
Research services	254	342	565	644
Gross profit	3,694	6,653	5,915	13,180
Operating expenses:				
Research and development	1,709	1,286	3,285	2,596
Sales and marketing	3,416	2,821	6,526	5,883
General and administrative	4,002	3,894	10,589	7,807
Total operating expenses	9,127	8,001	20,400	16,286
Loss from operations	(5,433)	(1,348)	(14,485)	(3,106)
Interest expense, net	(39)	(39)	(65)	(78)
Total interest expense, net	(39)	(39)	(65)	(78)
Net loss	$ (5,472)	$ (1,387)	$ (14,550)	$ (3,184)
Net loss per share:				
Basic and diluted	$ (0.23)	$ (0.06)	$ (0.62)	$ (0.14)
Weighted-average common shares outstanding:				
Basic and diluted	23,369,179	23,111,127	23,313,668	23,087,299

See accompanying notes to unaudited consolidated financial statements.

ASPEN AEROGELS, INC.

Consolidated Statements of Cash Flows

(Unaudited)

	Six Months Ended June 30,	
	2017	2016
	(In thousands)	
Cash flows from operating activities:		
Net loss	$ (14,550)	$ (3,184)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	5,306	4,826
Stock-compensation expense	2,618	2,803
Lease incentives	(49)	—
Other	(1)	—
Changes in operating assets and liabilities:		
Accounts receivable	1,518	(4,110)
Inventories	(387)	(5,256)
Prepaid expenses and other assets	349	(45)
Accounts payable	(1,272)	1,459
Accrued expenses	813	(1,475)
Deferred revenue	(237)	(232)
Deferred rent	(111)	—
Net cash used in operating activities	(6,003)	(5,214)
Cash flows from investing activities:		
Capital expenditures	(4,831)	(7,728)
Net cash used in investing activities	(4,831)	(7,728)
Cash flows from financing activities:		
Repayment of obligations under capital lease	(15)	(43)
Payments made for employee restricted stock tax withholdings	(286)	(82)
Net cash used in financing activities	(301)	(125)
Net decrease in cash	(11,135)	(13,067)
Cash at beginning of period	18,086	32,804
Cash at end of period	$ 6,951	$ 19,737
Supplemental disclosures of cash flow information:		
Interest paid	$ 89	$ 105
Income taxes paid	$ —	$ —
Supplemental disclosures of non-cash activities:		
Changes in accrued capital expenditures	$ (3,385)	$ (95)
Settlement of asset retirement obligation	$ —	$ 241

See accompanying notes to unaudited consolidated financial statements.

ASPEN AEROGELS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(UNAUDITED)

(1) Description of Business and Basis of Presentation

Nature of Business

Aspen Aerogels, Inc. (the Company) is an aerogel technology company that designs, develops and manufactures innovative, high-performance aerogel insulation used primarily in the energy infrastructure and building materials markets. The Company also conducts research and development related to aerogel technology supported by funding from several agencies of the U.S. government and other institutions in the form of research and development contracts.

The Company maintains its corporate offices in Northborough, Massachusetts. The Company has three wholly owned subsidiaries: Aspen Aerogels Rhode Island, LLC, Aspen Aerogels Germany, GmbH and Aspen Aerogels Georgia, LLC.

Unaudited Interim Financial Information

The accompanying unaudited interim consolidated financial statements include the accounts of the Company and have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Certain information and disclosures normally included in the consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. As such, the information included in this Quarterly Report on Form 10-Q should be read in conjunction with the audited consolidated financial statements and accompanying notes in our Annual Report on Form 10-K for the year ended December 31, 2016 (the Annual Report), filed with the Securities and Exchange Commission on March 2, 2017.

In the opinion of the Company's management, the unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and include all adjustments that are of a normal recurring nature and necessary for the fair statement of the Company's financial position as of June 30, 2017 and the results of its operations for the three and six months ended June 30, 2017 and 2016 and the cash flows for the six month periods then ended.

The results of operations for the three and six months ended June 30, 2017 are not necessarily indicative of the results to be expected for the year ending December 31, 2017 or any other period.

(2) Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements, which have been prepared in accordance with U.S. GAAP, include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements requires the Company to make a number of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include allowances for doubtful accounts, sales returns and allowances, product warranty costs, inventory valuation, the carrying amount of property and equipment, stock-based compensation and deferred income taxes. The Company evaluates its estimates and assumptions on an on-going basis using historical experience and other factors, including the current economic environment, which are believed to be reasonable under the circumstances. Management adjusts such estimates and assumptions when facts and circumstances dictate. Illiquid credit markets, volatile equity markets and declines in business investment increase the uncertainty inherent in such estimates and assumptions. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in these estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

Cash and Cash Equivalents

Cash equivalents include short-term, highly liquid instruments, which consist of money market accounts. All cash and cash equivalents are maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits; however, these deposits typically may be redeemed upon demand and, therefore, bear minimal risk.

Revenue Recognition

The Company recognizes revenue from the sale of products and performance of research and development services. Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, the price to the buyer is fixed or determinable, delivery has occurred or services have been provided, and collectability is reasonably assured.

Product Revenue

Product revenue is recognized upon transfer of title and risk of loss, which is upon shipment or delivery. The Company’s customary shipping terms are free on board (FOB) shipping point.

The Company records deferred revenue for product sales when (i) the Company has delivered products but other revenue recognition criteria have not been satisfied or (ii) payments have been received in advance of products being delivered.

Research Services Revenue

The Company performs research services under contracts with various government agencies and other institutions. The Company records revenue earned on research services contracts using the percentage-of-completion method in two ways: (1) for firm-fixed-price contracts, the Company accrues that portion of the total contract price that is allocable, on the basis of the Company’s estimates of costs incurred to date to total contract costs; and (2) for cost-plus-fixed-fee contracts, the Company records revenue that is equal to total payroll cost incurred times a stated factor plus reimbursable expenses, to a stated upper limit. The primary cost under the Company’s research service contracts is the labor effort expended in completing research, and the only deliverable, other than the labor hours expended, is reporting of research results to the customer. Because the input measure of labor hours expended is also reflective of the output measure, it is a reliable means to measure the extent of progress towards completion. Revisions in cost estimates and fees during the course of the contract are reflected in the accounting period in which the facts that require the revisions become known. Contract costs and rates used to allocate overhead to contracts are subject to audit by the respective contracting government agency. Adjustments to revenue as a result of audit are recorded in the period they become known. To date, adjustments to revenue as a result of audit have been insignificant.

Stock-based Compensation

Stock-based compensation expense is measured at the grant date based on the fair value of the award. Expense is recognized on a straight-line basis over the requisite service period for all awards with service conditions. For performance-based awards, the grant date fair value is recognized as expense when the condition is probable of being achieved, and then on a graded basis over the requisite service period. The Company uses the Black-Scholes option-pricing model to determine the fair value of service-based option awards, which requires a number of complex and subjective assumptions including fair value of the underlying security, the expected volatility of the underlying security, a risk-free interest rate and the expected term of the option. The fair value of restricted stock and restricted stock unit (RSU) grants is determined using the closing trading price of the Company’s common stock on the date of grant. The fair value of awards containing market conditions is determined using a Monte Carlo simulation model based upon the terms of the conditions, the expected volatility of the underlying security, and other relevant factors.

During the six months ended June 30, 2017, the Company granted 86,023 shares of restricted common stock and non-qualified options (NSO s) to purchase 119,133 shares of common stock with a grant d ate fair value of $ 0.4 million and $0.2 million, respectively, vesting over a period of one year to its non-employee directors under the 2014 Employee, Director and Consultant Equity Incentive Plan (the 2014 Eq uity Plan). During the six months ended June 3 0, 2017 , the Company also granted 481,373 RSUs and NSOs to purchase 320,571 shares of common stock with a grant date fair value of $1.3 million and $0.7 million, respectively, to employees under the 2014 Equity Plan . The employee RSUs and NSOs will vest ov er a three year period.

Stock-based compensation is included in cost of sales or operating expenses, as applicable, and consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(In thousands)			
Cost of product revenue	$ 236	$ 199	$ 440	$ 391
Research and development expenses	160	148	298	288
Sales and marketing expenses	303	277	571	538
General and administrative expenses	675	809	1,309	1,586
Total stock-based compensation	$ 1,374	$ 1,433	$ 2,618	$ 2,803

Effective January 1, 2017, the Company adopted the provisions of Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) 2016-09, Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting (ASU 2016-09) related to the timing of accounting for the forfeitures of share based awards using a modified retrospective transition method. Under these provisions, the Company will record the impact of forfeitures of service based awards at the time an award is forfeited. Adoption of the provisions resulted in a cumulative-effect adjustment to equity as of January 1, 2017 of $0.3 million.

Pursuant to the "evergreen" provisions of the 2014 Equity Plan, the number of shares of common stock authorized for issuance under the plan automatically increased by 467,396 shares to 6,536,597 shares effective January 1, 2017.

As of June 30, 2017, 3,357,031 shares of common stock were reserved for issuance upon the exercise or vesting, as appropriate, of outstanding stock-based awards granted under the 2014 Equity Plan. In addition, as of June 30, 2017, 92,583 shares of common stock were reserved for issuance upon the exercise of outstanding stock options granted under the Company's 2001 Equity Incentive Plan, as amended (the 2001 Equity Plan). Any cancellations or forfeitures of the options outstanding under the 2001 Equity Plan will result in the shares reserved for issuance upon exercise of such options becoming available for grant under the 2014 Equity Plan. As of June 30, 2017, there were 2,287,082 shares of common stock available for grant under the 2014 Equity Plan.

Earnings per Share

The Company calculates net loss per common share based on the weighted-average number of common shares outstanding during each period. Potential common stock equivalents are determined using the treasury stock method. The weighted-average number of common shares included in the computation of diluted net income (loss) gives effect to all potentially dilutive common equivalent shares, including outstanding stock options, RSUs and warrants. Common equivalent shares are excluded from the computation of diluted net income (loss) per share if their effect is antidilutive.

Segments

Operating segments are identified as components of an enterprise about which separate, discrete financial information is available for evaluation by the chief operating decision maker in making decisions on how to allocate resources and assess performance. The Company's chief operating decision maker is the Chief Executive Officer. The Company's chief operating decision maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company. The Company views its operations and manages its business as one operating segment.

Information about the Company's total revenues, based on shipment destination or services location, is presented in the following table:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(In thousands)			
Revenue:				
U.S.	$ 10,131	$ 10,208	$ 19,261	$ 21,621
International	14,938	17,510	28,810	38,918
Total	$ 25,069	$ 27,718	$ 48,071	$ 60,539

Warranty Costs

The Company provides warranties for its products and records the estimated cost of such warranties within cost of sales in the period that the related revenue is recorded. The Company's standard warranty period extends to one year from the date of shipment. This standard warranty provides that the Company's products will be free from defects in material and workmanship, and will, under normal use, conform to the specifications for the product.

The Company's products may be utilized in systems that may involve new technical demands and new configurations. As such, the Company regularly reviews and assesses whether warranty reserves shall be recorded in the period the related revenue is recorded. For an initial shipment of product in a system with new technical demands or configurations and where the Company is unsure of meeting the customer's specifications, the Company will defer the recognition of product revenue and related costs until written customer acceptance is obtained.

During the six months ended June 30, 2017 and 2016, the Company recorded warranty expense of $0.9 million and $0.5 million, respectively. These specific warranty charges were related to product claims for two separate product application issues . These claims are outside the Company's typical experience.

Recently Issued Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies. Recently issued standards typically do not require adoption until a future effective date. Prior to their effective date, the Company evaluates the pronouncements to determine the potential effects of adoption to its consolidated financial statements.

Standards Implemented Since December 31, 2016

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330), which, for entities that do not measure inventory using the last-in, first-out (LIFO) or retail inventory method, changes the measurement principle for inventory from the lower of cost or market to lower of cost and net realizable value. The ASU also eliminates the requirement for these entities to consider replacement cost or net realizable value less an approximately normal profit margin when measuring inventory. Public entities are required to apply the standard for fiscal years beginning after December 15, 2016, including interim periods within those fiscal periods. The Company adopted this standard effective January 1, 2017. Application of the standard has not resulted in any material impact to the Company's consolidated financial statements or other disclosures.

In March 2016, the FASB issued ASU 2016-09. The amendment simplifies several aspects of the accounting for share-based payment transactions including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For public entities, the amendments in ASU 2016-09 are effective for interim and annual reporting periods beginning after December 15, 2016. The Company has adopted this standard effective January 1, 2017. The provisions of ASU 2016-09 related to the timing of accounting for the forfeitures of share based awards was adopted using a modified retrospective method by means of a cumulative-effect adjustment to equity as of January 1, 2017 of $0.3 million. The other provisions of ASU 2016-09 have been adopted prospectively.

Standards to be Implemented

In August 2015, the FASB issued a deferral of ASU 2014-09, Revenue from Contracts with Customers. The standard will eliminate the transaction- and industry-specific revenue recognition guidance under current U.S. GAAP and replace it with a principle based approach for determining revenue recognition. As a result of the deferral, public entities are required to apply the revised revenue recognition standard for the annual reporting period beginning on or after December 15, 2017, including interim periods within that annual reporting period. Early application is permitted only as of annual and interim periods in fiscal years beginn ing after December 15, 2016. The Company expects to adopt the modified retrospective method. The Company has commenced a review of the new standard compared to current accounting polic ies with respect to revenue s treams and customer contracts. As of June 3 0, 2017, the Company has not identified any accounting changes that would impact the allocation and timing of recognition of previously reported revenues . During the second half of 2017 , the Company plan s to finalize the review of revenue streams and custo mer contracts to determine the impact that this standard may have on its results of operations, financial position and disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. FASB ASU 2016-02 modifies the accounting for leases and requires that all leases be recorded on the consolidated balance sheets as assets and liabilities. This update is effective for fiscal years beginning after December 15, 2018. Early application is permitted. The Company has not yet selected a transition method and is evaluating the effect the updated standard will have on its consolidated financial statements and related disclosures. The Company currently expects that most of its operating lease commitments will be subject to the new standard and recognized as right-of-use assets and operating lease liabilities upon the adoption of ASU 2016-02, which will increase the total assets and total liabilities that it reports relative to such amounts prior to adoption.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230)* : Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15). This amendment addresses eight classification issues related to the statement of cash flows. For public business entities, the amendments in ASU 2016-15 are effective for public business entities for annual and interim periods in fiscal years beginning after December 15, 2017. Early adoption is permitted, including adoption in an interim period. The Company has not yet selected a transition method and is evaluating the effect the updated standard will have on its consolidated financial statements and related disclosures.

(3) Inventories

Inventories consist of the following:

	June 30, 2017	December 31, 2016
	(In thousands)	
Raw materials	$ 2,198	$ 3,511
Finished goods	11,057	9,357
Total	$ 13,255	$ 12,868

(4) Property, Plant and Equipment, Net

Property, plant and equipment consist of the following:

	June 30, 2017	December 31, 2016	Useful life
	(In thousands)		
Construction in progress	$ 11,019	$ 11,139	—
Buildings	23,928	23,901	30 years
Machinery and equipment	114,880	113,659	3-10 years
Computer equipment and software	7,921	7,679	3 years
Total	157,748	156,378	
Accumulated depreciation	(77,225)	(71,984)	
Property, plant and equipment, net	$ 80,523	$ 84,394	

Depreciation expense was $5.3 million and $4.8 million for the six months ended June 30, 2017 and 2016, respectively.

Construction in progress totaled $11.0 million and $11.1 million at June 30, 2017 and December 31, 2016, respectively, which included engineering designs and other pre-construction costs for the planned manufacturing facility in Statesboro, Georgia of $7.2 million at June 30, 2017 and December 31, 2016.

The Company anticipates that the impact of constrained capital investment and low activity levels in the global energy markets will continue through the end of 2017. With this view of the market, the Company in late 2016 delayed the board approved project to construct the Statesboro, Georgia manufacturing fac ility and its related financing to better align the capacity expansion with the Company's assessment of demand for the 2018 to 2020 period.

(5) Accrued Expenses

Accrued expenses consist of the following:

	June 30, 2017	December 31, 2016
	(In thousands)	
Employee compensation	$ 3,604	$ 2,796
Other accrued expenses	1,147	1,191
Total	$ 4,751	$ 3,987

(6) Commitments and Contingencies

Customer Supply Agreement

During 2016, the Company entered into a supply agreement and a side agreement (together, the Supply Agreement) and a joint development agreement (the JDA) with BASF SE (BASF). Pursuant to the Supply Agreement, the Company agreed to sell exclusively to BASF the Company's Spaceloft ® A2 product at annual volumes specified by BASF, subject to certain volume limits. The Supply Agreement will terminate on December 31, 2027. Upon expiration of the Supply Agreement, the Company will be subject to a post-termination supply commitment for an additional two years. The JDA is designed to facilitate the collaboration between the parties on the development and commercialization of new products.

In addition, under the terms of the Supply Agreement, BASF will make a non-interest bearing prepayment to the Company in the aggregate amount of $22 million during the construction of the Company's planned manufacturing facility in Statesboro, Georgia (Plant Two), subject to the Company's prior satisfaction of certain preconditions, including securing a debt commitment from a third party lender for at least $30 million. BASF is obligated to pay the prepayment to the Company in eight equal consecutive quarterly installments commencing on the first day of the calendar quarter following the date on which the preconditions are met. Once commenced, BASF's obligation to make such quarterly payments shall be subject to postponement in the event of delays of three months or more in the projected date of completion of Plant Two by a commensurate number of months.

After October 1, 2018, the Company will, at BASF's instruction, credit up to 25.3% of any amounts invoiced by the Company for Spaceloft ® A2 product sold to BASF against the prepayment balance. However, BASF has no obligation to purchase products under the Supply Agreement. If any of the prepayment remains uncredited against amounts invoiced by the Company as of September 30, 2023, BASF may request that the Company repay the uncredited amount to BASF in four equal quarterly installments beginning on December 31, 2023. The repayment obligation will be secured by a security interest in real estate, plant and equipment at the Company's Rhode Island and Georgia manufacturing facilities.

The Company anticipates that the impact of constrained capital investment and low activity levels in the global energy markets will continue through the end of 2017. With this view of the market, the Company in late 2016 delayed the board approved Plant Two project and its related financing to better align the capacity expansion with the Company's assessment of demand for the 2018 to 2020 period. As a result, the Company has yet to fulfill the prepayment preconditions and commencement of the quarterly prepayments from BASF will be delayed until the preconditions are satisfied.

Revolving Line of Credit

The Company entered into an Amended and Restated Loan and Security Agreement with Silicon Valley Bank (Loan Agreement), on August 31, 2014, which has been subsequently amended from time to time. On January 27, 2017, the Loan Agreement was amended to extend the maturity date of the revolving credit facility to January 28, 2018. Under the Loan Agreement, the Company may borrow up to $20 million subject to compliance with certain covenants and borrowing base limitations. At the Company's election, the interest rate applicable to borrowings may be based on the prime rate or LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. In addition, the Company is required to pay a monthly unused line fee of 0.5% per annum of the average unused portion of the facility. The Company's obligations under the Loan Agreement are secured by a first priority security interest in all assets of the Company, including those at the East Providence facility, except for certain exclusions.

At June 30, 2017 and December 31, 2016, the Company had no amounts drawn on the revolving credit facility. Under the Loan Agreement, the Company is required to comply with both non-financial and financial covenants, including minimum Adjusted EBITDA and minimum Adjusted Quick Ratio, as defined. At June 30, 2017, the Company was in compliance with all such financial covenants.

The Company previously provided its landlord for its Northborough, Massachusetts facility with letters of credit securing certain obligations. As of January 31, 2017, these obligations were released by the landlord. In addition, the Company has been required to provide certain customers with letters of credit securing obligations under commercial contracts. The Company had outstanding letters of credit backed by the revolving credit facility of $2.3 million and $2.7 million at June 30, 2017 and December 31, 2016, respectively, which reduce the funds otherwise available to the Company under the facility. Based on the available borrowing base, the effective amount available to the Company under the revolving credit facility at June 30, 2017 was $10.5 million after consideration of the $2.3 million of outstanding letters of credit.

Litigation

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. See Part II, Item 1 ("Legal Proceedings") of this Quarterly Report on Form 10-Q for a description of certain of the Company's current legal proceedings. The Company is not presently a party to any litigation for which it believes a loss is probable requiring an amount to be accrued or a possible loss contingency requiring disclosure.

(7) Deferred Rent

The Company leases office and warehouse space in Northborough, Massachusetts and East Providence, Rhode Island.

For leases that contain fixed increases in the minimum annual lease payment during the original term of the lease, the Company recognizes rental expense on a straight-line basis over the lease term, and records the difference between rent expense and the amount currently payable as deferred rent.

Lease incentives for allowances for qualified leasehold improvements received from the landlord are amortized on a straight-line basis over the lease term. These improvements and the funding received from the landlord are recorded as fixed asset additions and a deferred rent liability on the consolidated balance sheet. The deferred rent liability is being amortized as a reduction to rent expense over the life of the lease.

Cash flows from the landlord for the reimbursement of improvements have been reported within cash from operating activities, while cash flows remitted for the acquisition of leasehold improvements are classified within investing activity cash flows. As of June 30, 2017, deferred rent included $1.1 million in deferred lease incentives and $0.4 million of straight-line rental obligations.

Deferred rent consists of the following:

	June 30, 2017	December 31, 2016
	(In thousands)	
Deferred rent	$ 1,538	$ 1,125
Current maturities of deferred rent	(203)	(154)
Deferred rent, less current maturities	$ 1,335	$ 971

(8) Net Loss Per Share

The computation of basic and diluted net loss per share consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(In thousands, except share and per share data)			
Numerator:				
Net loss	$ (5,472)	$ (1,387)	$ (14,550)	$ (3,184)
Denominator:				
Weighted average shares outstanding, basic and diluted	23,369,179	23,111,127	23,313,668	23,087,299
Net loss per share, basic and diluted	$ (0.23)	$ (0.06)	$ (0.62)	$ (0.14)

Potentially dilutive common shares that were excluded from the computation of diluted net loss per share because they were anti-dilutive consist of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Common stock options	2,498,737	2,055,398	2,498,737	2,055,398
Restricted common stock units	950,877	759,230	950,877	759,230
Common stock warrants	115	115	115	115
Restricted common stock awards	164,148	153,277	164,148	153,277
Total	3,613,877	2,968,020	3,613,877	2,968,020

In the table above, anti-dilutive shares consist of those common stock equivalents that have (i) an exercise price above the average stock price for the period or (ii) related average unrecognized stock compensation expense sufficient to buy back the entire amount of shares. The Company excludes the shares issued in connection with restricted stock awards from the calculation of basic weighted average common shares outstanding until the restrictions lapse.

(9) Income Taxes

The Company incurred net operating losses and recorded a full valuation allowance against net deferred tax assets for all periods presented. Accordingly, the Company has not recorded a provision for federal or state income taxes.

(10) Subsequent Events

The Company has evaluated subsequent events through August 3, 2017, the date of issuance of the unaudited consolidated financial statements for the three and six months ended June 30, 2017.

On August 2, 2017, the Company reduced the Company performance target for fiscal year 2020 with respect to 78,125 shares of restricted stock and modified the vesting conditions of NSOs to purchase 253,902 shares of common stock granted to its chief executive officer, such that the time periods to achieve certain common stock price target vesting conditions of NSOs to purchase 131,578 and 122,324 shares of common stock, were extended to a four and five year period from the date of grant, respectively.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the audited financial information and the notes thereto included in the Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission on March 2, 2017, which we refer to as the Annual Report.

Certain matters discussed in this Quarterly Report on Form 10-Q may be deemed to be forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. In this Quarterly Report on Form 10-Q, words such as "may," "will," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements.

Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this Quarterly Report. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in this Quarterly Report, they may not be predictive of results or developments in future periods.

The following information and any forward-looking statements should be considered in light of factors discussed elsewhere in this Quarterly Report on Form 10-Q and under "Risk Factors" in Item 1A of the Annual Report.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

You should read the following discussion and analysis of financial condition and results of operations together with Part I Item 1 "Financial Statements," which includes our financial statements and related notes, elsewhere in this Quarterly Report on Form 10-Q.

Overview

We design, develop and manufacture innovative, high-performance aerogel insulation used primarily in the energy infrastructure and building materials markets. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our end-use customers select our products where thermal performance is critical and to save money, reduce energy use, preserve operating assets and protect workers.

Our insulation is used by oil producers and the owners and operators of refineries, petrochemical plants, LNG facilities, power generating assets and other energy infrastructure. Our Pyrogel and Cryogel product lines have undergone rigorous technical validation by industry leading end-users and achieved significant market adoption. We also derive product revenue from the building materials and other end markets. Customers in these markets use our products for applications as diverse as wall systems, military and commercial aircraft, trains, buses, appliances, apparel, footwear and outdoor gear.

We generate product revenue through the sale of our line of aerogel blankets. We market and sell our products primarily through a sales force based in North America, Europe and Asia. The efforts of our sales force are supported by a small number of sales consultants with extensive knowledge of a particular market or region. Our sales force is responsible for establishing and maintaining customer and partner relationships, delivering highly technical information and ensuring high-quality customer service.

Our salespeople work directly with end-use customers and engineering firms to promote the qualification, specification and acceptance of our products. We also rely on an existing and well-established channel of qualified insulation distributors and contractors in more than 30 countries around the world that ensures rapid delivery of our products and strong end-user support. Our salespeople also work to educate insulation contractors about the technical and operating cost advantages of our aerogel blankets.

We also perform research services under contracts with various agencies of the U.S. government, including the Department of Defense and the Department of Energy, and other institutions. Research performed under contract with government agencies and other institutions enables us to develop and leverage technologies into broader commercial applications.

We manufacture our products using our proprietary technology at our facility in East Providence, Rhode Island. We completed the construction and start-up of a third production line in the East Providence facility during the first quarter of 2015, which increased our annual nameplate capacity to approximately 50 million square feet of aerogel blankets. During the first quarter of 2016, we announced the planned construction of a second manufacturing facility in Statesboro, Georgia supported by a package of incentives from the State of Georgia and local governmental authorities. During the fourth quarter of 2016, we elected to delay construction of this facility to better align the capacity expansion with our assessment of demand for the 2018 to 2020 time period.

During 2016, we entered into a strategic partnership with BASF SE to develop and commercialize products for the building materials and other markets. The strategic partnership included a supply agreement governing the sale of our Spaceloft A2 product to BASF and a joint development agreement targeting innovative products and technologies. Subject to certain preconditions, BASF also agreed to make a series of prepayments to us in the aggregate of $22 million during the construction of our planned manufacturing facility in Statesboro, Georgia. The prepayments will be either credited against amounts invoiced to BASF for Spaceloft A2 or repaid by us to BASF after December 31, 2023. As a result of our decision in late 2016 to delay construction of the Statesboro facility, we have yet to fulfill the preconditions, and commencement of the prepayments from BASF will be delayed until the preconditions are satisfied.

In July 2017, we announced the launch of a new product, Pyrogel® HPS, a high-temperature aerogel blanket engineered to provide thermal conductivity and economic performance at service temperatures of up to 650°C (1200°F).

Our revenue for the six months ended June 30, 2017 was $48.1 million, which represented a decrease of $12.5 million from the six months ended June 30, 2016. Net loss for the six months ended June 30, 2017 was $14.6 million and net loss per diluted share was $0.62. Net loss for the six months ended June 30, 2016 was $3.2 million and net loss per diluted share was $0.14.

Key Metrics and Non-GAAP Financial Measures

We regularly review a number of metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions.

Square Foot Operating Metric

We price our product and measure our product shipments in square feet. We estimate our annual nameplate capacity was approximately 50 million square feet of aerogel blankets at June 30, 2017. We believe the square foot operating metric allows us and our investors to measure our manufacturing capacity and product shipments on a uniform and consistent basis. The following chart sets forth product shipments associated with recognized revenue in square feet for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(In thousands)			
Product shipments in square feet	8,707	9,943	16,980	21,789

Adjusted EBITDA

We use Adjusted EBITDA, a non-GAAP financial measure, as a means to assess our operating performance. We define Adjusted EBITDA as net income (loss) before interest expense, taxes, depreciation, amortization, stock-based compensation expense and other items, which occur from time to time, that we do not believe are indicative of our core operating performance. Adjusted EBITDA is a supplemental measure of our performance that is not presented in accordance with U.S. GAAP. Adjusted EBITDA should not be considered as an alternative to net income (loss) or any other measure of financial performance calculated and presented in accordance with U.S. GAAP. In addition, our definition and presentation of Adjusted EBITDA may not be comparable to similarly titled measures presented by other companies.

We use Adjusted EBITDA:

- as a measure of operating performance because it does not include the impact of items that we do not consider indicative of our core operating performance;
- for planning purposes, including the preparation of our annual operating budget;
- to allocate resources to enhance the financial performance of our business; and
- as a performance measure under our bonus plan.

We also believe that the presentation of Adjusted EBITDA provides useful information to investors with respect to our results of operations and in assessing the performance and value of our business. Various measures of EBITDA are widely used by investors to measure a company's operating performance without regard to items that can vary substantially from company to company depending upon financing and accounting methods, book values of assets, capital structures and the methods by which assets were acquired.

Although measures similar to Adjusted EBITDA are frequently used by investors and securities analysts in their evaluation of companies, we understand that Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for net income (loss), income (loss) from operations, net cash provided by (used in) operating activities or an analysis of our results of operations as reported under U.S. GAAP. Some of these limitations are:

- Adjusted EBITDA does not reflect our historical cash expenditures or future requirements for capital expenditures or other contractual commitments;
- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect stock-based compensation expense;
- Adjusted EBITDA does not reflect our income tax expense or cash requirements to pay our income taxes;
- Adjusted EBITDA does not reflect our interest expense, or the cash requirements necessary to service interest or principal payments on our debt;
- Although depreciation, amortization and impairment charges are non-cash charges, the assets being depreciated, amortized or impaired will often have to be replaced in the future, and Adjusted EBITDA does not reflect any cash requirements for these replacements; and
- Other companies in our industry may calculate EBITDA or Adjusted EBITDA differently than we do, limiting their usefulness as a comparative measure.

Because of these limitations, our Adjusted EBITDA should not be considered as a measure of discretionary cash available to us to reinvest in the growth of our business or as a measure of cash available for us to meet our obligations.

To properly and prudently evaluate our business, we encourage you to review the U.S. GAAP financial statements included elsewhere in this Quarterly Report on Form 10-Q, and not to rely on any single financial measure to evaluate our business.

The following table presents a reconciliation of net loss, the most directly comparable U.S. GAAP measure, to Adjusted EBITDA for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(In thousands)			
Net loss	$ (5,472)	$ (1,387)	$ (14,550)	$ (3,184)
Depreciation and amortization	2,630	2,416	5,306	4,826
Stock-based compensation (1)	1,374	1,433	2,618	2,803
Interest expense, net	39	39	65	78
Adjusted EBITDA	$ (1,429)	$ 2,501	$ (6,561)	$ 4,523

(1) Represents non-cash stock-based compensation related to vesting and modifications of stock option grants, vesting of restricted stock units and vesting of restricted common stock.

Our financial performance, including such measures as net income (loss), earnings per share and Adjusted EBITDA, are affected by a number of factors including volume and mix of aerogel products sold, average selling prices, our material and manufacturing costs, the costs associated with and timing of expansions and start-up of additional production capacity, and the amount and timing of operating expenses, including patent enforcement costs. As we build out our manufacturing capacity in the longer term, we expect increased manufacturing expenses will periodically have a negative impact on net income (loss), earnings per share and Adjusted EBITDA, but will set the framework for improved performance in the long term. Accordingly, we expe ct that our net income (loss), earnings per share and Adjusted EBITDA will vary from period to period, in particular when we expand our manufacturing capacity.

As a result of the conclusion of a multiyear petrochemical project with a major Asian energy company, which comprised 25% of our product revenue during 2016, in combination with the impact of constrained capital investment and low activity levels in the global energy infrastructure market, we expect a decrease in revenue, an increase in net loss and loss per share and a decrease in Adjusted EBITDA during the year ending December 31, 2017 versus the comparable period in 2016. Given fixed cost structures and lag times for implementing reductions of certain variable costs, in combination with a planned decrease in manufacturing output, the percentage increase in net loss and loss per share and the percentage decrease in Adjusted EBITDA could be significantly greater than any percentage decrease in revenue.

Components of Our Results of Operations

Revenue

We recognize product revenue from the sale of our line of aerogel products and research services revenue from the provision of services under contracts with various agencies of the U.S. government and other institutions. Product revenue is recognized upon transfer of title and risk of loss, which is upon shipment or delivery.

We record deferred revenue for product sales when (i) we have delivered products but other revenue recognition criteria have not been satisfied or (ii) payments have been received in advance of products being delivered.

We currently anticipate that constrained capital investment and low activity levels in the global energy markets will continue through 2017, particularly in the global downstream market. As a result of this constrained capital investment and low activity levels in the global energy market, as well as the conclusion of the multiyear petrochemical project with a major Asian energy company, which comprised 25% of our product revenue during 2016, we expect to experience a decrease in revenue during 2017.

Cost of Revenue

Cost of product revenue consists primarily of materials and manufacturing expense, including labor, utilities, maintenance expense and depreciation on manufacturing assets. Cost of product revenue is recorded when the related product revenue is recognized. Cost of product revenue also includes stock-based compensation of manufacturing employees and shipping costs.

Material costs as a percentage of product revenue vary from product to product due to differences in average selling prices, material requirements, product thicknesses and manufacturing yields. In addition, we provide warranties for our products and record the estimated cost within cost of sales in the period that the related revenue is recorded. As a result, material costs as a percentage of revenue will vary from period to period due to changes in the mix of aerogel products sold or the estimated cost of warranties. In the longer term, we expect material costs in the aggregate to decline as a percentage of revenue as we seek to achieve higher selling prices, material sourcing improvements, quality improvements and manufacturing yield enhancements for our aerogel products.

Manufacturing expense is also a significant component of cost of revenue. As we increase manufacturing capacity through our planned construction and operation of a second manufacturing facility and, over time, potentially expand the production lines at the second facility, we expect manufacturing expense as a percentage of product revenue will increase following each expansion but will decrease in the long-term with increased revenues supported by the effect of completed capacity expansions.

As a result of the conclusion of the multiyear petrochemical project with a major Asian energy company, which comprised 25% of our product revenue during 2016, in combination with the impact of constrained capital investment and low activity levels in the global energy infrastructure market, we expect a decrease in revenue and associated increase in manufacturing expense as a percentage of revenue during 2017.

Cost of research services revenue consists of direct labor costs of research personnel engaged in the contract research, third-party consulting expense, and associated direct material costs. This cost of revenue also includes overhead expenses associated with project resources, development tools and supplies. Cost of research services revenue is recorded when the related research services revenue is recognized.

Gross Profit

Our gross profit as a percentage of revenue is affected by a number of factors, including the volume of aerogel products produced and sold, the mix of aerogel products sold, average selling prices, our material and manufacturing costs, realized capacity utilization and the costs associated with expansions and start-up of production capacity. Accordingly, we expect our gross profit in absolute dollars and as a percentage of revenue to vary significantly from period to period. As we build out our manufacturing capacity, we expect increased manufacturing expenses will periodically have a significant negative impact on gross profit in the periods following any such expansion.

As a result of the conclusion of the multiyear petrochemical project with a major Asian energy company, which comprised 25% of our product revenue during 2016, in combination with the impact of constrained capital investment and low activity levels in the global energy infrastructure market, we expect a decrease in revenue and an associated decrease in gross profit and gross profit as a percentage of revenue during 2017. Given fixed cost structures and lag times for implementing reductions of certain variable costs, in combination with a planned decrease in manufacturing output, the percentage decrease in gross profit could be significantly greater than any percentage decrease in revenue. However, in the longer term, we expect gross profit to improve as a percentage of revenue due to expected increases in manufacturing productivity and production volumes, supported by expected capacity expansions, improvements in manufacturing yields and realization of material purchasing efficiencies.

Operating Expenses

Operating expenses consist of research and development, sales and marketing, and general and administrative expenses. Operating expenses include personnel costs, legal fees, professional fees, service fees, insurance premiums, travel expense, facilities related costs and other costs and fees. The largest component of our operating expenses is personnel costs, consisting of salaries, benefits, incentive compensation and stock-based compensation. In any particular period, the timing and extent of personnel additions or reductions, legal activities, including patent enforcement actions, marketing programs, research efforts and a range of similar activities or actions could materially affect our operating expenses, both in absolute dollars and as a percentage of revenue.

Research and Development Expenses

Research and development expenses consist primarily of expenses for personnel engaged in the development of next generation aerogel compositions, form factors and manufacturing technologies. These expenses also include testing services, prototype expenses, consulting services, equipment depreciation, facilities costs and related overhead. We expense research and development costs as incurred. We expect to continue to devote substantial resources to the development of new aerogel technology. We believe that these investments are necessary to maintain and improve our competitive position. We expect to continue to invest in research and engineering personnel and the infrastructure required in support of their efforts. While we expect that our research and development expenses will increase in absolute dollars but decrease as a percentage of revenue in the longer term, we expect such expenses will increase as a percentage of revenue during 2017.

Sales and Marketing Expenses

Sales and marketing expenses consist primarily of personnel costs, incentive compensation, marketing programs, travel and related costs, consulting expenses and facilities related costs. We plan to expand our sales force and sales consultants globally to drive anticipated growth in customers and demand for our products. While we expect that sales and marketing expenses will increase in absolute dollars but decrease as a percentage of revenue in the longer-term, we expect such expenses will increase as a percentage of revenue during 2017.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs, legal expenses, consulting and professional services, audit and tax consulting costs, and expenses for our executive, finance, human resources and information technology organizations. General and administrative expenses have increased as we have incurred additional costs related to operating as a publicly-traded company, which include costs of compliance with securities, corporate governance and related laws and regulations, investor relations expenses, increased insurance premiums, including director and officer insurance, and increased audit and legal fees. In addition, we expect our general and administrative expenses to increase as we add general and administrative personnel to support the anticipated growth of our business and continued expansion of our manufacturing operations. We also expect that the patent enforcement actions, described in more detail under "Legal Proceedings" in Part II, Item 1 of this Quarterly Report on Form 10-Q, if protracted, could result in significant legal expense over the medium to long-term. During 2017, we expect general and administrative expense will increase both in absolute dollars and as a percentage of revenue. In the longer term, we expect that general and administrative expenses will decrease both in absolute dollars and as a percentage of revenue.

Interest Expense, Net

For the six months ended June 30, 2017 and 2016, interest expense, net consisted primarily of fees related to our revolving credit facility.

Provision for Income Taxes

We have incurred net losses since inception and have not recorded benefit provisions for U.S. federal income taxes or state income taxes since the tax benefits of our net losses have been offset by valuation allowances due to the uncertainty associated with the utilization of net operating loss carryforwards.

Results of Operations

Three months ended June 30, 2017 compared to the three months ended June 30, 2016

The following tables set forth a comparison of the components of our results of operations for the periods presented:

Revenue

	Three Months Ended June 30, 2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Revenue:						
Product	$ 24,562	98%	$ 27,123	98%	$ (2,561)	(9)%
Research services	507	2%	595	2%	(88)	(15)%
Total revenue	$ 25,069	100%	$ 27,718	100%	$ (2,649)	(10)%

The following chart sets forth product shipments in square feet for the periods presented:

	Three Months Ended June 30, 2017	2016	Change Amount	Percentage
Product shipments in square feet (in thousands)	8,707	9,943	(1,236)	(12)%

Total revenue decreased by $2.6 million, or 10%, to $25.1 million for the three months ended June 30, 2017 from $27.7 million in the comparable period in 2016 primarily as a result of a decrease in product revenue.

Product revenue decreased by $2.6 million, or 9%, to $24.6 million for the three months ended June 30, 2017 from $27.1 million in the comparable period in 2016. This decrease was principally the result of a broad based decline in revenue in the global downstream energy markets and a decrease in sales to a major Asian energy company associated with the conclusion of a multiyear petrochemical project, offset, in part, by an increase in revenue in the LNG and district energy markets in the United States and project related revenue in the subsea market during the three months ended June 30, 2017.

Product revenue for the three months ended June 30, 2017 included $3.3 million in sales to a North American distributor, and $2.7 million and $2.4 million in sales to two Asia based distributors, respectively. Product revenue for the three months ended June 30, 2016 included $4.5 million in sales to a North American distributor.

The average selling price per square foot of our products increased by $0.09, or 3%, to $2.82 per square foot for the three months ended June 30, 2017 from $2.73 per square foot for the three months ended June 30, 2016. The increase in average selling price reflected a year-over-year increase in the mix of high-priced subsea products and the impact of price increases enacted in early 2017. This increase in average selling price had the effect of increasing product revenue by $0.8 million for the three months ended June 30, 2017 from the comparable period in 2016.

In volume terms, product shipments decreased by 1.2 million square feet, or 12%, to 8.7 million square feet of aerogel products for the three months ended June 30, 2017, as compared to 9.9 million square feet for the three months ended June 30, 2016. The decrease in product volume had the effect of decreasing product revenue by $3.4 million for the three months ended June 30, 2017 from the comparable period in 2016.

Research services revenu e de creased by $0.1 million, or 15% , to $0.5 million for the three months ended June 30, 2017 from $0.6 million in the comparable period in 2016 . The de crease was primarily due to the timing and amount of funding available under existing research contracts during the three months ended June 30, 2017 from the comparable period in 2016.

Product revenue was 98% of total revenue for the three months ended June 30, 2017 and 2016. Research services revenue was 2% of total revenue for the three months ended June 30, 2017 and 2016.

Cost of Revenue

	Three Months Ended June 30,							
	2017			2016			Change	
	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage
	($ in thousands)							
Cost of revenue:								
Product	$ 21,121	86%	84%	$ 20,723	76%	75%	$ 398	2%
Research services	254	50%	1%	342	57%	1%	(88)	(26)%
Total cost of revenue	$ 21,375	85%	85%	$ 21,065	76%	76%	$ 310	1%

Total cost of revenue increased by $0.3 million, or 1%, to $21.4 million for the three months ended June 30, 2017 from $21.1 million in the comparable period in 2016. The increase in total cost of revenue was the result of an increase in product cost of revenue offset, in part, by a decrease in research services cost of revenue.

The cost of product revenue increased by $0.4 million, or 2%, to $21.1 million for the three months ended June 30, 2017 from $20.7 million in the comparable period in 2016. The $0.4 million increase was the result an increase in expense of $2.0 million recognized during the three months ended June 30, 2017 due to a decrease in manufacturing output during the period, offset, in part, by decreases in manufacturing expense of $0.8 million, warranty expense of $0.5 million and material costs of $0.3 million. The decrease in manufacturing expense was the result of decreases in utilities expense of $0.3 million, compensation expense of $0.3 million and maintenance expense of $0.3 million, offset, in part, by an increase in depreciation expense of $0.1 million.

The cost of product revenue as a percentage of product revenue increased to 86% during the three months ended June 30, 2017 from 76% during the three months ended June 30, 2016. This increase was the result of the high proportion of fixed manufacturing expenses that remained essentially unchanged despite a decrease in manufacturing output and 9% decrease in product revenue for the three months ended June 30, 2017 versus the comparable period in 2016.

The cost of research services revenue was $0.3 million for the three months ended June 30, 2017 and 2016. Cost of research service revenue as a percentage of research services revenue decreased to 50% during the three months ended June 30, 2017 from 57% in the comparable period in 2016 due to a reduction in outside services utilized to support the contracted research.

Gross Profit

	Three Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Gross profit	$ 3,694	15%	$ 6,653	24%	$ (2,959)	(44)%

Gross profit decreased by $3.0 million, or 44%, to $3.7 million for the three months ended June 30, 2017 from $6.7 million in the comparable period in 2016. The decrease in gross profit was the result of the nearly $2.7 million decrease in total revenue in combination with the $0.3 million increase in total cost of sales. The decrease in revenue was principally associated with a broad based decline in revenue in the global downstream energy market and a decrease in sales to a major Asian energy company associated with the conclusion of a multiyear petrochemical project . The increase in total cost of sales was driven by an increase in expense recognized during the three months ended June 30, 2017 due to the decrease in manufacturing output.

Gross profit as a percentage of total revenue decreased to 15% of total revenue for the three months ended June 30, 2017 from 24% in the comparable period in 2016. In 2017, we expect gross profit as a percentage of total revenue will decrease versus 2016. The expected decrease in gross profit reflects our expectation that the expected percentage reduction in cost of total revenue will not fully offset the expected percentage reduction in total revenue in 2017 due to a planned decrease in manufacturing output and the high proportion of fixed costs in our manufacturing facility .

Research and Development Expenses

	Three Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Research and development expenses	$ 1,709	7%	$ 1,286	5%	$ 423	33%

Research and development expenses increased by $0.4 million, or 33%, to $1.7 million for the three months ended June 30, 2017 from $1.3 million in the comparable period in 2016. The $0.4 million increase was primarily due to an increase of $0.2 million in compensation related expenses, $0.1 million increase in depreciation expense and $0.1 million in other research expenses.

Research and development expenses as a percentage of total revenue increased to 7% for the three months ended June 30, 2017 as compared to 5% in the comparable period in 2016 due principally to the increase in research and development expenses and, to a lesser extent, the decrease in total revenue for the three months ended June 30, 2017.

We expect that our research and development expenses during 2017 will increase from 2016 expense levels in support of new product development, improved manufacturing technology and the costs associated with the operation of our newly constructed full scale pilot line. Due to the expected growth in research and development expenses and the projected decline in total revenue, we expect research and development expenses as a percentage of total revenue to increase in 2017. In the long term, we expect to continue to increase investment in research, development and engineering personnel, projects and infrastructure in support of efforts to develop new products, technologies and markets. However, we expect that research and development expenses will decline as a percentage of total revenue in the long-term due to projected growth in product revenue.

Sales and Marketing Expenses

	Three Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Sales and marketing expenses	$ 3,416	14%	$ 2,821	10%	$ 595	21%

Sales and marketing expenses increased by $0.6 million, or 21%, to $3.4 million for the three months ended June 30, 2017 from $2.8 million in the comparable period in 2016. The $0.6 million increase was primarily driven by an increase in compensation related expenses of $0.7 million offset, in part, by a reduction in general marketing expense of $0.1 million.

Sales and marketing expenses as a percentage of total revenue increased to 14% for the three months ended June 30, 2017 from 10% in the comparable period in 2016 due principally to the increase in sales and marketing expenses and, to a lesser extent, the decline in total revenue during the three months ended June 30, 2017.

We expect sales and marketing expenses to increase during 2017 in line with a planned increase in sales personnel and marketing efforts. Due to the expected growth in sales and marketing expenses and the projected decline in total revenue, we expect sales and marketing expenses as a percentage of total revenue to increase in 2017. In the long term, we expect that sales and marketing expenses will increase in absolute dollars as we continue to increase sales personnel and marketing efforts in support of expected growth in demand for our products. However, we expect that sales and marketing expenses will decrease as a percentage of total revenue in the long-term due to projected growth in product revenue.

General and Administrative Expenses

	Three Months Ended June 30,				Change	
	2017		2016			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
General and administrative expenses	$ 4,002	16%	$ 3,894	14%	$ 108	3%

General and administrative expenses increased by $0.1 million, or 3% to $4.0 million during the three months ended June 30, 2017 from $3.9 million in the comparable period in 2016. The $0.1 million increase was primarily the result of an increase in compensation related expenses of $0.3 million and professional fees of $0.1 million offset, in part, by a decrease in patent enforcement costs of $0.2 million and a decrease in other general and administrative expenses of $0.1 million.

General and administrative expenses as a percentage of total revenue increased to 16% for the three months ended June 30, 2017 from 14% in the comparable period in 2016. This increase was due principally to the decline in total revenue during the three months ended June 30, 2017.

We expect general and administrative expenses to increase during 2017 as we expect to pay incentive based compensation related to 2017 performance that we did not pay related to 2016 performance. Due to the expected increase in general and administrative expenses and the projected decline in total revenue, we expect general and administrative expenses as a percentage of total revenue to increase in 2017. We also expect that the patent enforcement actions, described in more detail under “Legal Proceedings” in Part II, Item 1, of this Quarterly Report on Form 10-Q, if protracted, could result in significant legal expense over the medium to long term. In the long term, we expect to continue to increase general and administrative personnel and expense levels to support the anticipated growth of our business and continued expansion of our manufacturing operations. As a result, in the long term, we expect that general and administrative expenses will increase in absolute dollars but decrease as a percentage of revenue due to projected growth in product revenue.

Interest Expense, net

	Three Months Ended June 30,				Change	
	2017		2016			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Interest expense, net	$ (39)	(0)%	$ (39)	(0)%	$ —	—

Interest expense, net, comprised primarily of costs related to our revolving credit facility, was less than $0.1 million during the three months ended June 30, 2017 and 2016.

Six months ended June 30, 2017 compared to the six months ended June 30, 2016

The following tables set forth a comparison of the components of our results of operations for the periods presented:

Revenue

	Six Months Ended June 30,				Change	
	2017		2016			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Revenue:						
Product	$ 46,888	98%	$ 59,409	98%	$ (12,521)	(21)%
Research services	1,183	2%	1,130	2%	53	5%
Total Revenue	$ 48,071	100%	$ 60,539	100%	$ (12,468)	(21)%

The following chart sets forth product shipments in square feet for the periods presented:

	Six Months Ended June 30,		Change	
	2017	2016	Amount	Percentage
Product shipments in square feet (in thousands)	16,980	21,789	(4,809)	(22)%

Total revenue decreased by $12.5 million, or 21%, to $48.1 million for the six months ended June 30, 2017 from $60.5 million in the comparable period in 2016 primarily as a result of a decrease in product revenue.

Product revenue decreased by $12.5 million, or 21%, to $46.9 million for the six months ended June 30, 2017 from $59.4 million in the comparable period in 2016. This decrease was principally the result of a decrease in sales to a major Asian energy company associated with the conclusion of a multiyear petrochemical project, a decline in project work in the subsea market, and a broad based decline in revenue in the global downstream market, offset, in part, by an increase in revenue in the LNG and district energy markets in the United States.

Product revenue for the six months ended June 30, 2017 included $7.0 million in sales to a distributor in the North American energy market and $5.8 million in sales to an Asian distributor. Product revenue for the six months ended June 30, 2016 included $9.2 million in sales to a distributor in the North American energy market and $8.5 million in sales to a major Asian energy company.

The average selling price per square foot of our products increased by $0.03, or 1%, to $2.76 per square foot for the six months ended June 30, 2017 from $2.73 per square foot for the six months ended June 30, 2016. The increase in average selling price reflected the impact of price increases enacted in early 2017 and a decrease in the mix of products sold to the major Asian energy company with lower, project-based pricing, offset, in large part, by a decrease in the mix of high-priced subsea products. This increase in average selling price had the effect of increasing product revenue by $0.6 million for the six months ended June 30, 2017 from the comparable period in 2016.

In volume terms, product shipments decreased by 4.8 million square feet, or 22%, to 17.0 million square feet of aerogel products for the six months ended June 30, 2017, as compared to 21.8 million square feet for the six months ended June 30, 2016. The decrease in product volume had the effect of decreasing product revenue by $13.1 million for the six months ended June 30, 2017 from the comparable period in 2016.

Research services revenue increased by $0.1 million, or 5%, to $1.2 million for the six months ended June 30, 2017 from $1.1 million in the comparable period in 2016. The increase was primarily due to the timing and amount of funding available under existing research contracts during the six months ended June 30, 2017 from the comparable period in 2016.

Product revenue was 98% of total revenue for the six months ended June 30, 2017 and 2016. Research services revenue was 2% of total revenue for the six months ended June 30, 2017 and 2016.

Cost of Revenue

	Six Months Ended June 30,						Change	
	2017			2016				
	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage
				($ in thousands)				
Cost of revenue:								
Product	$ 41,591	89%	87%	$ 46,715	79%	77%	$ (5,124)	(11)%
Research services	565	48%	1%	644	57%	1%	(79)	(12)%
Total cost of revenue	$ 42,156	88%	88%	$ 47,359	78%	78%	$ (5,203)	(11)%

Total cost of revenue decreased by $5.2 million, or 11%, to $42.2 million for the six months ended June 30, 2017 from $47.4 million in the comparable period in 2016. The decrease in total cost of revenue was the result of a decrease in product cost of revenue.

The cost of product revenue decreased by $5.1 million, or 11%, to $41.6 million for the six months ended June 30, 2017 from $46.7 million in the comparable period in 2016. The $5.1 million decrease was the result of a reduction in material costs of $7.7 million associated with the decline in product revenue and a reduction in manufacturing expense of $1.4 million, offset, in part, by an increase in expense of $3.6 million recognized due to a decrease in manufacturing outpu t and an increase in warranty expense of $0.4 million during the six months ended June 30, 2017 . The de crease in manufactur ing expense was the result of de crease s in utilities expense of $ 0. 7 million , compensation expense of $0.6 million and maintenance ex pense of $0.3 million , offset, in part, by an incre ase in depreciation expense of $0.2 million.

The cost of product revenue as a percentage of product revenue increased to 89% during the six months ended June 30, 2017 from 79% during the six months ended June 30, 2016. This increase was the result of the high proportion of fixed manufacturing expenses that remained essentially unchanged despite the 21% decrease in product revenue and a decrease in manufacturing output for the six months ended June 30, 2017 versus the comparable period in 2016.

The cost of research services revenue was $0.6 million for the six months ended June 30, 2017. The cost of research service revenue as a percentage of research services revenue decreased to 48% during the six months ended June 30, 2017 from 57% in the comparable period in 2016 due to the higher mix of internal labor in 2017 versus outside services utilized to support the contracted research.

Gross Profit

	Six Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Gross profit	$ 5,915	12%	$ 13,180	22%	$ (7,265)	(55)%

Gross profit decreased by $7.3 million, or 55%, to $5.9 million for the six months ended June 30, 2017 from $13.2 million in the comparable period in 2016. The decrease in gross profit was the result of the $12.5 million decrease in total revenue offset, in part, by the $5.2 million decrease in total cost of sales. The decrease in revenue was principally associated with the broad based decline in revenue in the global downstream energy market and a decrease in sales to a major Asian energy company associated with the conclusion of a multiyear petrochemical project . The decrease in total cost of sales was driven by reduced material costs and, to a lesser extent, decreased manufacturing expenses associated with the 21% decline in product revenue.

Gross profit as a percentage of total revenue decreased to 12% of total revenue for the six months ended June 30, 2017 from 22% in the comparable period in 2016. In 2017, we expect gross profit as a percentage of total revenue will decrease versus 2016. The expected decrease in gross profit reflects our expectation that the percentage reduction in cost of total revenue will not fully offset the expected percentage reduction in total revenue in 2017 due to a planned decrease in manufacturing output and the high proportion of fixed costs in our manufacturing facility.

Research and Development Expenses

	Six Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Research and development expenses	$ 3,285	7%	$ 2,596	4%	$ 689	27%

Research and development expenses increased by $0.7 million, or 27%, to $3.3 million for the six months ended June 30, 2017 from $2.6 million in the comparable period in 2016. The $0.7 million increase was due to an increase of $0.3 million in compensation related expenses, an increase of $0.2 million in depreciation expense and an increase of $0.2 million in other research expense.

Research and development expenses as a percentage of total revenue increased to 7% for the six months ended June 30, 2017 as compared to 4% in the comparable period in 2016 due to both the increase in research and development expenses and the decrease in total revenue for the six months ended June 30, 2017.

We expect that our research and development expenses during 2017 will increase from 2016 expense levels in support of new product development , improved manufacturing technology and the costs associated with the operation of our newly constructed full scale pilot line. Due to the expected growth in research and development expenses and the projected decline in total revenue, we expect research and development expenses as a percentage of total revenue to increase in 2017. In the long term, we expect to continue to increase investment in research, development and engineering personnel, projects and infrastructure in support of efforts to develop new products, technologies and markets . However, we expect that research and development expenses will decline as a percentage of total revenue in the long-term due to projected growth in product revenue.

Sales and Marketing Expenses

	Six Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Sales and marketing expenses	$ 6,526	14%	$ 5,883	10%	$ 643	11%

Sales and marketing expenses increased by $0.6 million, or 11%, to $6.5 million for the six months ended June 30, 2017 from $5.9 million in the comparable period in 2016. The $0.6 million increase was due to an increase in compensation related costs of $0.8 million, offset, in part, by a reduction in marketing expense of $0.2 million.

Sales and marketing expenses as a percentage of total revenue increased to 14% for the six months ended June 30, 2017 from 10% in the comparable period in 2016 due both to the increase in sales and marketing expenses and the decline in total revenue during the six months ended June 30, 2017.

We expect sales and marketing expenses to increase during 2017 in line with a planned increase in sales personnel and marketing efforts. Due to the expected growth in sales and marketing expenses and the projected decline in total revenue, we expect sales and marketing expenses as a percentage of total revenue to increase in 2017. In the long term, we expect that sales and marketing expenses will increase in absolute dollars as we continue to increase sales personnel and marketing efforts in support of expected growth in demand for our products. However, we expect that sales and marketing expenses will decrease as a percentage of total revenue in the long-term due to projected growth in product revenue.

General and Administrative Expenses

	Six Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
General and administrative expenses	$ 10,589	22%	$ 7,807	13%	$ 2,782	36%

General and administrative expenses increased by $2.8 million, or 36% to $10.6 million during the six months ended June 30, 2017 from $7.8 million in the comparable period in 2016. The $2.8 million increase was primarily the result of increases in patent enforcement costs of $2.3 million, payroll and related costs of $0.6 million, and legal and professional fees of $0.1 million, offset, in part, by a decrease in stock-based compensation expense of $0.2 million.

General and administrative expenses as a percentage of total revenue increased to 22% for the six months ended June 30, 2017 from 13% in the comparable period in 2016, which was due both to the increase in general and administrative expenses and the decline in total revenue during the six months ended June 30, 2017.

We expect general and administrative expenses to increase during 2017 as we expect to pay incentive based compensation related to 2017 performance that we did not pay related to 2016 performance. Due to the expected growth in general and administrative expenses and the projected decline in total revenue, we expect general and administrative expenses as a percentage of total revenue to increase in 2017. We also expect that the patent enforcement actions, described in more detail under “Legal Proceedings” in Part II, Item 1, of this Quarterly Report on Form 10-Q, if protracted, could result in significant legal expense over the medium to long term. In the long term, we expect to continue to increase general and administrative personnel and expense levels to support the anticipated growth of our business and continued expansion of our manufacturing operations. As a result, in the long term, we expect that general and administrative expenses will increase in absolute dollars but decrease as a percentage of revenue due to projected growth in product revenue.

Interest Expense, net

	Six Months Ended June 30,					
	2017		2016		Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Interest expense, net	$ (65)	(0)%	$ (78)	(0)%	$ 13	17%

Interest expense, net, comprised primarily of costs related to our revolving credit facility, was less than $0.1 million during the six months ended June 30, 2017 and 2016.

Liquidity and Capital Resources

Overview

We have experienced significant losses and invested substantial resources since our inception to develop and commercialize our aerogel technology and to build a manufacturing infrastructure capable of supplying aerogel products at the volumes and costs required by our customers. These investments have included research and development and other operating expenses, capital expenditures and investment in working capital balances.

Through 2015, we experienced revenue growth and gained share in our target markets. Despite a decline in revenue in 2016 and an expected decline in revenue in 2017, our financial projections anticipate long-term revenue growth, with increasing levels of gross profit and improved cash flows from operations. However, we expect to incur significant capital expenditures related to the expansion of our manufacturing capacity which, while currently delayed, we believe will be needed to support this expected long term growth in demand.

We believe that our existing cash balance and available credit will be sufficient to fund the remaining design and development and a portion of the construction of our second manufacturing facility. We expect to supplement our cash balance and available credit with anticipated cash flows from operations, local government grants, debt financings, customer prepayments and potentially equity financings to provide the capital required to complete the first production line in our second manufacturing facility.

We currently anticipate that constrained capital investment and low activity levels in the global energy markets, in particular in the downstream global markets, will continue through 2017. With this view of the market, we elected in late 2016 to delay the board approved project to construct a second manufacturing facility and its related financing to better align the capacity expansion with our assessment of demand for the 2018 to 2020 period. In addition, we intend to manage capital expenditures and working capital balances during 2017 to maintain the cash resources required to support current operating requirements and our long term capacity plan.

Primary Sources of Liquidity

Our principal sources of liquidity are currently our cash and cash equivalents and our revolving credit facility with Silicon Valley Bank. Cash and cash equivalents consist primarily of cash and money market accounts on deposit with banks. As of June 30, 2017, we had $7.0 million of cash and cash equivalents.

At June 30, 2017, our only debt obligations were less than $0.1 million related to capital lease obligations. At June 30, 2017, we also had $2.3 million of outstanding letters of credit secured by the revolving credit facility with Silicon Valley Bank.

We have maintained the revolving credit facility with Silicon Valley Bank since March 2011, which has been amended from time to time. Under our revolving credit facility, we are permitted to borrow a maximum of $20.0 million, subject to continued covenant compliance and borrowing base requirements. At our election, the interest rate applicable to borrowings under the amended revolving credit facility may be based on the prime rate or LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. In addition, we are required to pay a monthly unused revolving line facility fee of 0.5% per annum of the average unused portion of the revolving credit facility. The revolving credit facility matures on January 28, 2018. We intend to extend or replace the facility prior to expiration.

Due to the borrowing base limitations of the revolving credit facility, the effective amount available to us under the facility at June 30, 2017 was $10.5 million after giving effect to the $2.3 million of letters of credit outstanding. As of June 30, 2017, we had no outstanding balances drawn on the revolving credit facility.

Analysis of Cash Flow

Net Cash Used in Operating Activities

During the six months ended June 30, 2017, we used $6.0 million in net cash for operating activities, as compared to the use of $5.2 million in net cash during the comparable period in 2016, an increase in the use of cash of $0.8 million. This increase in use of cash was the result of the increase in net loss adjusted for non-cash items of $11.1 million, offset, in large part, by an increase in cash provided by changes in operating assets and liabilities of $10.3 million.

Net Cash Used in Investing Activities

Net cash used in investing activities is related to capital expenditures to support our growth. Net cash used in investing activities for the six months ended June 30, 2017 and 2016 was $4.8 million and $7.7 million, respectively.

Net cash used in investing activities for the six months ended June 30, 2017 and 2016 included a total of $4.8 million and $7.7 million, respectively, in capital expenditures for the engineering and design and other pre-construction costs related to our planned manufacturing facility in Statesboro, Georgia, and machinery and equipment in support of the manufacture of new products and to improve the throughput and efficiency of our East Providence facility.

Net Cash Used in Financing Activities

Net cash used in financing activities for the six months ended June 30, 2017 totaled $0.3 million and consisted of $0.3 million for payments made for employee tax withholdings associated with the vesting of restricted stock units and less than $0.1 million for repayments of obligations under capital leases. Net cash used in financing activities for the six months ended June 30, 2016 totaled $0.1 million and included $0.1 million for payments made for employee tax withholdings associated with the vesting of restricted stock units and less than $0.1 million for repayments of obligations under capital leases.

Off Balance Sheet Arrangements

Since our inception, we have not engaged in any off balance sheet activities as defined in Item 303(a)(4) of Regulation S-K.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations and commitments as reported in our Annual Report on Form 10-K for the year ending December 31, 2016, filed with the SEC on March 2, 2017.

Recent Accounting Pronouncements

Information regarding new accounting pronouncements is included in note 2 to our unaudited consolidated financial statements contained in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with U.S. GAAP. The preparation of our financial statements and related disclosures requires us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses and related disclosures. We believe that the estimates, assumptions and judgments involved in these accounting policies have the greatest potential impact on our financial statements and, therefore, we consider these to be our critical accounting policies. Accordingly, we evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions. See our Annual Report on Form 10-K for the year ended December 31, 2016, filed on March 2, 2017 with the Securities and Exchange Commission (SEC), and note 2 to our consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for information about these critical accounting policies, as well as a description of our other significant accounting policies.

Certain Factors That May Affect Future Results of Operations

The SEC, encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Quarterly Report on Form 10-Q contains such "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other important factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements.

Forward-looking statements include, but are not limited to, statements about: our beliefs in the appropriateness of our assumptions, the accuracy of ou r estimates regarding expenses, loss contingencies, future revenues, future profits, uses of cash, available credit, capital requirements, and the need for additional financing; our expectations about revenue, expenses, Adjusted EBITDA, GAAP EPS, cash bala nces and related variations or trends; beliefs about the general strength or health of Aspen Aerogels' business; the performance of our aerogel blankets; our plans to construct a second manufacturing facility in Statesboro, Georgia; our estimates of annual production capacity; beliefs about our strategic partnership with BASF and the potential benefits of such a relationship, including the potential for it to create new product and market opportunities; our supply agreement with BASF, our exclusive supply t o BASF of its Spaceloft ® A2 product, the potential for future cash advances from BASF under the supply agreement (payment of which are subject to certain conditions) to provide a source of financing for some portion of the cost of the planned construction of our proposed manufact uring plant expected to be located in Statesboro, Georgia, and the potential for BASF to become a significant customer for our products; our joint development agreement with BASF, and the potential for it to support the development of new aerogel products and technologies; our beliefs about the usefulness of the square foot operating metric; our beliefs about the financial metrics that are indicative of our core performance; our beliefs about the usefulness of our presentation of Adjusted EBITDA; our expect ations about the effect of manufacturing capacity on financial metrics such as Adjusted EBITDA; our beliefs about the outcome, effects or estimated costs of current or future litigation or their respective timing, including in connection with the Company's patent enforcement actions; our beliefs about the validity of our patents, our expectations about the outcome and timing of the patent enforcement actions ; our expectations about hiring additional personnel; our plans to devote substantial resources to th e development of new aerogel technology; our expectations about product mix; our expectations about future material costs and manufacturing expenses as a percentage of revenue; our expectations of future gross profit and the effect of manufacturing expense s, manufacturing capacity and productivity on gross profit; our expectations about our resources and other investments in new technology and related research and development activities and associated expenses; our expectations about short and long term (a) research and development (b) general and administrative and (c) sales and marketing expenses; our expectations of near term revenue declines; our expectations of revenue growth, increased gross profit, and improving cash flows over the long term; our inte ntions about managing capital expenditures and working capital balances; our expectations about incurring significant capital expenditures in the future; our expectations about the expansion of our workforce and resources and its effect on sales and market ing, general and administrative, and related expenses; our expectations about future product revenue and demand for our products; our expectations about the effect of stock based compensation on various costs and expenses; our expectations about potential sources of future financing; our beliefs about the impact of accounting policies on our financial statements; our beliefs about the effect of interest rates, inflation and foreign currency fluctuations on our results of operations and financial condition; and our beliefs about the expansion of our international operations.

Words such as "may," "will," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and words and terms of similar substance used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management's present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those described in the forward-looking statements. These risks include, but are not limited to, those set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q and under the heading "Risk Factors" contained in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this Quarterly Report on Form 10-Q might not occur. Stockholders and other readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this Quarterly Report on Form 10-Q. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to Aspen Aerogels, Inc. or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Item 3. 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. Our market risk exposure results primarily from fluctuations in interest rates as well as from inflation. In the normal course of business, we are exposed to market risks, including changes in interest rates which affect our line of credit under our revolving credit facility as well as cash flows. We may also face additional exchange rate risk in the future as we expand our business internationally.

Interest Rate Risk

We are exposed to changes in interest rates in the normal course of our business. At June 30, 2017, we had unrestricted cash and cash equivalents of $7.0 million. These amounts were held for working capital and capital expansion purposes and were invested primarily in deposit and money market accounts at a major financial institution in North America. Due to the short-term nature of these investments, we believe that our exposure to changes in the fair value of our cash as a result of changes in interest rates is not material.

As of June 30, 2017, we have no debt outstanding other than capital lease obligations of approximately $0.1 million with fixed interest rates. At June 30, 2017, we also had $2.3 million of outstanding letters of credit.

Under our revolving credit facility, we are permitted to borrow a maximum of $20.0 million, subject to continued covenant compliance and borrowing base requirements. At our election, the interest rate applicable to borrowings under the revolving credit facility may be based on the prime rate or LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. In addition, we are required to pay a monthly unused revolving line facility fee of 0.5% per annum of the average unused portion of the revolving credit facility. The maturity date of our revolving credit facility is January 28, 2018.

Due to the borrowing base limitations, the effective amount available to us under the revolving credit facility at June 30, 2017 was $10.5 million after giving effect to the $2.3 million of letters of credit outstanding. As of June 30, 2017, we had no outstanding balances drawn on the revolving credit facility.

Inflation Risk

Although we expect that our operating results will be influenced by general economic conditions, we do not believe that inflation has had a material effect on our results of operations during the periods presented in this report. However, our business may be affected by inflation in the future.

Foreign Currency Exchange Risk

We are subject to inherent risks attributed to operating in a global economy. Principally all of our revenue, receivables, purchases and debts are denominated in U.S. dollars.

Item 4. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures* .

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934, as amended, or the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

As of June 30, 2017, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on such evaluation, our principal executive officer and principal financial officer have concluded that, as of June 30, 2017, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Controls* .

During the six months ended June 30, 2017, there were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHE R INFORMATION

Item 1. Leg al Proceedings.

On May 5, 2016, we filed a complaint for patent infringement against Nano Tech Co., Ltd. (“Nano”) and Guangdong Alison Hi-Tech., Ltd. (“Alison” and, together with Nano, the “Respondents”) in the United States International Trade Commission (the “ITC”). The ITC complaint alleges that these two China-based companies have engaged and are engaging in unfair trade practices by importing aerogel products in the United States that infringe several of the Company’s patents. In the ITC complaint, we are seeking exclusion orders directing United States Customs and Border Protection to stop the importation of infringing products. On June 2, 2016, the ITC instituted an investigation based on our complaint. The investigation is ongoing with participation from the Respondents through their respective counsel. The Administrative law Judge (ALJ) presiding over the ITC investigation held an evidentiary hearing in February 2017 and we are awaiting a written decision from the ALJ. In addition to Respondents’ contention at the ITC that the patents we have asserted are invalid, Alison has also filed petitions with United States Patent and Trademark Office (“USPTO”) requesting Inter-Partes Review to cancel certain claims in three of the asserted manufacturing process patents and a product patent. The USPTO has denied all of Alison’s petitions to institute Inter-Partes Review challenging the validity of Aspen patents. Alison has also filed similar requests with the Chinese Patent Office (“SIPO”) seeking to invalidate two of our Chinese manufacturing process patents and two of our Chinese product patents. After the conclusion of the oral proceedings and before any decision issued by the SIPO, Alison withdrew all of its requests for invalidation of our Chinese patents.

On April 11, 2016, we also filed a patent infringement suit at the District Court in Mannheim, Germany against the Respondents and two European distributors asserting their infringement of one of our German patents. We subsequently asserted infringement of another three patents against Nano and a European distributor of Alison’s products at the Mannheim court. We have since settled with the other European distributor in exchange for a commitment not to procure infringing products and cooperation with our case. The litigation against the other defendants is ongoing. Nano has also initiated a nullity action in German Federal Patent Court against one of our asserted German manufacturing process patents. Alison likewise filed an opposition to one of the asserted patents at the European Patent Office and also initiated nullity action against two other patents.

Due to their nature, it is difficult to predict the outcome or the costs involved in any litigation. Furthermore, the Respondents may have significant resources and interest to litigate and therefore, these litigation matters could be protracted and may ultimately involve significant legal expenses. In addition to the foregoing, we have been and may be from time to time party to other legal proceedings that arise in the ordinary course of business and to other patent enforcement actions to assert our patent rights.

Item 1A. Risk Factors.

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, except as follows.

We may not be able to successfully develop and introduce new products in a timely manner at competitive prices, which would limit our ability to grow and maintain our competitive position and could adversely affect our financial conditions, results of operations and cash flow.

Our growth depends, in part, on continued sales of existing products, including by improving the performance of existing products, as well as the successful development and introduction of new products, which face the uncertainty of customer acceptance and reaction from competitors. New product development requires considerable resources and attention that may shift our focus from and may disrupt our current operations, especially for an organization like ours which has fewer resources than many of our competitors. We may not be able to sustainably manufacture new products with attractive margins and we may experience higher yield losses than expected. Any delay in the development or launch of a new product could result in our not being the first to market, which could compromise our competitive position. Even if we manage to develop and introduce new products, such products may not address market needs or otherwise compete with third party products. Even if our new products are adopted by the market, we may not achieve the growth in revenue that we expect from such new products and our investment in these efforts may not be proportional to our expected or actual revenue growth. If we are unable to develop and introduce new products in a cost-effective manner or otherwise manage effectively the operations related to new products, our results of operations and financial condition could be adversely impacted.

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

(a) *Unregistered Sales of Equity Securities* . Not applicable.

(b) *Use of Proceeds from Initial Public Offering of Common Stock* .

We registered shares of our common stock in connection with our initial public offering pursuant to a registration statement on Form S-1 (File No. 333-195523), which was declared effective by the SEC on June 12, 2014, and a registration statement on Form S-1 (File No. 333-196719) filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, or the Securities Act.

We received aggregate net proceeds from the offering of approximately $74.7 million, after deducting $4.3 million of underwriting discounts and approximately $3.5 million of offering expenses.

As of June 30, 2017, we have used $19.8 million of the net proceeds of the offering to repay all amounts outstanding under our subordinated notes and our revolving credit facility; $31.0 million of the net proceeds of the offering for capital expenditures related to our third production line; $7.2 million of the net proceeds of the offering for our planned manufacturing facility in Statesboro, Georgia; and $9.7 million of the net proceeds of the offering for general corporate purposes. The remainder of the net proceeds is held in a deposit account and money market account with a major financial institution in North America. We have broad discretion in the use of the net proceeds from our initial public offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our stock. There has been no material change in our planned use of the balance of the net proceeds from the offering as described in our final prospectus dated June 12, 2014, filed with the SEC on June 16, 2014.

(c) *Purchases of Equity Securities By the Issuer and Affiliated Purchasers* .

We did not repurchase any of our equity securities during the quarter ended June 30, 2017.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

As previously reported, on December 11, 2015, the Board of Directors of the Company granted to Donald R. Young, President and Chief Executive Officer of the Company, under the Company's 2014 Employee, Director and Consultant Equity Incentive Plan, (i) 78,125 shares of restricted common stock which will vest based on the achievement of a Company performance target for fiscal year 2020 (the "Restricted Shares"), (ii) a nonqualified stock option to purchase 84,745 shares of common stock which will vest in full on the third anniversary of the grant date (the "Time-Based Option"); and (iii) a nonqualified stock option to purchase 370,181 shares of common stock of which 131,578 of the shares will vest and become exercisable on the third anniversary of the grant date provided that the 30 day volume weighted average price of the Company's common stock on the New York Stock Exchange (the "VWAP") shall be at least $7.68 for at least 60 consecutive trading days during such three-year period; 122,324 of the shares will vest and become exercisable on the fourth anniversary of the grant date provided that the VWAP shall be at least $8.32 for at least 60 consecutive trading days during such four-year period; and the remaining 116,279 of the shares will vest and become exercisable on the fifth anniversary of the grant date provided that the VWAP shall be at least $8.96 for at least 60 consecutive trading days during such five-year period (the "Performance Option").

In order to better align Mr. Young's incentives with the Company's current goals, particularly given the constrained capital investment and low activity levels in the global energy infrastructure markets, the Company's election to delay the board approved Plant Two project and its related financing to better align the capacity expansion with the Company's assessment of demand for the 2018 to 2020 period, and the Company's decision to file patent infringement suits, the Company's Board of Directors has reduced the Company performance target for fiscal year 2020 with respect to the Restricted Shares and extended by one year each of the time periods during which Mr. Young may achieve the price targets on the vesting of his Performance Option that are currently set to expire on the third anniversary of the grant date (131,578 shares, $7.68 target) and on the fourth anniversary of the grant date (122,324 shares, $8.32 target).

Item 6. E xhibits.

(a) Exhibits

31.1	Certification of principal executive officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
31.2	Certification of principal financial officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
32	Certifications of the principal executive officer and the principal financial officer under Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from Aspen Aerogels, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets (unaudited) as of June 30, 2017 and December 31, 2016, (ii) the Consolidated Statements of Operations (unaudited) for the three and six months ended June 30, 2017 and 2016, (iii) the Consolidated Statements of Cash Flows (unaudited) for the six months ended June 30, 2017 and 2016, and (iv) the Notes to Consolidated Financial Statements (unaudited).

SIGNA TURES

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

ASPEN AEROGELS, INC.

Date: August 3, 2017

By: /s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Date: August 3, 2017

By: /s/ John F. Fairbanks
John F. Fairbanks
Vice President, Chief Financial Officer and Treasurer
(principal financial officer and principal accounting officer)

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Donald R. Young, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Aerogels, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2017

/s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, John F. Fairbanks, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Aerogels, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2017

/s/ John F. Fairbanks

John F. Fairbanks
Vice President, Chief Financial Officer and Treasurer (principal financial officer and principal accounting officer)

Exhibit 32

CERTIFICATIONS UNDER SECTION 906

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Aspen Aerogels, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 3, 2017	/s/ Donald R. Young
	Donald R. Young President and Chief Executive Officer (principal executive officer)
Dated: August 3, 2017	/s/ John F. Fairbanks
	John F. Fairbanks Vice President, Chief Financial Officer and Treasurer (principal financial officer and principal accounting officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.