

U. S. SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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, 2019

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM _____ TO _____.

Commission file number: 001-35011

DYNASIL CORPORATION OF AMERICA

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

22-1734088
(I.R.S. Employer
Identification No.)

313 Washington Street, Suite 403, Newton, MA
(Address of principal executive offices)

02458
(Zip Code)

Registrant's telephone number, including area code: (617) 668-6855

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 past 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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit 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
Non-accelerated filer
Emerging growth company

Accelerated filer
Smaller reporting 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. Yes No

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

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading symbol</u>	<u>Name of each exchange of which registered</u>
Common stock	DYSL	Nasdaq Capital Market

As of August 7, 2019 there were 17,618,173 shares of common stock, par value \$.0005 per share, outstanding.

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	June 30, 2019 (Unaudited)	September 30, 2018
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 519,000	\$ 2,327,000
Accounts receivable, net of allowances of \$274,000 and \$262,000 at June 30, 2019 and September 30, 2018, respectively	5,347,000	4,069,000
Unbilled receivables	2,422,000	1,214,000
Contract assets	62,000	1,000
Inventories, net of reserves	4,544,000	4,106,000
Prepaid expenses and other current assets	717,000	664,000
Total current assets	<u>13,611,000</u>	<u>12,381,000</u>
Property, Plant and Equipment, net	7,762,000	8,098,000
Other Assets		
Intangibles, net	665,000	755,000
Deferred tax asset	4,128,000	4,333,000
Goodwill	5,864,000	5,900,000
Long term contract assets	7,000	7,000
Security deposits	53,000	58,000
Total other assets	<u>10,717,000</u>	<u>11,053,000</u>
Total Assets	<u>\$ 32,090,000</u>	<u>\$ 31,532,000</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Line of credit	\$ 961,000	\$ -
Current portion of long-term debt	1,431,000	1,246,000
Capital lease obligations, current portion	33,000	40,000
Accounts payable	2,544,000	2,355,000
Contract liabilities	33,000	253,000
Accrued expenses and other liabilities	2,667,000	2,803,000
Total current liabilities	<u>7,669,000</u>	<u>6,697,000</u>
Long-term Liabilities		
Long-term debt, net of current portion	1,797,000	2,075,000
Capital lease obligations, net of current portion	30,000	52,000
Deferred tax liability, net	200,000	205,000
Other long-term liabilities	181,000	175,000
Total long-term liabilities	<u>2,208,000</u>	<u>2,507,000</u>

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

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Continued)

LIABILITIES AND STOCKHOLDERS' EQUITY (Continued)

	June 30, 2019 (Unaudited)	September 30, 2018
Stockholders' Equity		
Common Stock, \$0.0005 par value, 40,000,000 shares authorized, 18,377,083 and 18,152,074 shares issued, 17,566,923 and 17,341,914 shares outstanding at June 30, 2019 and September 30, 2018, respectively.	9,000	9,000
Additional paid in capital	22,153,000	21,865,000
Accumulated other comprehensive income (loss)	(832,000)	(700,000)
Retained earnings	599,000	841,000
Less 810,160 shares of treasury stock - at cost	(986,000)	(986,000)
Total Dynasil stockholders' equity	20,943,000	21,029,000
Noncontrolling interest	1,270,000	1,299,000
Total stockholders' equity	22,213,000	22,328,000
Total Liabilities and Stockholders' Equity	\$ 32,090,000	\$ 31,532,000

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

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(UNAUDITED)

	Three Months Ended June 30,		Nine Months Ended June 30,	
	2019	2018	2019	2018
Net revenue	\$ 11,090,000	\$ 10,542,000	\$ 32,650,000	\$ 29,985,000
Cost of revenue	6,984,000	6,367,000	20,494,000	18,326,000
Gross profit	4,106,000	4,175,000	12,156,000	11,659,000
Operating expenses:				
Sales and marketing	425,000	288,000	1,300,000	955,000
Research and development	162,000	177,000	486,000	701,000
General and administrative	3,665,000	3,100,000	10,317,000	9,519,000
Total operating expenses	4,252,000	3,565,000	12,103,000	11,175,000
Income (loss) from operations	(146,000)	610,000	53,000	484,000
Interest expense, net	56,000	44,000	144,000	132,000
Income (loss) before taxes	(202,000)	566,000	(91,000)	352,000
Income tax (benefit)	66,000	190,000	207,000	(404,000)
Net income (loss)	(268,000)	376,000	(298,000)	756,000
Less: Net loss attributable to noncontrolling interest	(5,000)	(15,000)	(18,000)	(124,000)
Net income (loss) attributable to common stockholders	\$ (263,000)	\$ 391,000	\$ (280,000)	\$ 880,000
Net income (loss)	\$ (268,000)	\$ 376,000	\$ (298,000)	\$ 756,000
Other comprehensive income (loss):				
Foreign currency translation	(136,000)	(384,000)	(132,000)	(127,000)
Total comprehensive income (loss)	(404,000)	(8,000)	(430,000)	629,000
Less: comprehensive income (loss) attributable to noncontrolling interest	(5,000)	(15,000)	(18,000)	(124,000)
Total comprehensive income (loss) attributable to common stockholders	\$ (399,000)	\$ 7,000	\$ (412,000)	\$ 753,000
Basic net income (loss) per common share	\$ (0.02)	\$ 0.02	\$ (0.02)	\$ 0.05
Diluted net income (loss) per common share	\$ (0.02)	\$ 0.02	\$ (0.02)	\$ 0.05
Weighted average shares outstanding				
Basic	17,522,644	17,203,965	17,426,316	17,127,834
Diluted	17,522,644	17,221,199	17,426,316	17,147,228

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

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(UNAUDITED)

	Three Months Ended June 30,		Nine Months Ended June 30,	
	2019	2018	2019	2018
Common Amount				
Balance, beginning of period	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000
Balance, end of period	<u>9,000</u>	<u>9,000</u>	<u>9,000</u>	<u>9,000</u>
Additional Paid-in Capital				
Balance, beginning of period	22,060,000	21,635,000	21,865,000	21,406,000
Issuance of shares of common stock under employee stock purchase plan	4,000	5,000	14,000	13,000
Stock-based compensation costs	89,000	116,000	274,000	337,000
Balance, end of period	<u>22,153,000</u>	<u>21,756,000</u>	<u>22,153,000</u>	<u>21,756,000</u>
Other Comprehensive Income (Loss)				
Balance, beginning of period	(696,000)	(282,000)	(700,000)	(539,000)
Foreign currency translation adjustment	(136,000)	(384,000)	(132,000)	(127,000)
Balance, end of period	<u>(832,000)</u>	<u>(666,000)</u>	<u>(832,000)</u>	<u>(666,000)</u>
Retained Earnings (Accumulated Deficit)				
Balance, beginning of period	862,000	(430,000)	841,000	(919,000)
Impact of change in accounting policy	-	-	22,000	-
Xcede stock surrender of Series A Preferred	-	-	16,000	-
Net income (loss)	(263,000)	391,000	(280,000)	880,000
Balance, end of period	<u>599,000</u>	<u>(39,000)</u>	<u>599,000</u>	<u>(39,000)</u>
Treasury Stock				
Balance, beginning of period	(986,000)	(986,000)	(986,000)	(986,000)
Balance, end of period	<u>(986,000)</u>	<u>(986,000)</u>	<u>(986,000)</u>	<u>(986,000)</u>
Noncontrolling Interest				
Balance, beginning of period	1,274,000	1,355,000	1,299,000	1,454,000
Stock-based compensation costs	1,000	4,000	5,000	14,000
Xcede stock surrender of Series A Preferred	-	-	(16,000)	-
Net income (loss)	(5,000)	(15,000)	(18,000)	(124,000)
Balance, end of period	<u>1,270,000</u>	<u>1,344,000</u>	<u>1,270,000</u>	<u>1,344,000</u>
Total Stockholders' Equity	<u>\$ 22,213,000</u>	<u>\$ 21,418,000</u>	<u>\$ 22,213,000</u>	<u>\$ 21,418,000</u>
Common Shares				
Number of shares, beginning of period	18,301,216	18,008,871	18,152,074	17,893,763
Issuance of shares of common stock under employee stock purchase plan	5,623	3,637	17,453	11,593
Stock-based compensation costs - shares issued	70,244	79,423	207,556	186,575
Number of shares, end of period	<u>18,377,083</u>	<u>18,091,931</u>	<u>18,377,083</u>	<u>18,091,931</u>
Treasury Shares				
Number of shares, beginning of period	810,160	810,160	810,160	810,160
Number of shares, end of period	<u>810,160</u>	<u>810,160</u>	<u>810,160</u>	<u>810,160</u>

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

DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Nine Months Ended	
	June 30,	
	2019	2018
Cash flows from operating activities:		
Net income (loss)	\$ (298,000)	\$ 756,000
Adjustments to reconcile net income (loss) to net cash:		
Stock compensation expense	279,000	351,000
Foreign exchange loss (gain)	26,000	13,000
Depreciation and amortization	1,056,000	927,000
Deferred income taxes	205,000	(524,000)
Non-cash R&D services	-	209,000
Other	34,000	(6,000)
Other changes in assets and liabilities:		
Accounts receivable, net	(1,321,000)	(362,000)
Unbilled receivables	(1,168,000)	253,000
Contract assets	(61,000)	-
Inventories	(503,000)	(153,000)
Prepaid expenses and other assets	(55,000)	42,000
Accounts payable	203,000	(447,000)
Accrued expenses and other liabilities	(129,000)	55,000
Contract liabilities	(219,000)	(20,000)
Net cash from operating activities	(1,951,000)	1,094,000
Cash flows from investing activities:		
Purchases of property, plant and equipment	(679,000)	(1,788,000)
Purchase of intangibles	-	(65,000)
Net cash from investing activities	(679,000)	(1,853,000)
Cash flows from financing activities:		
Proceeds from issuance of common stock	14,000	13,000
Principal payments on capital leases	(29,000)	(72,000)
Proceeds from (payments of) line of credit, net	961,000	-
Proceeds from (payments of) equipment line of credit, net	484,000	281,000
Proceeds from (payments of) bank and subordinated debt, net	(584,000)	(329,000)
Net cash from financing activities	846,000	(107,000)
Effect of exchange rates on cash and cash equivalents	(24,000)	(38,000)
Net change in cash and cash equivalents	(1,808,000)	(904,000)
Cash and cash equivalents, beginning	\$ 2,327,000	\$ 2,415,000
Cash and cash equivalents, ending	<u>\$ 519,000</u>	<u>\$ 1,511,000</u>
Supplemental disclosures of cash flow information:		
Cash paid during the year for:		
Interest	\$ 132,000	\$ 109,000
Tax payments (refunds)	(5,000)	7,000
Non cash activities:		
Equipment line of credit to term note conversion	484,000	-
Xcede stock surrender of Series A Preferred	18,000	-
Assets purchased under capital leases	-	12,000

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

**DYNASIL CORPORATION OF AMERICA
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)**

Note 1 - Basis of Presentation

The accompanying consolidated balance sheet as of June 30, 2019, the consolidated statements of operations and comprehensive income (loss) for the three and nine months ended June 30, 2019 and 2018, changes in stockholders' equity for the three and nine months ended June 30, 2019 and 2018, and cash flows for the nine months ended June 30, 2019 and 2018 of Dynasil Corporation of America and subsidiaries (the "Company"), and the related information contained in these notes have been prepared by management and are unaudited. Xcede Technologies, Inc. ("Xcede") is a joint venture between Dynasil Biomedical and Mayo Clinic to spin out and separately fund the development of a tissue sealant technology. As of June 30, 2019, Dynasil Biomedical owned 63% of Xcede's stock and, as a result, Xcede is included in the Company's consolidated balance sheets, results of operations and cash flows. The remaining 37% of Xcede's stock is owned by others and is accounted for under the rules applicable to non-controlling interest. Certain prior year balances have been reclassified to conform to the current year presentation. These reclassifications did not affect previously reported net income or stockholders' equity. In the opinion of management, all adjustments (which include normal recurring and nonrecurring items) necessary to present fairly the Company's financial position, results of operations and cash flows in conformity with generally accepted accounting principles for the periods presented have been made. Interim operating results are not necessarily indicative of operating results for a full year.

The preparation of our unaudited consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the unaudited consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Certain information and note disclosures normally included in the Company's annual financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted. These consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's September 30, 2018 Annual Report on Form 10-K previously filed by the Company with the Securities and Exchange Commission.

The Company considers events or transactions that have occurred after the unaudited consolidated balance sheet date of June 30, 2019, but prior to the filing of the unaudited consolidated financial statements with the SEC on this Quarterly Report on Form 10-Q, to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure, as applicable. Subsequent events have been evaluated through the date of the filing of this Quarterly Report on Form 10-Q with the SEC.

Note 2 – Recent Accounting Pronouncements

Revenue from Contracts with Customers. Effective October 1, 2018, the Company adopted Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers*, and all the related amendments using the modified retrospective transition method. Under the modified retrospective approach, the Company applied the standards to new contracts and those that were not completed as of October 1, 2018 which resulted in a cumulative adjustment to increase the retained earnings in the amount of \$22,000. Prior periods will not be retrospectively adjusted, but the Company will maintain dual reporting for the year of initial application in order to maintain comparability of the periods presented. The cumulative effect of the changes made to the October 1, 2018 unaudited consolidated balance sheet for the adoption of Topic 606 was as follows:

	Balance at September 30, 2018	Adjustment for Topic 606	Adjusted balance at October 1, 2018
Assets:			
Unbilled receivables	1,214,000	40,000	1,254,000
Inventories, net of reserves	4,106,000	(18,000)	4,088,000
Liabilities:			
Contract liabilities	253,000	-	253,000
Stockholders' equity:			
Retained earnings	841,000	22,000	863,000

Contract assets were formerly reported within costs in excess of billings and unbilled receivables. Contract liabilities were formerly reported as deferred revenue. The titles have been changed in the table below to be consistent with accounts currently used under the new standard.

	September 30, 2018	
	As Reported	As Adopted
Unbilled receivables	1,215,000	1,214,000
Contract assets	-	1,000
Security and other deposits	65,000	58,000
Long term contract assets	-	7,000
Deferred revenue	253,000	-
Contract liabilities	-	253,000

The Company receives payments from customers based on a billing schedule as established in our contracts. Contract asset relates to our conditional right to consideration for our completed performance under the contract. Accounts receivable are recorded when the right to consideration becomes unconditional. Contract liability relates to payments received in advance of performance under the contract. Contract liabilities are recognized as revenue as (or when) we perform under the contract. The Company recognized revenue in the amount of \$0 during the three months ended June 30, 2019 and \$253,000 during the nine months ended June 30, 2019 for amounts included in the contract liability balance at September 30, 2018.

Under the new standard, most contracts in the Innovation and Development (formerly Contract Research) segment, which primarily provide contract research services, were not materially impacted upon the adoption of Topic 606 as revenue will continue to be recognized over time. Contracts in the Optics segment generally provide for the following revenue sources: standard product sales, custom product development and sales, and non-recurring engineering contracts. Revenues for this segment are recognized using either the "point in time" or "over time" methods of Topic 606, depending upon the revenue source. The change in revenue recognition for the Optics segment related to certain custom optics products and the related non-recurring engineering costs which changed from "point in time" to "over time" upon the adoption of Topic 606. This change will result in the recognition of revenue over time when compared to existing standards with the cumulative adjustment relating to contracts that are not complete as of September 30, 2018 recognized as an adjustment of \$22,000 to opening retained earnings on October 1, 2018. The revenue for the standard products will be recognized using the "point in time" model of Topic 606, and the timing of such revenue recognition is not expected to differ materially from the historical revenue recognition. Other immaterial adjustments related to the Optics segment that are sometimes offered to customers include customer rights of return and volume discounts. The Company has elected the practical expedient that the Company will not be required to adjust promised amounts of consideration for the effects of a significant financing component if the transfer of promised goods or services will occur in one year or less.

The impact of the adoption of ASC 606 on the Company's consolidated financial statements for the three and nine months ended June 30, 2019 was immaterial as compared to what would have been reported under the previous guidance.

Innovation and Development Segment Revenues

The Company performs research and development for U.S. Federal government agencies, educational institutions and commercial organizations. The Company accounts for a research contract when a contract has been executed, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectability of the contract price is considered probable. Revenue is earned under reimbursement of costs plus fees, fixed price, or time and material type contracts.

The Company's contracts with agencies of the U.S. government are subject to periodic funding by the respective contracting agency. Funding for a contract may be provided in full at inception of the contract or ratably throughout the contract as the services are provided. In evaluating the probability of funding for purposes of assessing collectability of the contract price, the Company considers previous experience with the customers, communication with the customers regarding funding status, and knowledge of available funding for the contract or program. If funding is not assessed as probable, revenue recognition is deferred until realization is reasonably assured.

Under the typical payment terms of the Company's U.S. government contracts, the customer pays either performance-based payments or progress payments. Performance-based payments, which are typically used in the firm fixed price contracts, are interim payments based on quantifiable measures of performance or on the achievement of specified events or milestones. Progress payments, which are typically used in the Company's cost-plus type contracts, are interim payments based on costs incurred as the work progresses. For the Company's U.S. government cost-plus contracts, the customer generally pays during the performance period for 80%-90% of the actual costs incurred. Because the customer retains a small portion of the contract price until completion of the contract and audit of allowable costs, cost-plus type contracts generally result in revenue recognized in excess of billings which the Company presents as contract assets on the balance sheet. Amounts billed and due from customers are classified as receivables on the balance sheet, whereas amounts earned, but not yet billed to the Company's customers due to timing, are classified as unbilled receivables on the balance sheet. The Company recognizes a liability for performance-based payments paid in advance which are in excess of the revenue recognized and presents these amounts as contract liabilities on the balance sheet.

To determine the proper revenue recognition method for research and development contracts, the Company evaluates whether two or more contracts should be combined and accounted for as one single modified contract and whether the combined or single contract should be accounted for as more than one performance obligation. For instances where a contract has options that were bid with the initial contract and awarded at a later date, the Company combines the options with the original contract when options are awarded. For most contracts, the customer contracts for research with multiple milestones that are interdependent, thus, the entire contract is accounted for as one performance obligation. The effect of the combined or modified contract on the transaction price and measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

Contract revenue recognition is measured over time as the Company performs the work because of continuous transfer of knowledge and control to the customer. For U.S. government contracts which are typically subject to the Federal Acquisition Regulation ("FAR"), this continuous transfer of knowledge and control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay for cost incurred plus a reasonable profit, and take control of any work in process. From time to time, as part of normal management processes, facts may change, causing revisions to estimated total costs or revenues expected. The cumulative impact of any revisions to estimates and the full impact of anticipated losses on any type of contract are recognized in the period in which they become known.

Because of knowledge and control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the services to be provided. The Company generally uses the input method, more specifically the cost-to-cost measure of progress for the contracts because it best depicts the transfer of knowledge and control to the customer which occurs as the Company incur costs on these contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. The underlying bases for estimating contract research revenues are measurable expenses, such as labor, subcontractor costs and materials, and data that are updated on a regular basis for purposes of preparing cost estimates. The Company's research contracts generally have a period of performance of nine months to three years, and estimates of contract costs have historically been consistent with actual results. Revisions in these estimates between accounting periods to reflect changing facts and circumstances have not had a material impact on operating results, and the Company does not expect future changes in these estimates to be material. The cumulative impact of any revisions to estimates and the full impact of anticipated losses on any type of contract are recognized in the period in which they become known.

Under cost-plus contracts, the Company is reimbursed for costs that are determined to be reasonable, allowable and allocable to the contract and paid a fixed fee representing the profit negotiated between the Company and the contracting agency. Revenue from cost-plus contracts is recognized as costs are incurred plus an estimate of applicable fees earned. The Company considers fixed fees under cost-plus contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Revenue from time and materials contracts is recognized based on direct labor hours expended at contract billing rates plus other billable direct costs. The Company has elected the practical expedient to recognize revenue in the amount for which it has the right to invoice the customer, provided that invoiced amount corresponds directly with the value to the customer of the Company's performance to date.

Fixed price contracts may include either a product delivery or specific service performance throughout a period. For fixed price contracts that are based on the proportional performance method and involve a specified number of deliverables, the Company recognizes revenue based on the proportion of the cost of the deliverables compared to the cost of all deliverables included in the contract as this method more accurately measures performance under these arrangements. For fixed price contracts that provide for the development and delivery of a specific prototype or product, revenue is recognized based upon the performance completed to date, using an output method of revenue recognition based on milestones reached.

Whether certain costs under government contracts are allowable is subject to audit by the government. Certain indirect costs are charged to contracts using provisional or estimated indirect rates, which are subject to later revision based on government audits of those costs. Management is of the opinion that costs subsequently disallowed, if any, would not likely have a significant impact on revenues recognized for those contracts.

Optics Segment Revenues

The Company produces standard and customized products for commercial organizations, educational institutions, and U.S. Federal government agencies. In addition, the Company also offers services which include non-recurring engineering services. To determine the proper revenue recognition method for Optics contracts, the Company evaluates whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. The Company recognizes revenue when the performance obligation has been satisfied by transferring the control of the product or service to the customer. For contracts with multiple performance obligations, the Company allocates the contract's transaction price to each performance obligation based on their relative stand-alone selling prices. In such circumstances, the Company uses the observable price of goods or services which are sold separately in similar circumstances to similar customers. If these prices are not observable, then the Company will estimate the stand-alone selling price using information that is reasonably available. For the majority of the Company's standard products and services, price list, and discount structures related to customer type are available. For products and services that do not have price list and discount structures, the Company may use one or more of the following: (i) adjusted market assessment approach or (ii) expected cost plus a margin approach. The adjusted market approach requires evaluation of the market in which the Company sells goods or services and estimates the price that a customer in that market would be willing to pay for those goods or services. The expected cost plus margin approach requires the Company to forecast expected costs of satisfying the performance obligation and then add a reasonable margin for that good or service. Shipping and handling activities primarily occur after a customer obtains control and are considered fulfillment cost rather than separate performance obligations. Similarly, sales and similar taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the entity from a customer are excluded from the measurement of the transaction price.

Unfulfilled Performance Obligations

For standard products, the Company recognizes revenue at a point in time when control passes to the customer. Absent substantial product acceptance clauses, this is based on the shipping terms. For custom products that require engineering and development based on customer requirements and provide for cost plus reasonable margin throughout the contract, the Company recognizes revenue over time using the output method for any items shipped and any finished goods or work in process that is produced for balances of open sales orders. For any finished goods or work in process that has been produced for the balance of open sales orders the Company recognizes revenue by applying the average selling price for such open order to the lesser of the on hand balance in finished goods or open sales order quantity which the Company presents as a contract asset on the balance sheet. Cost of sales is recognized based on the standard cost of the finished goods and work in process associated with this revenue and inventory balances are reduced accordingly.

Unfulfilled performance obligations represent amounts expected to be earned on executed contracts. Indefinite delivery and quantity contracts and unexercised options are not reported in total unfulfilled performance obligations. Unfulfilled performance obligations include funded obligations, which is the amount for which money has been directly authorized by the U.S. government and by a commercial customer for which a purchase order has been received, and unfunded obligations, representing firm orders for which funding has not yet been appropriated. The approximate value of our Innovation and Development segment unfulfilled performance obligations was \$38.3 million at June 30, 2019. The Company expects to satisfy 34% of the performance obligations in fiscal year 2019, 55% in fiscal year 2020, and the remaining amount by fiscal year 2021. The approximate value of our Optics segment unfulfilled performance obligations was \$7.0 million at June 30, 2019. The Company expects to satisfy 53% of the performance obligations in fiscal year 2019 and 47% in fiscal year 2020.

The Company disaggregates revenue from contracts with customers by geographic locations, customer-type, contract type, timing of recognition, and major categories for each segments, as the Company believes it best depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. See details in the tables below.

	Three Months Ended June 30, 2019			Nine Months Ended June 30, 2019		
	Optics	Innovation & Development	Total	Optics	Innovation & Development	Total
Total Revenue by Geographic Location						
United States	\$ 3,688,000	\$ 4,981,000	\$ 8,669,000	\$ 10,567,000	\$ 14,334,000	\$ 24,901,000
Asia	667,000	-	667,000	2,440,000	22,000	2,462,000
Europe	1,422,000	46,000	1,468,000	4,608,000	97,000	4,705,000
Other	122,000	164,000	286,000	231,000	351,000	582,000
Total	<u>\$ 5,899,000</u>	<u>\$ 5,191,000</u>	<u>\$ 11,090,000</u>	<u>\$ 17,846,000</u>	<u>\$ 14,804,000</u>	<u>\$ 32,650,000</u>
Total Revenue by Contract Type						
Firm-fixed price	\$ 5,899,000	\$ 500,000	\$ 6,399,000	\$ 17,846,000	\$ 1,663,000	\$ 19,509,000
Non-Firm Fixed price	-	4,691,000	4,691,000	-	13,141,000	13,141,000
Total	<u>\$ 5,899,000</u>	<u>\$ 5,191,000</u>	<u>\$ 11,090,000</u>	<u>\$ 17,846,000</u>	<u>\$ 14,804,000</u>	<u>\$ 32,650,000</u>
Total Revenue by Major Customer Type						
U.S. government revenue	\$ 53,000	\$ 4,856,000	\$ 4,909,000	\$ 56,000	\$ 14,072,000	\$ 14,128,000
U.S. commercial revenue	3,634,000	125,000	3,759,000	10,511,000	262,000	10,773,000
Foreign commercial and other revenue	2,212,000	210,000	2,422,000	7,279,000	470,000	7,749,000
Total	<u>\$ 5,899,000</u>	<u>\$ 5,191,000</u>	<u>\$ 11,090,000</u>	<u>\$ 17,846,000</u>	<u>\$ 14,804,000</u>	<u>\$ 32,650,000</u>
Total Revenue by Major Products/Services						
Optical components	\$ 5,850,000	\$ -	\$ 5,850,000	\$ 17,682,000	\$ -	\$ 17,682,000
Contract research	-	5,009,000	5,009,000	-	14,430,000	14,430,000
Other products and services	49,000	182,000	231,000	164,000	374,000	538,000
Total	<u>\$ 5,899,000</u>	<u>\$ 5,191,000</u>	<u>\$ 11,090,000</u>	<u>\$ 17,846,000</u>	<u>\$ 14,804,000</u>	<u>\$ 32,650,000</u>
Total Revenue by Timing of Recognition						
Goods/services transferred over time	\$ 712,000	\$ 5,017,000	\$ 5,729,000	\$ 1,780,000	\$ 14,456,000	\$ 16,236,000
Goods transferred at a point in time	5,187,000	174,000	5,361,000	16,066,000	348,000	16,414,000
Total	<u>\$ 5,899,000</u>	<u>\$ 5,191,000</u>	<u>\$ 11,090,000</u>	<u>\$ 17,846,000</u>	<u>\$ 14,804,000</u>	<u>\$ 32,650,000</u>

Service Concession Arrangements (Topic 853): Determining the Customer of the Operation Services. In May 2017, the FASB issued ASU 2017-10 which provides guidance for operating entities when they enter into a service concession arrangement with a public-sector grantor. This update is effective for the Company in the fiscal year beginning October 1, 2018, at the time the Company adopted Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606). The Company implemented this ASU on October 1, 2018 and it did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. In October 2016, the FASB issued ASU 2016-16 which eliminates the exception, other than for inventory transfers, under current U.S. GAAP under which the tax effects of intra-entity asset transfers (intercompany sales) are deferred until the transferred asset is sold to a third party or otherwise recovered through use. Upon adoption of ASU 2016-16, the Company will recognize the tax expense from the sale of that asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. Any deferred tax asset that arises in the buyer's jurisdiction would also be recognized at the time of the transfer. Modified retrospective adoption is required with any cumulative-effect adjustment recorded to retained earnings as of the beginning of the period of adoption. The cumulative-effect adjustment, if any, would consist of the net impact from (1) the write-off of any unamortized tax expense previously deferred and (2) recognition of any previously unrecognized deferred tax assets, net of any necessary valuation allowances. The impact of the adoption of this standard on future periods will be dependent on future asset transfers, which generally occur in connection with acquisitions and other business structuring activities. The Company implemented this ASU on October 1, 2018 and it did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

Business Combinations (Topic 805): Clarifying the Definition of a Business. In January 2017, the FASB issued ASU 2017-01 which clarifies the definition of a business for determining whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The Company implemented this ASU on October 1, 2018 and it did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting. In May 2017, the FASB issued ASU No. 2017-09 which was issued to clarify and reduce both (i) diversity in practice and (ii) cost and complexity when applying the guidance in Topic 718, "Compensation – Stock Compensation" to changes in the terms and conditions of a share-based payment award. This update is effective for the Company in the fiscal year beginning October 1, 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial position, results of operations, or cash flows.

Leases (Topic 842). In February 2016, the FASB issued ASU 2016-02 (as subsequently amended by ASU 2018-01, ASU 2018-10, ASU 2018-11 and ASU 2018-20) which requires that a lessee recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. As with previous guidance, there continues to be a differentiation between finance leases and operating leases, however this distinction now primarily relates to differences in the manner of expense recognition over time and in the classification of lease payments in the statement of cash flows. Lease assets and liabilities arising from both finance and operating leases will be recognized in the statement of financial position. ASU 2016-02 leaves the accounting for leases by lessors largely unchanged from previous GAAP. The transitional guidance for adopting the requirements of ASU 2016-02 calls for a modified retrospective approach that includes a number of optional practical expedients that entities may elect to apply. In addition, ASU 2018-11 provides for an additional (and optional) transition method by which entities may elect to initially apply the transition requirements in Topic 842 at that Topic's effective date with the effects of initially applying Topic 842 recognized as a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption and without retrospective application to any comparative prior periods presented. Also, ASU 2018-20 provides certain narrow-scope improvements to Topic 842 as it relates to lessors. The guidance in ASU 2016-02 will become effective for the Company as of the beginning of the 2020 fiscal year. The Company is reviewing vendor relationships and assessing the impact of this ASU on its consolidated financial statements with the intention to adopt this ASU in fiscal year 2020.

Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. In January 2017, the FASB issued ASU 2017-04 which simplifies the test for goodwill impairment by eliminating Step 2 from the Goodwill impairment test. This new guidance is effective for the Company beginning in fiscal year 2021. The adoption of this standard is not expected to have a material impact on the Company's financial statements.

Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, including Accounting Standards Update (ASU) 2016-13. In June 2016, the FASB issued ASU 2016-13 which significantly changes how entities account for credit losses for financial assets and certain other instruments, including trade receivables and contract assets that are not measured at fair value through net income. The ASU requires a number of changes to the assessment of credit losses, including the utilization of an expected credit loss model, which requires consideration of a broader range of information to estimate expected credit losses over the entire lifetime of the asset, including losses where probability is considered remote. Additionally, the standard requires the estimation of lifetime expected losses for trade receivables and contract assets that are classified as current. The Company is reviewing the effect of the ASU on its results of operations, financial condition, and cash flows.

Note 3 – Xcede Technologies, Inc. Joint Venture

In October 2013, the Company, through its subsidiary Dynasil Biomedical (“DBM”), formed Xcede, a joint venture with Mayo Clinic, in order to spin out and separately fund the development of its hemostatic tissue sealant technology, which formerly comprised the majority of its expense within the biomedical segment.

Beginning at its inception and through November 2016, Xcede funded its pre-clinical research activities through the issuance of \$5.2 million in the aggregate principal amount of convertible notes bearing interest at 5% (“the Notes”). In November of 2016, the Notes were converted into Series A convertible preferred stock of Xcede (“Series A Preferred”). Series A Preferred participants include both outside investors (accounted for as noncontrolling interest) and DBM. The outside investors converted \$3.1 million of Notes and accrued interest into 3,055,551 shares of Series A Preferred. DBM converted the remaining \$2.4 million of Notes and accrued interest into 2,338,569 shares of Series A Preferred.

Additionally, DBM invested \$1.2 million of cash into Xcede in exchange for Series B convertible preferred stock of Xcede (“Series B Preferred”). Series A Preferred was issued at a 20% discount to the price per share of the Series B Preferred, in accordance with the amended provisions of the Notes. The value of DBM’s Series A Preferred and Series B Preferred, as they are wholly owned by DBM, is eliminated in consolidation.

Each share of Series A Preferred and Series B Preferred (together “the Preferred Stock”) is convertible, at the option of the holder, into such number of fully paid and non-assessable shares of Xcede common stock (“Common Stock”) as determined by dividing the original issue price, as defined, by the conversion price in effect on the date of conversion, which is 1:1. Each holder of the Preferred Stock is entitled to one vote for each share of Common Stock that the holder of the Preferred Stock would be entitled to receive upon the conversion of the holder’s Preferred Stock into Common Stock. Upon any liquidation event, which includes certain change of control events, following payment of pre-equity distributions, the remaining proceeds or net assets of Xcede shall be paid and distributed in the following amounts and order of priority: (1) to satisfy the liquidation preference payment due to each holder of Series B Preferred, (2) to satisfy the liquidation preference payment due to each holder of Series A Preferred, (3) payment in full of any acquisition transaction payment, and (4) the remaining assets available to be distributed ratably among the holders of the Common Stock. If a liquidation event were to occur, the Series A Preferred’s liquidation value would be \$1.016 per share and Series B Preferred’s liquidation value would be \$1.27 per share. As of June 30, 2019, the liquidation value of the Series B Preferred would be approximately \$1.5 million and the Series A Preferred would be approximately \$5.5 million, of which \$2.4 million is DBM’s portion and \$3.1 million would be attributed to noncontrolling shareholders.

As of June 30, 2019, DBM owned approximately 63% of Xcede’s outstanding Common Stock and Preferred Stock and, as a result, Xcede is included in the Company’s consolidated balance sheets, results of operations and cash flows. Due to the Series A Preferred having a liquidation preference and therefore not representing a residual interest, cumulative net losses of Xcede are attributed only to common stockholders in accordance with common stock ownership. Noncontrolling interest represents the value of the Series A Preferred and common stock not owned by DBM plus 17% of cumulative losses of Xcede based on the 17% common stock ownership held by noncontrolling interests.

In 2016, Xcede signed agreements with Cook Biotech Inc. (“CBI”) in connection with the development, regulatory approval and production of Xcede’s hemostatic patch (the “Xcede Patch”) in which CBI committed to fund up to \$1.5 million for the pre-clinical testing for the Xcede Patch. Xcede utilized \$0.5 million in CBI services in exchange for a note that is currently outstanding.

On July 20, 2018, Xcede received a notice of termination from CBI claiming that the results of a recent animal study showed that it is not commercially reasonable, in CBI's assessment, to continue to the next development phase of the Patch.

In light of the foregoing, Xcede has halted clinical trial preparations at this time and has curtailed its operations to a minimal level while the Board of Directors of Xcede evaluates alternatives, including the viability of modifying the Xcede Patch to address the shortcomings cited by CBI and/or the possible sale or license of Xcede IP assets, subject to amending CBI's security interest. Additionally, Xcede and the Company's RMD subsidiary have begun an investigation of possible continued development of the Xcede Patch, which includes seeking government funding of this development. In September 2019, Xcede and RMD plan to resubmit an application for a Phase I SBIR grant for \$225,000. There can be no assurances with respect to any such alternatives or that any additional outside funding to continue development of the Xcede Patch will be available to Xcede.

Note 4 - Inventories

Inventories, net of reserves, consists of the following:

	June 30, 2019	September 30, 2018
Raw Materials	\$2,482,000	\$ 2,362,000
Work-in-Process	1,073,000	890,000
Finished Goods	989,000	854,000
	<u>\$4,544,000</u>	<u>\$ 4,106,000</u>

Note 5 – Intangible Assets

Intangible assets at June 30, 2019 and September 30, 2018 consist of the following:

June 30, 2019	Useful Life (years)	Gross Amount	Accumulated Amortization	Net
Acquired Customer Base	5 to 15	\$ 703,000	\$ 635,000	\$ 68,000
Know How	15	512,000	376,000	136,000
Trade Names	Indefinite	266,000	-	266,000
Patents	20	223,000	28,000	195,000
Biomedical Technologies	5	260,000	260,000	-
		<u>\$ 1,964,000</u>	<u>\$ 1,299,000</u>	<u>\$ 665,000</u>

September 30, 2018	Useful Life (years)	Gross Amount	Accumulated Amortization	Net
Acquired Customer Base	5 to 15	\$ 719,000	\$ 601,000	\$ 118,000
Know How	15	512,000	350,000	162,000
Trade Names	Indefinite	272,000	-	272,000
Patents	20	223,000	20,000	203,000
Biomedical Technologies	5	260,000	260,000	-
		<u>\$ 1,986,000</u>	<u>\$ 1,231,000</u>	<u>\$ 755,000</u>

Amortization expense for the three months ended June 30, 2019 and 2018 was \$27,000 and \$28,000, respectively. Amortization expense for the nine months ended June 30, 2019 and 2018 was \$82,000 and \$84,000, respectively.

Estimated amortization expense for each of the next five fiscal years and thereafter is as follows:

	2019 (3 months)	2020	2021	2022	2023	Thereafter	Total
Acquired Customer Base	\$ 20,000	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ 68,000
Know How	9,000	34,000	34,000	34,000	25,000	-	136,000
Patents	3,000	11,000	11,000	11,000	11,000	148,000	195,000
	<u>\$ 32,000</u>	<u>\$ 93,000</u>	<u>\$ 45,000</u>	<u>\$ 45,000</u>	<u>\$ 36,000</u>	<u>\$ 148,000</u>	<u>\$ 399,000</u>

The Company continually assesses whether events or changes in circumstances have occurred that may warrant revision of the estimated useful lives of its long-lived assets or whether the remaining balances of those assets should be evaluated for possible impairment. There were no changes, aside from foreign exchange rate fluctuations, in the carrying value of long-lived assets, during the nine months ended June 30, 2019 and 2018.

Note 6 – Goodwill

Goodwill is subject to an annual impairment test. The Company considers many factors which may indicate the requirement to perform additional, interim impairment tests. These include:

- A significant adverse long term outlook for any of its industries;
- An adverse finding or rejection from a regulatory body involved in new product regulatory approvals;
- Failure of an anticipated commercialization of a product or product line;
- Unanticipated competition or the introduction of a disruptive technology;
- The testing for recoverability under the Impairment or Disposal of Long-Lived Assets Subsections of Subtopic 360-10 of a significant asset group within a reporting unit;
- A loss of key personnel; and

- An expectation that a reporting unit carrying goodwill, or a significant portion of a reporting unit, will be sold or otherwise disposed of.

There were no changes, aside from foreign exchange rate fluctuations, in the carrying value of goodwill, during the nine months ended June 30, 2019 and 2018.

Note 7 – Debt

Senior Debt

On April 30, 2019, the Company converted the outstanding balance on the equipment line of credit with Middlesex Savings Bank (“Middlesex”) of approximately \$484,000 into a five year term note with an interest rate of 5.17%, which will be repaid in equal monthly installments from May 2019 through April 2024. Additionally, on May 1, 2019, the Company’s equipment line of credit was renewed for \$750,000 through April 30, 2020, at which time the outstanding balance will be converted into a five year term note.

Subordinated Debt

On November 27, 2018, the Company amended the Note Purchase Agreement (the “Note”) with Massachusetts Capital Resource Company (“MCRC”) to reinstate the interest only payment requirements of the loan and defer principal repayment requirements to November 30, 2019. Such amendment also extended the maturity date from July 31, 2019 to November 30, 2021.

On May 7, 2019, the Company received a waiver from MCRC to terms of the Note to allow and permit the Company’s proposed transaction to delist its Common Stock from the Nasdaq Stock Market, including the 1-for-8,000 reverse stock split on its outstanding shares of Common Stock (the “Reverse Split”), the payment of cash to stockholders subsequent to the Reverse Split who hold only a fractional interest, and the subsequent forward stock split of 8,000-for-1 to restore the remaining shareholders to their original share ownership as of immediately prior to the Reverse Split.

In connection with the events described above, on August 6, 2019, the Company entered into a Note Purchase Agreement with MCRC, the Company’s subordinated lender, in which the Company borrowed an additional \$2,000,000 in cash and replaced the existing Note which has an outstanding principal amount of \$865,216, for an aggregate principal amount of \$2,865,216 which will be due July 31, 2026 and bears eight percent interest per annum. Until August 31, 2022 this loan will require interest only payments, followed by principal and interest payments for the remaining four years of the loan. Until August 31, 2021, the Company is subject to early-payback penalties. As a result of this amendment to the Note, the debt balance as of June 30, 2019 with MCRC was classified as long-term.

Note 8 – Earnings (Loss) Per Common Share

Basic earnings (loss) per common share is computed by dividing the net income or loss attributable to common shares by the weighted average number of common shares outstanding. Diluted earnings per common share adjusts basic earnings per share for the effects of common stock options, common stock warrants, convertible preferred stock and other potential dilutive common shares outstanding during the periods.

For the three and nine months ended June 30, 2019 and 2018, no common share equivalents related to stock options were included in the calculation of dilutive shares, as all of the 95,602 and 160,537 common stock options outstanding, respectively, had exercise prices above the applicable period's average market price per share and the inclusion of common share equivalents would be anti-dilutive. Additionally, for the three and nine months ended June 30, 2019 and 2018, 25,000 and 60,000 shares of restricted common stock were excluded from the calculation of dilutive shares, respectively, as the effect of their inclusion would be anti-dilutive.

The computation of the weighted shares outstanding for the three months ended June 30, 2019 and 2018 is as follows:

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Weighted average shares outstanding		
Basic	17,522,644	17,203,965
Effect of dilutive securities		
Stock Options	-	-
Restricted Stock	-	17,234
Dilutive Average Shares Outstanding	<u>17,522,644</u>	<u>17,221,199</u>

The computation of the weighted shares outstanding for the nine months ended June 30, 2019 and 2018 is as follows:

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Weighted average shares outstanding		
Basic	17,426,316	17,127,834
Effect of dilutive securities		
Stock Options	-	-
Restricted Stock	-	19,394
Dilutive Average Shares Outstanding	<u>17,426,316</u>	<u>17,147,228</u>

Note 9 - Stock Based Compensation

The fair value of the stock options granted is estimated at the date of grant using the Black-Scholes option pricing model.

The expected volatility was determined with reference to the historical volatility of the Company's stock. The Company uses historical data to estimate option exercise and employee termination within the valuation model. The expected term of options granted represents the period of time that the options granted are expected to be outstanding. The risk-free interest rate for periods within the contractual life of the option is based on the U.S. Treasury rate in effect at the time of grant. The dividend yield is expected to be zero because historically the Company has not paid dividends on common stock.

The Company's Xcede joint venture adopted an Equity Incentive Plan in 2013 which provides for, among other incentives, the granting of options to purchase shares in Xcede's common stock to officers, directors, employees and consultants. The options granted generally vest over a three year period. The fair value of the stock options granted is estimated at the date of grant using the Black-Scholes option pricing model using assumptions generally consistent with those used for Company stock options. Because Xcede is not publicly traded, the expected volatility is estimated with reference to the average historical volatility of a group of publicly traded companies that are believed to have similar characteristics to Xcede.

As of June 30, 2019, DBM owned approximately 63% of Xcede's outstanding Common Stock and Preferred Stock. No significant change in the Company's position with respect to the ownership of Xcede's stock occurred during the three months ended June 30, 2019.

Stock compensation expense for the three and nine months ended June 30, 2019 and 2018 is as follows:

	Three Months Ended June 30, 2019	Three Months Ended June 30, 2018
Stock Grants	\$ 73,000	\$ 78,000
Restricted Stock Grants	6,000	14,000
Option Grants	-	-
Employee Stock Purchase Plan	1,000	1,000
Subsidiary Option Grants	10,000	27,000
Total	<u>\$ 90,000</u>	<u>\$ 120,000</u>

	Nine Months Ended June 30, 2019	Nine Months Ended June 30, 2018
Stock Grants	\$ 215,000	\$ 209,000
Restricted Stock Grants	29,000	40,000
Option Grants	-	17,000
Employee Stock Purchase Plan	3,000	2,000
Subsidiary Option Grants	32,000	83,000
Total	<u>\$ 279,000</u>	<u>\$ 351,000</u>

At June 30, 2019, there was approximately \$32,000 in unrecognized stock compensation cost for Dynasil, which is expected to be recognized over a weighted average period of approximately thirteen months.

Restricted Stock Grants

A summary of restricted stock activity for the nine months ended June 30, 2019 is presented below:

Restricted Stock Activity for the Nine Months ended June 30, 2019	Shares	Weighted-Average Grant-Date Fair Value
Nonvested at September 30, 2018	60,000	\$ 1.61
Granted	-	-
Vested	(35,000)	1.68
Cancelled	-	-
Nonvested and expected to vest at June 30, 2019	<u>25,000</u>	\$ 1.50

Stock Option Grants

During the nine months ended June 30, 2019, no Dynasil stock options were granted. A summary of stock option activity for the nine months ended June 30, 2019 is presented below:

	Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remain Contractual Term (in Years)
Balance at September 30, 2018	160,537	\$ 2.01	0.93
Outstanding and exercisable at September 30, 2018	160,537	\$ 2.01	0.93
Granted	-	-	-
Exercised	-	-	-
Cancelled	(64,935)	2.33	-
Balance at June 30, 2019	95,602	\$ 1.80	0.59
Outstanding and exercisable at June 30, 2019	95,602	\$ 1.80	0.59

Subsidiary Stock Option Grants

During the nine months ended June 30, 2019, no Xcede stock options were granted. A summary of Xcede stock option activity for the nine months ended June 30, 2019 is presented below:

	Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remain Contractual Term (in Years)
Balance at September 30, 2018	1,300,956	\$ 1.00	7.10
Outstanding and exercisable at September 30, 2018	1,229,685	1.00	7.11
Granted	-	-	-
Exercised	-	-	-
Cancelled	-	-	-
Balance at June 30, 2019	1,300,956	1.00	6.35
Outstanding and exercisable at June 30, 2019	1,283,768	\$ 1.00	6.35

At June 30, 2019, the Company's Xcede joint venture had approximately \$10,000 of unrecognized stock compensation expense associated with stock options expected to be recognized over a period of three months.

Note 10 – Segment, Customer and Geographical Reporting

Segment Financial Information

Dynasil reports three reportable segments: innovation and development (“Innovation and Development”), (formerly known as the Contract Research segment), optics (“Optics”) and biomedical (“Biomedical”). Within these segments, there is a segregation of operating segments based upon the organizational structure used to evaluate performance and make decisions on resource allocation, as well as availability and materiality of separate financial results consistent with that structure. The Optics segment aggregates four operating segments – Dynasil Fused Silica, Optometrics, Hilger Crystals (“Hilger”), and Evaporated Metal Films – that manufacture commercial products, including optical crystals for sensing in the security and medical imaging markets, as well as optical components, optical coatings and optical materials for scientific instrumentation and other applications. The Innovation and Development segment is one of the largest small business participants in U.S. government-funded research. The Biomedical segment consists of a single operating segment, Dynasil Biomedical Corporation (“Dynasil Biomedical”), a medical technology incubator which owns rights to certain early stage medical technologies. Dynasil Biomedical holds common and preferred stock in the Xcede joint venture which is developing a tissue sealant technology and currently has no other operations.

The Company's segment information for the three months ended June 30, 2019 and 2018 is summarized below:

**Results of Operations for the Three Months Ended June 30,
2019**

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 5,899,000	\$ 5,191,000	\$ -	\$ 11,090,000
Gross profit	2,112,000	1,994,000	-	4,106,000
GM %	36%	38%	-	37%
Operating expenses	2,237,000	1,992,000	23,000	4,252,000
Operating income (loss)	(125,000)	2,000	(23,000)	(146,000)
Depreciation and amortization	297,000	63,000	3,000	363,000
Capital expenditures	90,000	29,000	-	119,000
Intangibles, net	334,000	136,000	195,000	665,000
Goodwill	925,000	4,939,000	-	5,864,000
Total assets	\$ 21,084,000	\$ 10,805,000	\$ 201,000	\$ 32,090,000

**Results of Operations for the Three Months Ended June 30,
2018**

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 6,159,000	\$ 4,383,000	\$ -	\$ 10,542,000
Gross profit	2,299,000	1,876,000	-	4,175,000
GM %	37%	43%	-	40%
Operating expenses	1,721,000	1,760,000	84,000	3,565,000
Operating income (loss)	578,000	116,000	(84,000)	610,000
Depreciation and amortization	261,000	53,000	3,000	317,000
Capital expenditures	707,000	76,000	20,000	803,000
Intangibles, net	408,000	171,000	380,000	959,000
Goodwill	968,000	4,939,000	-	5,907,000
Total assets	\$ 21,117,000	\$ 8,018,000	\$ 507,000	\$ 29,642,000

*Formerly Contract Research

The Company's segment information for the nine months ended June 30, 2019 and 2018 is summarized below:

**Results of Operations for the Nine Months Ended June 30,
2019**

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 17,846,000	\$ 14,804,000	\$ -	\$ 32,650,000
Gross profit	6,121,000	6,035,000	-	12,156,000
GM %	34%	41%	-	37%
Operating expenses	5,993,000	6,012,000	98,000	12,103,000
Operating income (loss)	128,000	23,000	(98,000)	53,000
Depreciation and amortization	863,000	183,000	10,000	1,056,000
Capital expenditures	586,000	93,000	-	679,000
Intangibles, net	334,000	136,000	195,000	665,000
Goodwill	925,000	4,939,000	-	5,864,000
Total assets	\$ 21,084,000	\$ 10,805,000	\$ 201,000	\$ 32,090,000

**Results of Operations for the Nine Months Ended June 30,
2018**

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 17,011,000	\$ 12,974,000	\$ -	\$ 29,985,000
Gross profit	6,038,000	5,621,000	-	11,659,000
GM %	35%	43%	-	39%
Operating expenses	5,154,000	5,297,000	724,000	11,175,000
Operating income (loss)	884,000	324,000	(724,000)	484,000
Depreciation and amortization	738,000	179,000	10,000	927,000
Capital expenditures	1,635,000	153,000	65,000	1,853,000
Intangibles, net	408,000	171,000	380,000	959,000
Goodwill	968,000	4,939,000	-	5,907,000
Total assets	\$ 21,117,000	\$ 8,018,000	\$ 507,000	\$ 29,642,000

***Formerly Contract Research**

Customer Financial Information

For three and nine months ended June 30, 2019, one customer in the Optics segment represented more than 10% of the total segment revenue. For the three and nine months ended June 30, 2018, no customer in the Optics segment represented more than 10% of the total segment revenue.

For the three and nine months ended June 30, 2019, three customers of the Innovation and Development segment, all various agencies of the U.S. Government, each represented more than 10% of the total segment revenue. For the three months ended June 30, 2018, four customers of the Innovation and Development segment, three various agencies of the U.S. Government and one commercial customer, each represented more than 10% of the total segment revenue. For the nine months ended June 30, 2018, three customers of the Innovation and Development segment, all various agencies of the U.S. Government, each represented more than 10% of the total segment revenue.

Geographic Financial Information

Revenue by geographic location in total and as a percentage of total revenue, for the three months ended June 30, 2019 and 2018 are as follows:

Geographic Location	Three Months Ended June 30, 2019		Three Months Ended June 30, 2018	
	Revenue	% of Total	Revenue	% of Total
United States	\$ 8,669,000	78%	\$ 7,512,000	71%
Asia	667,000	6%	877,000	9%
Europe	1,468,000	13%	2,029,000	19%
Other	286,000	3%	124,000	1%
	<u>\$ 11,090,000</u>	<u>100%</u>	<u>\$ 10,542,000</u>	<u>100%</u>

Revenue by geographic location in total and as a percentage of total revenue, for the nine months ended June 30, 2019 and 2018 are as follows:

Geographic Location	Nine Months Ended June 30, 2019		Nine Months Ended June 30, 2018	
	Revenue	% of Total	Revenue	% of Total
United States	\$ 24,901,000	76%	\$ 22,993,000	76%
Asia	2,462,000	8%	877,000	3%
Europe	4,705,000	14%	4,662,000	16%
Other	582,000	2%	1,453,000	5%
	<u>\$ 32,650,000</u>	<u>100%</u>	<u>\$ 29,985,000</u>	<u>100%</u>

Note 11 - Income Taxes

The Company uses the asset and liability approach to account for income taxes. Under this approach, deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and net operating loss and tax credit carry forwards. The amount of deferred taxes on these temporary differences is determined using the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, as applicable, based on tax rates, and tax laws, in the respective tax jurisdiction then in effect.

Dynasil Corporation of America and its wholly-owned U.S. subsidiaries file a consolidated federal income tax return and various state returns. The Company's U.K. subsidiary files tax returns in the U.K. Prior to November 18, 2016, the Company's subsidiary, Xcede was included in the federal and state tax returns filed by Dynasil. As of November 18, 2016, Dynasil's ownership in Xcede was reduced to approximately 59%. As a result, Xcede is no longer included in Dynasil's federal consolidated tax return and files a separate federal return. Xcede continues to be included in the Dynasil consolidated state tax filings pursuant to the respective state tax requirements.

In assessing the ability to realize the net deferred tax assets, management considers various factors including taxable income in carryback years, future reversals of existing taxable temporary differences, tax planning strategies and projections of future taxable income, to determine whether it is more likely than not that some portion or all of the net deferred tax assets will not be realized.

As a result of Xcede's de-consolidation from the Company's federal tax returns, the Company is no longer able to offset taxable income with Xcede's current or cumulative net operating losses. Upon review of relevant criteria for the new Dynasil federal consolidated group, it was determined that it is more likely than not that the federal deferred tax assets of the new Dynasil federal consolidated group will be realized based upon positive earnings history and expected future profits of the group. As a result, the federal deferred tax asset valuation allowance associated with the Dynasil federal consolidated group was reversed resulting in an income tax benefit in the amount of \$2.7 million during the quarter ending December 31, 2016. Going forward, as the Company records income, it will be able to utilize the NOLs (net operating losses) within its deferred tax assets. Based upon the Company's recent losses and uncertainty of future profits, the Company has determined that the uncertainty regarding the realization of the Company's state and separate Xcede deferred tax assets is sufficient to warrant the continued need for a valuation allowance against these deferred tax assets.

As a result of Xcede's decision to halt clinical trial preparations and curtail operations to a minimal level while the Board of Directors of Xcede evaluates alternative avenues to develop the Xcede Patch, following the July 2018 notice of termination from Cook Biotech Inc. ("CBI") claiming that the results of a recent animal study showed that it is not commercially reasonable, in CBI's assessment, to continue to the next development phase of the Xcede Patch, the Company has concluded that it is more likely than not that the deferred tax assets associated with the Company's unitary state filings will be realized based on future profit for the group and thus has reversed the related valuation allowance on the Company's NOLs of approximately \$0.6 million. In addition, the Company conducted a research and experimentation study which released the tax valuation allowance and increased deferred tax assets by \$0.6 million. The reversal resulted in an income tax benefit of approximately \$1.2 million recorded during the year ended September 30, 2018.

The Company applies the authoritative provisions related to accounting for uncertainty in income taxes. As required by these provisions, the Company recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being reached upon ultimate settlement with the relevant tax authority. As of June 30, 2019 and September 30, 2018, the Company has no liabilities for uncertain tax positions. Interest and penalty charges, if any, related to uncertain tax positions would be classified as income tax expense in the accompanying consolidated statement of operations. As of June 30, 2019 and September 30, 2018, the Company had no accrued interest or penalties related to uncertain tax positions. The Company currently has no federal or state tax examinations in progress.

On December 22, 2017, the 2017 Tax Act was signed into law. The 2017 Tax Act, which was effective on December 22, 2017, significantly revised the U.S. tax code by, among other changes, lowering the corporate income tax rate from 35% to 21%, requiring a one-time transition tax on accumulated foreign earnings of certain foreign subsidiaries that were previously tax deferred and creating new taxes on certain foreign sourced earnings. The Company has completed its accounting for the tax effects of the 2017 Tax Act.

The Company re-measured certain U.S. deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%, and recorded an income tax expense of \$0.7 million related to such re-measurement in the quarter ended December 31, 2018. The one-time transition tax was based on the total unremitted earnings of the Company's foreign subsidiary, Hilger, which had previously been deferred from U.S. income taxes. The Company recorded a provision for its one-time transition liability of its foreign subsidiary resulting in additional income tax expense of \$0.2 million in fiscal year 2018.

During the fiscal year ended, September 30, 2018, the Company has federal research credits of \$2.9 million, primarily resulted from a benefit in the third quarter of fiscal year 2018 related to R&E tax credits for the years ended 2013 through 2016. The federal credits begin expiring in fiscal year 2030. During the fiscal year ended September 30, 2018, the Company had state research credits of \$852,000 which begin expiring in fiscal year 2027.

The effective tax rates were (33%) and 34% for the three months ended June 30, 2019 and 2018, respectively. The effective tax rates were (227%) and (115%) for the nine months ended June 30, 2019 and 2018, respectively. The results for both nine month periods ended June 30, 2019 and 2018 had significant events which resulted in an extreme variation in tax rates. The effective tax rate for the three and nine months ended June 30, 2019 were a result of the anticipated non-deductible transaction costs resulting from the Board of Directors' plan to cease the registration of the Company's common stock under federal securities laws (see Note 12 – Subsequent Events). The effective tax rate for the nine months ended, June 30, 2018 was primarily driven by the recently signed 2017 Tax Act, as well as the R&E tax credit study completed in the third quarter of fiscal year 2018. The effective tax rate excluding the impact of the 2017 Tax Act and the PATH 2015 R&E Tax Credit was 69% for the nine months ended June 30, 2018.

The Company files its tax returns as prescribed by the tax laws of the jurisdictions in which it operates. The Company's tax filings for federal and state jurisdictions for the tax years beginning with 2013 are still subject to examination.

Note 12 – Subsequent Events

On August 7, 2019, the Company held a special meeting of stockholders (the "Special Meeting"). At the Special Meeting, the holders of a majority of the Company's issued and outstanding shares of common stock entitled to vote approved amendments to the Company's certificate of incorporation, as amended (the "Certificate of Incorporation"), to effect a 1-for-8,000 reverse stock split of the Company's common stock (the "Reverse Stock Split"), followed immediately by a 8,000-for-1 forward stock split of the Company's common stock (the "Forward Stock Split," and together with the Reverse Stock Split, the "Transaction").

Following the Special Meeting, the Company filed certificates of amendment to the Certificate of Incorporation with the State of Delaware to effect the Reverse Stock Split, followed immediately by the Forward Stock Split, both effective on August 7, 2019 at 5:01 and 5:02 p.m., respectively. As a result of the Transaction, each stockholder owning fewer than 8,000 shares of the Company's common stock immediately prior to the effective time of the Reverse Stock Split became entitled to receive \$1.15 per share, without interest, in cash for each share of the Company's common stock held by such stockholder at the effective time of the Reverse Stock Split. As a result of the Transaction, based on information provided to the Company by its transfer agent, Continental Stock Transfer & Trust Company, and the Depository Trust Company (DTC), 2,825,268 pre-split shares of common stock are due to be exchanged for cash, and the aggregate amount payable by the Company to the former holders of such shares is approximately \$3,249,000.

Stockholders who owned 8,000 or more shares of the Company's common stock immediately prior to the effective time of the Reverse Stock Split were not entitled to receive any cash for their fractional share interests resulting from the Reverse Stock Split, if any. The Forward Stock Split that immediately followed the Reverse Stock Split reconverted whole shares and fractional share interests held by such stockholders back into the same number of shares of the Company's common stock held by such stockholders immediately before the effective time of the Reverse Stock Split. As a result, the total number of shares of the Company's common stock held by such stockholders did not change.

The Company has given notice to The Nasdaq Stock Market ("Nasdaq") of its intent to voluntarily delist its common stock and to withdraw the registration of its common stock with the Securities and Exchange Commission (SEC). The Company intends to file a Form 25 Notification of Removal From Listing with the SEC on or about August 19, 2019. As a result, the Company expects that listing of its shares on Nasdaq will be terminated on or about August 29, 2019, at which time the Company intends to file a Form 15 with the SEC to suspend the Company's reporting obligations under Section 15(d) of the Exchange Act.

In connection with the events described above, on August 5, 2019, the Company entered into a Loan Modification Agreement with Middlesex, the Company's senior lender, to modify the Loan and Security Agreement dated May 1, 2014, by and between the Company and Middlesex, to allow for the exclusion of certain transaction-related expenses from the calculation of EBITDA.

In connection with the events described above, on August 6, 2019, the Company entered into an Note Purchase Agreement with MCRC, the Company's subordinated lender, in which the Company borrowed an additional \$2,000,000 in cash and replaced the existing Note, which has an outstanding principal amount of \$865,216, for an aggregate principal amount of \$2,865,216, which will be due July 31, 2026 and bears eight percent interest per annum. Until August 31, 2022 this loan will require interest only payments, followed by principal and interest payments for the remaining four years of the loan. Until August 31, 2021, the Company is subject to early-payback penalties.

The Company has evaluated subsequent events through the date the financial statements were released.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis should be read in conjunction with our financial statements and the notes thereto contained herein and in the Dynasil Corporation of America ("Dynasil", the "Company" or "we") Form 10-K for the fiscal year ended September 30, 2018.

General Business Overview

Operations

Consolidated revenue for the quarter ended June 30, 2019 was \$11.1 million, compared to revenue of \$10.5 million for the third quarter of fiscal year 2018. This \$0.6 million or 5% increase resulted from an 18% increase in Innovations and Development segment revenue, which was partially offset by a 4% decrease in Optics segment revenue.

Gross profit for the quarter ended June 30, 2019 was \$4.1 million, or 37% of revenue, as compared to the gross profit of \$4.2 million, or 40% of revenue for the quarter ended June 30, 2018.

Total operating expenses were \$4.3 million for the three-month period ended June 30, 2019, a 19% increase over the \$3.6 million in operating expenses for the three months ended June 30, 2018. The increase was attributable to \$0.5 million expended in the Company's efforts to delist from The Nasdaq Stock Market, as well as increased recruitment and personnel expenses as the Company continues to fill key positions. The operating expenses in our Biomedical segment continued to decrease in the third quarter as compared to the same period last year. Biomedical segment expenses to date in fiscal 2019 were \$0.1 million, as compared to \$0.7 million in the first three quarters of fiscal year 2018. Last year, our majority owned joint venture, Xcede Technologies, Inc. ("Xcede"), was preparing for clinical trials. As described below, these activities have since been suspended due to a notice of termination Xcede received from Cook Biotech, Inc. ("CBI") in July 2018, in which CBI asserted its termination rights under the Note Agreement and Development Agreement between Xcede and CBI, claiming that in CBI's assessment it is not commercially reasonable to continue to the next development phase of Xcede's hemostatic patch.

In light of the foregoing, Xcede has halted clinical trial preparations at this time and has curtailed its operations to a minimal level while the Board of Directors of Xcede evaluates alternatives, including the viability of modifying the Xcede Patch to address the shortcomings cited by CBI and/or the possible sale or license of Xcede IP assets, subject to amending CBI's security interest. Additionally, the Company's RMD subsidiary and Xcede have begun an investigation of the possible continued development of the Xcede Patch, which includes seeking government funding of this development. In April 2019, Xcede filed an application for a government grant seeking \$225,000, which is currently being revised, with a plan to resubmit this application in September 2019. There can be no assurances with respect to any such alternatives or that any additional outside funding to continue development of the Xcede Patch will be available to Xcede. Without such funding, the Board of Directors of Xcede may be required to cease all operations of Xcede. In the event that such a determination were to be made by the Xcede Board of Directors in the future, the Company expects that it would be required to account for Xcede at such time as discontinued operations in accordance with ASC 205-20 and would recognize a non-cash gain based on the losses absorbed by the Company in excess of their actual ownership percentage. This potential gain will have no impact on the Company's cash position when and if it is recognized or in the future.

Income (loss) from operations for the quarter ended June 30, 2019 was a loss of (\$0.1) million, compared with income from operations of \$0.6 million for the quarter ended June 30, 2018.

The provision for income taxes for the third quarter of 2019 was approximately \$0.1 million, as compared to a provision of \$0.2 million for the third quarter of fiscal year 2018.

Net income attributable to common stockholders was a loss of (\$0.3) million, or (\$0.02) per share, as compared to income of \$0.4 million, or \$0.02 per share for the quarters ended June 30, 2019 and 2018, respectively, largely as a result of the increased expenses in the fiscal year 2019.

Corporate Structure Changes

As previously disclosed, following a special meeting of Dynasil's stockholders on August 7, 2019, the Company filed certificates of amendment to our certificate of incorporation and subsequently effected a 1-for-8,000 reverse stock split of our common stock, par value \$0.0005 per share (the "Reverse Stock Split"), followed immediately by a 8,000-for-1 forward stock split of its common stock (the "Forward Stock Split," and together with the Reverse Stock Split, the "Transaction"). In regards to the Transaction, stockholders with fewer than 8,000 shares of Dynasil common stock held of record immediately before the Transaction became entitled to receive cash payments in lieu of fractional shares equal to \$1.15 per pre-Reverse Stock Split share. As a result of the Transaction, based on information provided to the Company by its transfer agent, Continental Stock Transfer & Trust Company, and the Depository Trust Company (DTC), 2,825,268 pre-split shares of common stock are due to be exchanged for cash, and the aggregate amount payable by the Company to the former holders of such shares is approximately \$3,249,000. We anticipate that stockholders who are to be cashed out in conjunction with the Transaction will receive payment as soon as practicable thereafter.

On or about Monday, August 19, we expect to file a Form 25 with the Securities and Exchange Commission (the "SEC") to indicate our intention to terminate the registration of our common stock with the SEC. Following that filing, and on or about August 29, we intend to file a Form 15 with the SEC to de-list our common stock from the Nasdaq Capital Market. As a result of these filings, (i) the Company would cease to file annual, quarterly, current, and other reports and documents with the SEC, and stockholders would cease to receive annual reports and proxy statements, and (ii) the Company's common stock would no longer be listed on the Nasdaq Capital Market.

Results of Operations

Results of Operations for the Three Months Ended June 30, 2019

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 5,899,000	\$ 5,191,000	\$ -	\$ 11,090,000
Gross profit	2,112,000	1,994,000	-	4,106,000
GM %	36%	38%	-	37%
Operating expenses	2,237,000	1,992,000	23,000	4,252,000
Operating income (loss)	(125,000)	2,000	(23,000)	(146,000)
Depreciation and amortization	297,000	63,000	3,000	363,000
Capital expenditures	90,000	29,000	-	119,000
Intangibles, net	334,000	136,000	195,000	665,000
Goodwill	925,000	4,939,000	-	5,864,000
Total assets	\$ 21,084,000	\$ 10,805,000	\$ 201,000	\$ 32,090,000

Results of Operations for the Three Months Ended June 30, 2018

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 6,159,000	\$ 4,383,000	\$ -	\$ 10,542,000
Gross profit	2,299,000	1,876,000	-	4,175,000
GM %	37%	43%	-	40%
Operating expenses	1,721,000	1,760,000	84,000	3,565,000
Operating income (loss)	578,000	116,000	(84,000)	610,000
Depreciation and amortization	261,000	53,000	3,000	317,000
Capital expenditures	707,000	76,000	20,000	803,000
Intangibles, net	408,000	171,000	380,000	959,000
Goodwill	968,000	4,939,000	-	5,907,000
Total assets	\$ 21,117,000	\$ 8,018,000	\$ 507,000	\$ 29,642,000

*Formerly Contract Research

Consolidated revenue for the quarter ended June 30, 2019, was \$11.1 million, a 5% increase as compared with revenue of \$10.5 million for the quarter ended June 30, 2018.

Optics segment revenue decreased \$0.3 million, or 4%, for the three months ended June 30, 2019 compared with the same period in the prior year, primarily as a result of a slowdown in the optics market during the quarter. The decrease in this quarter is largely the result of delayed and decreased orders from a few of our large key customers.

Innovation and Development segment revenue increased by \$0.8 million or 18% to \$5.2 million for the third quarter of fiscal year 2019, as compared with the same period in the prior year due to an increase in funded research contract awards. The research backlog for the Innovation and Development segment is very strong at \$38.3 million at June 30, 2019.

The Biomedical segment has no revenue as it is currently exploring development options for Xcede's tissue sealant technology.

Cost of revenue for the quarter ended June 30, 2019 was 63%, or \$7.0 million, as compared to 60% or \$6.4 million for the quarter ended June 30, 2018.

Gross profit for the three months ended June 30, 2019 was \$4.1 million, compared to \$4.2 million, for the three months ended June 30, 2018. The gross profit as a percent of revenue for the third quarter of 2019 was 37%, as compared to 40% in the same period in 2018. The gross profit for the Optics segment was \$2.1 million for the quarter ended June 30, 2019, compared to \$2.3 million for the quarter ended June 30, 2018. The gross profit as a percent of revenue for the Optics segment was 36% in the third quarter of 2019 and 37% in the third quarter of 2018. This reduction was the result of lower revenue and higher material costs within one of the business units in the segment. The Innovation and Development segment gross profit increased to \$2.0 million, as compared to \$1.9 million in the same period in fiscal year 2018, as a result of actively working on an increased number of contract research projects in 2019. Gross profit as a percent of revenue decreased in the third quarter of 2019 by 4% as compared to 2018 due to fewer commercial product sales in 2019 which have higher margins than contract research sales.

The Biomedical segment, through Xcede, is engaged in exploring development options for a tissue sealant technology which has not been approved for commercial use, and consequently it has no gross profit.

Total operating expenses increased to \$4.3 million for the three months ended June 30, 2019 from \$3.6 million for the same quarter in fiscal year 2018. Operating expenses for the Optics segment in the third quarter of 2019 were \$2.2 million, a \$0.5 million increase over the operating expenses of \$1.7 million in the same period in 2018. Innovation and Development segment expenses increased to \$2.0 million in the third quarter of fiscal year 2019, as compared to \$1.8 million in the third quarter of fiscal year 2018. The primary reason for the increase in both of these segments was the \$0.5 million of expenses in the Company's efforts to delist from the Nasdaq Stock Market incurred during the quarter, as well as increases in salaries and hiring costs. Biomedical segment expenses decreased by \$0.1 million in the three months ended June 30, 2019, compared to the three months ended June 30, 2018, primarily due to the cessation of work on its preparations for first-in-human clinical trials.

As a result of the items discussed above, income from operations for the three months ended June 30, 2019 was a loss of (\$0.1) million compared to income of \$0.6 million for the same period in fiscal year 2018.

Net interest expense was essentially the same in both the three month periods ended June 30, 2019 and 2018.

The provision for income taxes for the third quarter of 2019 was approximately \$0.1 million, as compared to \$0.2 million for the third quarter of fiscal year 2018.

Net income for the three months ended June 30, 2019 was a loss of (\$0.3) million, or (\$0.02) in basic earnings per share, as compared to income of \$0.4 million, or \$0.02 in basic earnings per share, for the quarter ended June 30, 2018.

Results of Operations – Year to Date

Results of Operations for the Nine Months Ended June 30, 2019

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 17,846,000	\$ 14,804,000	\$ -	\$ 32,650,000
Gross profit	6,121,000	6,035,000	-	12,156,000
GM %	34%	41%	-	37%
Operating expenses	5,993,000	6,012,000	98,000	12,103,000
Operating income (loss)	128,000	23,000	(98,000)	53,000
Depreciation and amortization	863,000	183,000	10,000	1,056,000
Capital expenditures	586,000	93,000	-	679,000
Intangibles, net	334,000	136,000	195,000	665,000
Goodwill	925,000	4,939,000	-	5,864,000
Total assets	\$ 21,084,000	\$ 10,805,000	\$ 201,000	\$ 32,090,000

Results of Operations for the Nine Months Ended June 30, 2018

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 17,011,000	\$ 12,974,000	\$ -	\$ 29,985,000
Gross profit	6,038,000	5,621,000	-	11,659,000
GM %	35%	43%	-	39%
Operating expenses	5,154,000	5,297,000	724,000	11,175,000
Operating income (loss)	884,000	324,000	(724,000)	484,000
Depreciation and amortization	738,000	179,000	10,000	927,000
Capital expenditures	1,635,000	153,000	65,000	1,853,000
Intangibles, net	408,000	171,000	380,000	959,000
Goodwill	968,000	4,939,000	-	5,907,000
Total assets	\$ 21,117,000	\$ 8,018,000	\$ 507,000	\$ 29,642,000

*Formerly Contract Research

Revenue for the nine months ended June 30, 2019 increased 9% to \$32.7 million, a \$2.7 million increase over the nine months ended June 30, 2018.

Optics segment revenue increased \$0.8 million, or 5%, for the nine months ended June 30, 2019, compared with the same period in the prior year, primarily as a result of revenue growth in three of the four operating units in this segment. Our Optics segment revenue showed increased orders from a number of our larger established customers during the first part of the year.

Revenue from our Innovation and Development segment increased \$1.8 million, or 14%, for the nine months ended June 30, 2019 as compared to the same period in 2018, primarily due to increased orders from some of our key government customers, partially offset by a delay in our commercial product orders.

The Biomedical segment had no revenue in either the nine months ended June 30, 2019 or 2018.

Gross profit for the nine months ended June 30, 2019 was \$12.2 million, or 37% of sales, compared to \$11.7 million, or 39% of sales for the nine months ended June 30, 2018. The \$0.5 gross profit increase was attributed to the higher revenue generated in the first nine months.

Gross profit for the Optics segment increased approximately \$0.1 million to \$6.1 million for the nine months ended June 30, 2019, compared to the gross profit for the same period in fiscal year 2018. Gross profit for the Innovation and Development segment increased \$0.4 million in the nine months ended June 30, 2019 to \$6.0 million compared to \$5.6 million in the nine months ended June 30, 2018. Both increases were the result of the increases in revenue in the first nine months of fiscal 2019, as compared to the same period in 2018.

The Biomedical segment, through Xcede, is developing a tissue sealant technology which has not been approved for commercial use and consequently has no gross profit.

Total operating expenses increased \$0.9 million to \$12.1 million for the nine months ended June 30, 2019, as compared to the total operating expenses of \$11.2 million for the nine months ended June 30, 2018. This increase was spread across the Optics and Innovation and Development segments due to the \$0.5 million of expenses incurred in the Company's efforts to delist from the Nasdaq Stock Market, as well as increases in personnel-related expenses, offset by \$0.6 million of lower expenses in the Biomedical segment due to curtailed operations.

Income (loss) from operations was essentially breakeven for the nine months ended June 30, 2019 and \$0.5 million for the same nine month period in 2018 due the items indicated above.

Net interest expense for both the nine month periods ended June 30, 2019 and 2018 was \$0.1 million.

The provision for income taxes for the first nine months of 2019 was a \$0.2 million as compared to a benefit of \$0.4 million for the same period in fiscal year 2018. The 2018 provision was the result of the \$1.3 million PATH 2015 R&E Tax Credit estimate for the years 2012 thru 2016 that was recognized in the third quarter of 2018, offset by the result of the 2017 Tax Act, in which we estimated the rate reduction impact to be \$0.5 million, the earnings and profit transition tax of our Hilger Crystals subsidiary to be \$0.1 million and the first quarter earnings provision of \$0.1 million.

Net income attributable to common stockholders for the nine months ended June 30, 2019 was a loss of (\$0.3) million or (\$0.02) basic earnings per share, compared to net income of \$0.9 million or \$0.05 basic earnings per share for the nine months ended June 30, 2018.

Liquidity and Capital Resources

Net cash as of June 30, 2019 was \$0.5 million, or approximately \$1.8 million less than net cash of \$2.3 million at September 30, 2018.

As of June 30, 2019, the Company was in full compliance with all of its bank covenants. The Company had \$4.0 million of available cash under its Middlesex Savings Bank line of credit based on its collateral calculations as of June 30, 2019, of which the outstanding balance was \$961,000. Management believes that its cash on hand, together with availability under its credit agreements, are adequate to meet the Company's current liquidity requirements for the next twelve months.

On November 27, 2018, the Company amended the Note Purchase Agreement with Massachusetts Capital Resource Company ("MCRC") to reinstate the interest-only payment requirements of the loan and defer principal repayment requirements to November 30, 2019. Such amendment also extended the maturity date from July 31, 2019 to November 30, 2021. On June 30, 2019, approximately \$865,000 in principal was outstanding on the MCRC loan.

In connection with the Company's efforts to delist from the Nasdaq Stock Market, on August 6, 2019, the Company entered into a Note Purchase Agreement with MCRC, the Company's subordinated lender, in which the Company borrowed an additional \$2,000,000 in cash and replaced the existing Note, which has an outstanding principal amount of \$865,216, for an aggregate principal amount of \$2,865,216, which will be due July 31, 2026 and bears eight percent interest per annum. Until August 31, 2022 this loan will require payback of interest payments only, followed by principal and interest payments for the remaining four years of the loan. Until August 31, 2021, the Company is subject to early-payback penalties. As a result of this amendment to the Note, the debt balance as of June 30, 2019 with MCRC was classified as long-term.

On April 30, 2019, the Company converted the outstanding balance on the equipment line of credit with Middlesex Savings Bank ("Middlesex") of approximately \$484,000, which was outstanding on June 30, 2019, into a five year term note with an interest rate of 5.17%. Additionally, on May 1, 2019, the Company's equipment line of credit was renewed for \$750,000 through April 30, 2020, at which time the outstanding balance will be converted into a five year term note. It also modified the borrowing base under its revolving line of credit note to increase the percentage of eligible accounts receivable available for borrowing from 80% to 85% and to eliminate eligible unbilled receivables as a category in obtaining advances under the revolving line of credit. On August 5, 2019, the Company entered into a Loan Modification Agreement with Middlesex to modify the Loan and Security Agreement, by and between the Company and Middlesex, to allow for the exclusion of certain transaction-related expenses from the calculation of EBITDA.

Following the consummation of the Transaction and taking into account the expenses thereof (including payments to cashed-out stockholders and professional fees), the Company has outstanding bank indebtedness of \$6.4 million and \$2.8 million available in the Company's line of credit.

On June 30, 2019, Xcede had \$0.5 million of outstanding indebtedness owed to CBI. The note was recorded at fair value at issuance net of unamortized discount based on an imputed interest rate of 5.4%. On July 20, 2018, Xcede received a notice of termination from CBI, which included CBI's assertion that the foregoing study results trigger an immediate repayment of the \$500,000 promissory note owed by Xcede to CBI under the Note Agreement and cancelled the remaining availability under the Note Agreement. While Xcede vigorously contests this assertion, at this time it is unclear how this matter will be resolved between Xcede and CBI. The Company carries the promissory note in short-term debt.

Cash From Operating Activities

In total, operating activities used cash of \$2.0 million for the nine months ended June 30, 2019. Approximately \$0.5 million of cash was used for inventory increases to ensure the proper supply of material is available to meet customer demand and \$0.1 million was used to pay down year end accrued expenses. In addition, unbilled receivables, accounts receivables and contract liabilities increased, which used approximately \$2.7 million of cash due to increased revenues in the third quarter of 2019 compared to revenue in the fourth quarter of 2018. The decreases in cash were offset by net loss, net of non-cash items of approximately \$1.3 million.

Cash From Investing and Financing Activities

The Company used cash of approximately \$0.7 million for the purchase of property, plant, and equipment for the nine months ended June 30, 2019.

Total outstanding bank debt as of June 30, 2019 increased approximately \$0.9 million to \$4.2 million from \$3.3 million at September 30, 2018. The net cash increase from financing activities during the nine months ended June 30, 2019 was approximately \$0.9 million as a result of \$1.0 million in short term borrowing against the Middlesex revolving line of credit, \$0.5 million borrowing against the Middlesex equipment line of credit, offset by \$0.6 million in principal payments on all debt.

Critical Accounting Policies and Estimates

During the nine months ended June 30, 2019, we adopted ASU 2014-09, which provides for new requirements in regards to revenue recognition. See Note 2 – Recent Accounting Pronouncements for further details. Aside from the adoption of ASU 2014-09, there been no material changes in our critical accounting policies or critical accounting estimates since September 30, 2018. For further discussion of our accounting policies see the "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended September 30, 2018 as well as the notes to the financial statements contained in this Quarterly Report on Form 10-Q.

The accounting policies that reflect our more significant estimates, judgments and assumptions and which we believe are the most critical to aid in fully understanding and evaluating our reported financial results include the following:

Revenue Recognition

We generate revenues from contract research, product sales, and non-recurring engineering contracts.

Our Optics segment produces standard and customized products for commercial organizations, educational institutions, and U.S. Federal government agencies. In addition, we also offer services which include non-recurring engineering services. We recognize revenue when the performance obligation has been satisfied by transferring the control of the product or service to the customer. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation based on their relative stand-alone selling prices. In such circumstances, the Company uses the observable price of goods or services which are sold separately in similar circumstances to similar customers. If these prices are not observable, then we will estimate the stand-alone selling price using information that is reasonably available. For the majority of our standard products and services, price list, and discount structures related to customer type are available. For products and services that do not have price list and discount structures, we may use one or both of the following: (i) adjusted market assessment approach or (ii) expected cost plus a margin approach. The adjusted market approach requires evaluation of the market in which we sell goods or services and estimation of the price that a customer in that market would be willing to pay for those goods or services. The expected cost plus margin approach requires the Company to forecast expected costs of satisfying the performance obligation and then add a reasonable margin for that good or service. Shipping and handling activities primarily occur after a customer obtains control and are considered fulfillment cost rather than separate performance obligations.

Our Innovation and Development segment performs research and development for U.S. Federal government agencies, educational institutions and commercial organizations. We account for a research contract when a contract has been executed, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectability of the contract price is considered probable. Revenue is earned under reimbursement of costs plus fees, fixed price, or time and material type contracts. Revenue is recognized when the contract has been approved by both parties, each entity can identify each's party's rights regarding goods and services to be transferred, the payment terms have been identified, the contract has commercial substance, and it is probable that we will collect substantially all of the consideration to which it is entitled in exchange for the goods or services transferred.

Under the typical payment terms of our U.S. government contracts, the customer pays either performance-based payments or progress payments. Performance-based payments, which are typically used in the firm fixed price contracts, are interim payments based on quantifiable measures of performance or on the achievement of specified events or milestones. Progress payments, which are typically used in our cost-plus type contracts, are interim payments based on costs incurred as the work progresses. For our U.S. government cost-plus contracts, the customer generally pays during the performance period for 80%-90% of the actual costs incurred. Because the customer retains a small portion of the contract price until completion of the contract and audit of allowable costs, cost-plus type contracts generally result in revenue recognized in excess of billings which we present as contract assets on the balance sheet. Amounts billed and due from customers are classified as receivables on the balance sheet, whereas amounts earned, but not yet billed to the Company's customers due to timing, are classified as unbilled receivables on the balance sheet. We recognize a liability for performance-based payments paid in advance which are in excess of the revenue recognized and presents these amounts as contract liabilities on the balance sheet.

Effective October 1, 2018, we adopted Topic 606, *Revenue from Contracts with Customers*, using the modified retrospective transition method, and implemented changes to its business processes, systems and controls to support revenue recognition and the related disclosures under this ASU. Under the modified retrospective approach, we applied the standards to new contracts and those that were not completed as of October 1, 2018. For those contracts not completed as of October 1, 2018, this method resulted in a cumulative adjustment to increase the Company's retained earnings in the amount of \$22,000.

This guidance has resulted in very few changes in revenue recognition for the standard contracts in both the Optics and the Innovation and Development segments. This new guidance may lead to recognition of certain revenue transactions sooner than in the past on contracts that require us to maintain stated inventory levels, as we have an enforceable right to payment for the required inventory, and on contracts such as engineering services and design and tooling transactions, as we have an enforceable right to payment for these performance obligations satisfied over time.

Goodwill

Goodwill is subject to an annual impairment test. We consider many factors which may indicate the requirement to perform additional, interim impairment tests. These include:

- A significant adverse long term outlook for any of our industries;
- An adverse finding or rejection from a regulatory body involved in new product regulatory approvals;
- Failure of an anticipated commercialization product line;
- Unanticipated competition or a disruptive technology introduction;
- The testing for recoverability under the Impairment or Disposal of Long-Lived Assets Subsections of Subtopic 360-10 of a significant asset group within a reporting unit;
- A loss of key personnel; and
- An expectation that a reporting unit carrying goodwill, or a significant portion of a reporting unit, will be sold or otherwise disposed of.

Goodwill is tested by reviewing the carrying value compared to the fair value at the reporting unit level. Fair value for the reporting unit is derived using the income approach. Under the income approach, fair value is calculated based on the present value of estimated future cash flows. Assumptions by management are necessary to evaluate the impact of operating and economic changes and to estimate future cash flows. Management's evaluation includes assumptions on future growth rates and cost of capital that are consistent with internal projections and operating plans.

The Company generally performs its annual impairment testing of goodwill during the fourth quarter of its fiscal year, or more frequently if events or changes in circumstances indicate that the assets might be impaired. The Company tests impairment at the reporting unit level using the two-step process. The Company's primary reporting units tested for impairment are Radiation Monitoring Devices, which comprises our Innovation and Development segment, and Hilger Crystals, a component of our Optics segment.

Intangible Assets

The Company's intangible assets consist of acquired customer relationships and trade names of Hilger Crystals, Ltd., acquired know-how of Radiation Monitoring Devices, Inc. and purchased and patented biomedical technologies within the Biomedical segment. The Company amortizes its intangible assets with definitive lives over their useful lives, which range from 5 to 20 years, based on the time period the Company expects to receive the economic benefit from these assets. No impairment charge was recorded during the nine-month periods ended June 30, 2019 or 2018.

The Company continually assesses whether events or changes in circumstances have occurred that may warrant revision of the estimated useful lives of its intangible and indefinite-lived assets or whether the remaining balances of those assets should be evaluated for possible impairment. There were no changes, aside from foreign exchange rate fluctuations, in the carrying value of intangible and indefinite-lived assets, during the nine months ended June 30, 2019.

Impairment of Long-Lived Assets

The Company's long-lived assets include property, plant and equipment and intangible assets subject to amortization. The Company evaluates long-lived assets for recoverability whenever events or changes in circumstances indicate that an asset may have been impaired. In evaluating an asset for recoverability, the Company estimates the future cash flow expected to result from the use of the asset and eventual disposition. If the expected future undiscounted cash flow is less than the carrying amount of the asset, an impairment loss, equal to the excess of the carrying amount over the fair value of the asset, is recognized.

The Company continually assesses whether events or changes in circumstances have occurred that may warrant revision of the estimated useful lives of its long-lived assets or whether the remaining balances of those assets should be evaluated for possible impairment. There were no changes, aside from foreign exchange rate fluctuations, in the carrying value of long-lived assets, during the nine months ended June 30, 2019.

Allowance for Doubtful Accounts Receivable

The Company performs ongoing credit evaluations of our customers and adjusts credit limits based upon payment history and the customer's current credit worthiness, as determined by our review of their current credit information. We continuously monitor collections and payments from our customers and maintain a provision for estimated credit losses based upon our historical experience and any specific customer collection issues that we have identified. While such credit losses have historically been minimal, within our expectations and the provisions established, we cannot guarantee that we will continue to experience the same credit loss rates that we have in the past. A significant change in the liquidity or financial position of any of our significant customers could have a material adverse effect on the collectability of our accounts receivable and our future operating results.

Stock-Based Compensation

The Company accounts for stock-based compensation using fair value. Compensation costs are recognized for stock-based compensation granted to employees and directors. Options and restricted stock awards are recorded as an expense over the requisite service period based on the grant date estimated fair value of the grant, which in the case of options is determined using the Black-Scholes option pricing model.

Income Taxes

As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax provision (benefit) in each of the jurisdictions in which we operate. This process involves estimating our current income tax provision (benefit) together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets. We regularly evaluate our ability to recover the reported amount of our deferred income tax assets considering several factors, including our estimate of the likelihood of the Company generating sufficient taxable income in future years during the period over which temporary differences reverse.

Recent Accounting Pronouncements

See Note 2, "Recent Accounting Pronouncements" in the Notes to Consolidated Financial Statements for a full description of recent accounting pronouncements, including the adoption of ASC 2014-09, which provides for new requirements in regards to revenue recognition, as well as respective dates of adoption or expected adoption and effects on our consolidated financial position, results of operations and cash flows.

Forward-Looking Statements

The statements contained in this Quarterly Report on Form 10-Q which are not historical facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements regarding future events and our future results are based on current expectations, estimates, forecasts, and projections and the beliefs and assumptions of our management, including, without limitation, our expectations regarding results of operations, our compliance with the financial covenants under our loan agreements with Middlesex Savings Bank and Massachusetts Capital Resource Company, our expectations regarding results of operations, the commercialization of our technology, including the Xcede patch and our dual mode detectors, the success of efforts to develop a successful Xcede Patch and to fund that development, our development of new technologies including at Dynasil Biomedical, the adequacy of our current financing sources to fund our current operations, our growth initiatives, our capital expenditures, the strength of our intellectual property portfolio, statements about the timing and effectiveness of the reverse and forward stock splits, the deregistration and delisting of the Company's common stock and the perceived benefits and costs of the proposed transaction. These forward-looking statements may be identified by the use of words such as "plans," "intends," "may," "could," "expect," "estimate," "anticipate," "continue," or similar terms, though not all forward-looking statements contain such words. The actual results of the future events described in such forward-looking statements could differ materially from those stated in such forward-looking statements due to a number of important factors. These factors that could cause actual results to differ from those anticipated or predicted include, without limitation, our ability to develop and commercialize our products, including obtaining regulatory approvals, the size and growth of the potential markets for our products and our ability to serve those markets, the rate and degree of market acceptance of any of our products, general economic conditions, costs and availability of raw materials and management information systems, our ability to obtain and maintain intellectual property protection for our products, Xcede's ability to produce preclinical data sufficient to enable it to initiate clinical studies of hemostatic patch, clinical results of Xcede's programs which may not support further development, the ability of our RMD business unit to identify and pursue possible continued development opportunities for the Xcede patch, which is not assured, competition, the loss of key management and technical personnel, our ability to obtain timely payment of our invoices to governmental customers, litigation, the effect of governmental regulatory developments, the availability of financing sources, our ability to deleverage our balance sheet, our ability to identify and execute on acquisition opportunities and integrate such acquisitions into our business, seasonality, the many variables that may impact the Company's projected cost savings, variables and risks related to the stock split transaction, SEC regulatory review of the Company's filings related to the such transaction, and the continuing determination of the Board of Directors and Special Committee that such transaction is in the best interests of all stockholders, as well as the uncertainties set forth in the Company's Annual Report on Form 10-K, filed on December 21, 2018, including the risk factors contained in Item 1A, and from time to time in the Company's other filings with the Securities and Exchange Commission. The Company disclaims any intention or obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

ITEM 4 CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures.

Our management, with the participation and supervision of our Chief Executive Officer and Chief Financial Officer, is responsible for our disclosure controls and procedures pursuant to Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified under the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to our principal executive officer and our principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, including the Chief Executive Officer and the Chief Financial Officer, carried out an evaluation of the effectiveness of our disclosure controls and procedures as of June 30, 2019. Based on the evaluation of our disclosure controls and procedures as of June 30, 2019, our Chief Executive Officer and our Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were not effective.

As disclosed in our Annual Report on Form 10-K for the year ended September 30, 2018, we identified a material weakness in our internal control over financial reporting as of September 30, 2018. Internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) are an integral part of disclosure controls and procedures. This material weakness, which is described in detail in our 2018 Annual Report on Form 10-K, can be summarized as relating to our controls over the revenue recognition process. Specifically, we lacked personnel with an appropriate level of knowledge, experience and training in contract review and management to provide reasonable assurance that revenue was being properly recorded in accordance with GAAP. Additionally, as our cost recognition system for contract revenue is a manual entry system, additional training and in-depth review for accuracy and completeness are required.

The measures that we have identified and implemented to address the material weakness are also discussed in detail in our 2018 Form 10-K. The Company believes that it has taken steps that it believes will remediate the previously identified material weakness. However, certain controls designed and implemented during the third quarter of the 2019 fiscal year to address the material weakness in the initial contract review and period-end financial reporting processes have not been operational for a sufficient period of time to allow management to conclude that they are operating effectively. As a result, management has determined as of June 30, 2019 the control deficiency that existed in the prior year still exists, and, that our internal controls do not effectively mitigate the risk that a material misstatement in our financial statements could occur and not be prevented or detected. We expect the evaluation and testing of the steps previously taken to remediate the previously identified material weaknesses will continue throughout fiscal year 2019 in order to allow management sufficient basis to conclude that the controls are operating effectively.

Changes in Internal Control Over Financial Reporting

As a result of our adoption of the new revenue standard (Topic 606), we implemented controls to ensure adequate evaluation of contracts and assessment of the impact of the new accounting standard related to revenue recognition on our financial statements to facilitate its adoption on October 1, 2018. There were not any significant changes to our internal control over financial reporting due to the adoption of the new standard, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f) during the period covered by this Quarterly Report or in other factors that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II – OTHER INFORMATION

ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed herein and in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended September 30, 2018, which could materially affect our business, financial condition or future results. The risks described in this report and in our Annual Report on Form 10-K are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

Risks Related To Dynasil's Stock

The Company intends to delist the Common Stock from the Nasdaq Stock Market and deregister the Common Stock under the Exchange Act.

As previously disclosed, the Company has given notice to The Nasdaq Stock Market of its intent to voluntarily delist the Common Stock and to withdraw the registration of the Common Stock with the SEC. The Company intends to file a Form 25 Notification of Removal From Listing with the SEC on or about August 19, 2019. As a result, the Company expects that listing of its shares on Nasdaq will be terminated on or about August 29, 2019, at which time the Company intends to file a Form 15 with the SEC to suspend the Company's reporting obligations under Section 15(d) of the Exchange Act. Following deregistration, the Company will no longer file annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K. Accordingly, there will be significantly less information regarding the Company available to stockholders and potential investors. In addition, the Company will no longer be subject to the provisions of the Sarbanes-Oxley Act and certain of the liability provisions of the Exchange Act, although the Company will still be subject to the antifraud provisions of the Exchange Act and any applicable state securities laws. Following deregistration, the Company's executive officers, directors and 10% stockholders will no longer be required to file reports relating to their transactions in the Common Stock with the SEC. In addition, the Company's executive officers, directors and 10% stockholders will no longer be subject to the recovery of short-swing profits provision of the Exchange Act, and persons acquiring 5% of the Common Stock will no longer be required to report their beneficial ownership under the Exchange Act. Following the delisting of the Common Stock, any trading in the Common Stock would only occur in privately negotiated sales or potentially on the OTC Pink Market, if one or more brokers chooses to make a market for the Common Stock there and complies with applicable regulatory requirements; however, there can be no assurances regarding any such trading. The lack of public information and increased illiquidity will make trading in our shares of Common Stock more difficult, which may cause the value of the Common Stock to decrease.

ITEM 6 EXHIBITS

- [10.01](#) [Amendment to the loan agreement between the Company and Middlesex Savings Bank, dated August 5, 2019.](#)
- [10.02](#) [Note Purchase Agreement between the Company and Massachusetts Capital Resource Company, dated August 6, 2019.](#)
- [31.1\(a\)](#) [Rule 13a-14\(a\)/15d-14\(a\) Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- [31.1\(b\)](#) [Rule 13a-14\(a\)/15d-14\(a\) Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- [32.1](#) [Section 1350 Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(furnished but not filed for purposes of the Securities Exchange Act of 1934\).](#)
- [99.1](#) [Press release, dated August 13, 2019 issued by Dynasil Corporation of America announcing its financial results for the quarter ended June 30, 2019.](#)
- 101 The following materials from Dynasil Corporation of America's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of June 30, 2019 and September 30, 2018, (ii) Consolidated Statements of Operations for the three months ended June 30, 2019 and 2018, (iii) Consolidated Statements of Changes in Stockholders' Equity for the three and nine months ended June 30, 2019 and 2018; (iv) Consolidated Statements of Cash Flows for the three months ended June 30, 2019 and 2018, and (v) Notes to Consolidated Financial Statements, tagged as blocks of text.

SIGNATURES

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

DYNASIL CORPORATION OF AMERICA

BY: /s/ Peter Sulick
Peter Sulick,
Chief Executive Officer and President

DATED: August 13, 2019

/s/ Robert J. Bowdring
Robert J. Bowdring,
Chief Financial Officer

DATED: August 13, 2019

LOAN DOCUMENT MODIFICATION AGREEMENT

This Loan Document Modification Agreement (this "**Agreement**") is made as of this 5th day of August, 2019, by and between Middlesex Savings Bank, a banking corporation organized and existing under the laws of Massachusetts, of 6 Main Street, Natick, Massachusetts 01760 (the "**Lender**"), and Dynasil Corporation of America of 313 Washington Street, Suite 403, Newton, Massachusetts 02458 (the "**Borrower**"); and Optometrics Corporation of 8 Nemco Way, Ayer, Massachusetts 01432, Radiation Monitoring Devices, Inc. of 44 Hunt Street, Watertown, Massachusetts 02472, RMD Instruments Corp. of 44 Hunt Street, Watertown, Massachusetts 02472, Evaporated Metal Films Corp. of 239 Cherry Street, Ithaca, New York 14850, and Dynasil Biomedical Corp. of 44 Hunt Street, Watertown, Massachusetts 02472 (collectively, the "**Guarantors**").

WHEREAS, on May 1, 2014 Lender made a loan (the "**Loan**") to Borrower evidenced by a Revolving Line of Credit Note dated May 1, 2014 from Borrower to Lender in the original principal amount of Four Million and 00/100 (\$4,000,000.00) Dollars (the "**LOC Note**");

WHEREAS, as security for the payment and performance of Borrower's obligations under the LOC Note, Borrower and Guarantors executed and delivered to Lender, (i) a Loan and Security Agreement dated May 1, 2014, by and between the Borrower and the Lender (the "**Loan Agreement**"), (ii) UCC-1 Financing Statements covering the Collateral described in the Loan Agreement and filed with the Secretary of State of the Commonwealth of Massachusetts, State of New York and State of Delaware (the "**UCC-1 Financing Statements**"), (iii) Entity Guaranty and Security Agreements, all dated May 1, 2014 from Guarantors to Lender (the "**Guaranties**"), (iv) a Stock Pledge Agreement by Borrower in favor of Lender dated May 1, 2014 (the "**Stock Pledge**"); and (v) a Subordination Agreement dated as of May 1, 2014 given by Massachusetts Capital Resource Company ("**MCRC**") to Lender (the "**MCRC Subordination**") by which all debt of Borrower to MCRC (the "**Junior Debt**") is subordinated to all Obligations of Borrower to Lender. Collectively, the Loan Agreement, the UCC-1 Financing Statements, the Guaranties, the Stock Pledge, and the MCRC Subordination are referred to, together with various other documents referred to therein, as the same may be amended from time to time, as the "**Security Instruments**";

WHEREAS, Borrower and Lender amended the terms of the Loan pursuant to a Loan Document Modification Agreement dated September 29, 2015, by adding or modifying certain financial covenants by Lender, granting to Borrower consent to pay-down or pay-off certain amounts of the Junior Debt, and by adding an option on the part of Borrower to term out a certain amount of Advances made to Borrower under the LOC Note;

WHEREAS, Borrower and Lender further amended the terms of the Loan pursuant to a Second Amendment of Loan Agreement dated December 2, 2016, to (i) provide for Borrower to pay dividends under certain circumstances, (ii) make a distribution to Dynasil Biomedical Corp. to invest in Xcede Technologies, and (iii) modify the debt service coverage covenant;

WHEREAS, Borrower and Lender further amended the terms of the Loan pursuant to a Loan Document Modification Agreement dated May 16, 2017, by modifying the Advance Period Termination Date as set forth therein, and providing for an equipment line of credit in favor of the Borrower (the "**Equipment Line of Credit**"), as evidenced by a certain Equipment Line of Credit Master Note (Non-Revolving) in the maximum principal amount of One Million and 00/100 (\$1,000,000.00) Dollars (the "**Equipment Line of Credit Note**"); and

WHEREAS, the Borrower and Lender further amended the terms of the Loan pursuant to a Loan Document Modification Agreement dated August 13, 2018 for the purposes of (i) renewing and modifying the Equipment Line of Credit and replacing the Equipment Line of Credit Note, and (ii) modifying the Maximum Funded Debt Ratio set forth in the Loan Agreement; and

WHEREAS, with this Modification Agreement, the Borrower and the Lender further agree to amend the Loan Agreement Pursuant to a Loan Document Modification Agreement dated the same, to increase the percentage of Eligible Accounts Receivable available for borrowing under the Revolving Line of Credit Note from 80% to 85% and to eliminate Eligible Unbilled Receivables as a category for the Borrower obtaining Advances under the Revolving Line of Credit effective April 30, 2019, and to modify the Equipment Line of Credit; and

WHEREAS, pursuant to the terms set forth herein, the Loan Agreement shall be further amended to change the definitions used to calculate the Debt Service Coverage Ratio in Section 4.9 and the Maximum Leverage Ratio in Section 4.9A (to add back up to \$750,000 of certain Go-Dark Expenses) from the twelve (12) month testing periods ending June 30, 2019 and September 30, 2019, and to consent to new subordinated indebtedness in the maximum amount of \$2,000,000 (Section 3.2), with payments of interest and principal to be included in the calculation of the Debt Service Coverage Ratio (Section 4.9).

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, it is hereby agreed as follows:

1. Section 4.9 of the Loan Agreement is hereby deleted in its entirety and the following new Section 4.9 is substituted therefor, as follows:

"4.9 Debt Service Coverage. At the close of each fiscal quarter of Borrower, maintain a Debt Service Coverage ratio of at least 1.2 to 1.0 for the prior 12 month period. '**Debt Service Coverage**' as used herein shall be determined for the relevant period, and shall mean (i) EBITDA excluding non-cash and/or non-recurring expenditures, (including without limitation, up to \$750,000 of certain Go-Dark Expenditures incurred in the de-listing of certain of the Borrower's stock from NASDAQ) for the fiscal quarters ending June 30, 2019 and September 30, 2019 only, but effective for the subsequent three (3) fiscal quarters to give effect to the trailing twelve (12) month testing periods for this covenant, minus unfinanced capital expenditures, minus dividends and distributions, minus cash taxes paid for ongoing operations, divided by (ii) scheduled interest and principal payments made on all debt."

2. Section 4.9A of the Loan Agreement is hereby deleted in its entirety, and the following new Section 4.9A is substituted therefor:

"4.9A Maximum Leverage. At the close of each fiscal quarter of the Borrower, and on a trailing four (4) quarter basis, Borrower shall maintain Maximum Leverage of 2.5:1. For purposes of this Section 4.9A, the following terms shall have the defined meanings:

'Adjusted EBITDA' shall mean, EBITDA, excluding therefrom non-cash and/or recurring expenditures, including without limitation, up to \$750,000 of Certain Go-Dark Expenditures incurred in the de-listing of certain of the Borrower's stock from NASDAQ for the twelve (12) month testing periods ending June 30, 2019 and September 30, 2019 only, or gains (as permitted), and the operating income or loss of the Xcede joint venture that is consolidated into Borrower's financial results.

'Maximum Leverage' shall mean that quotient equal to (a) the sum of (i) Senior Secured Debt plus (ii) Subordinated Debt plus capital leases and other indebtedness, if any, divided by (b) Adjusted EBITDA."

3. The Equipment Line of Credit Note is hereby amended to extend the Conversion Date to April 30, 2020 and change the Maturity Date (upon conversion to a term loan) from April 30, 2019 to April 30, 2025.

4. Borrower and Guarantors confirm that the Security Instruments, as amended by or added to in connection with this Agreement, constitute the valid and enforceable obligations of Borrower and Guarantors, and that neither Borrower nor Guarantors has any existing claims, defenses or rights of setoff with respect thereto.

5. Borrower and Guarantors hereby warrant and represent that the statements set forth in the recitals above are true and correct, and that all representations and warranties made by Borrower and Guarantors in the Security Instruments continue to be true and correct in all material respects.

6. It is further agreed that this Agreement shall not, in any manner, release, relinquish, or otherwise affect the liens, security interests, and rights created by or arising under the Security Instruments or its priority over other liens, charges, or encumbrances affecting the Collateral referred to therein (except by extending such lien to secure, inter alia, any and all new obligations created hereby and pursuant to the Equipment Line of Credit Note and the Term Note) or Borrower's or Guarantors' liability thereunder; and all other terms, conditions and covenants therein contained which are not hereby amended, are hereby ratified and confirmed as previously written.

7. Borrower and Guarantors hereby acknowledge that there are and were no oral or written representations, warranties, understandings, stipulations, agreements or promises made by any party or by any agent, employee or other representative of any party, pertaining to the subject matter of this Agreement which have not been incorporated herein. No express or implied consent to any further modifications involving any of the matters set forth in the Security Instruments or herein shall be inferred or implied by Lender's execution of this Agreement. Any further modification of the Loan Agreement shall require the express written approval of Lender. No provision hereof shall be modified or limited except by a written instrument signed by the parties hereto, expressly referring hereto and to the provision so modified or limited.

8. Except as expressly amended and modified by this Agreement all of the terms and conditions of the Security Instruments shall remain in full force and effect.

[Signature Page to Follow]

Executed under seal this 5th day of August, 2019.

MIDDLESEX SAVINGS BANK

By: /s/ Tony Zhang
Tony Zhang, Senior Vice President

DYNASIL CORPORATION OF AMERICA OPTOMETRICS CORPORATION
RADIATION MONITORING DEVICES, INC. RMD INSTRUMENTS CORP.
EVAPORATED METAL FILMS CORP. DYNASIL BIOMEDICAL CORP.

By: /s/ Robert Bowdring
Robert Bowdring, Chief Financial Officer of each of the above named
corporations

[Signature Page to Loan Modification Agreement]

DYNASIL CORPORATION OF AMERICA

**Note Purchase Agreement
(as amended, restated and consolidated)**

Dated as of August 6, 2019

DYNASIL CORPORATION OF AMERICA

Note Purchase Agreement
(as amended, restated and consolidated)

Dated as of August 6, 2019

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DYNASIL CORPORATION OF AMERICA
44 Hunt Street
Watertown, Massachusetts 02472

As of August 6, 2019

Massachusetts Capital Resource Company
420 Boylston Street
Boston, Massachusetts 02116

Re: Notes due 2026

Gentlemen:

Dynasil Corporation of America, a Delaware corporation (the "Company"), hereby agrees with **Massachusetts Capital Resource Company** (the "Purchaser") as follows:

BACKGROUND

The Company and the Purchaser are parties to that certain: (i) Note Purchase Agreement, dated as of July 31, 2012, as amended, (the "Prior Purchase Agreement") pursuant to which the Company issued to the Purchaser the Company Note, due November 30, 2021, in the original principal amount of \$3,000,000, which Note has a present outstanding principal balance of \$865,216 (the "Prior Note");

The Company has requested: (i) an additional loan of \$2,000,000 from the Purchaser, in accordance with the terms and conditions of this Agreement, and (ii) that the Prior Purchase Agreements be amended, restated and consolidated into one Purchase Agreement with the new loan and that the Prior Notes and the note presenting the new loan be consolidated into one Note which will be due July 31, 2026. The consolidated Note will be in the original aggregate principal amount of \$2,865,216, which will be issued for \$2,000,000 in cash and the exchange of the Prior Note which has an outstanding principal amount of \$865,216.

ARTICLE I

PURCHASE, SALE AND TERMS OF NOTES

1.01. The Notes. The Company has authorized the issuance and sale to the Purchaser of the Company's Notes, due 2026, in the original principal amount of \$2,865,216. The Notes shall be substantially in the form set forth in Exhibit 1.01 hereto and are herein referred to individually as a "Note" and collectively as the "Notes", which terms shall also include any notes delivered in exchange or replacement therefor.

1.02. Purchase and Sale of Notes.

(a) The Closing. The Company agrees to issue to the Purchaser, and, subject to and in reliance upon the representations, warranties, terms and conditions of this Agreement, the Purchaser agrees to purchase, the Notes for an aggregate purchase price of \$2,865,216. Such purchase and sale shall take place at a closing (the "Closing") to be held at the Law Office of George W. Thibault, 60 State Street, Suite 700, Boston, Massachusetts, 02109 on August 6, 2019 at 1:00 P.M. or on such other date and at such time as may be mutually agreed upon. At the Closing the Company will initially issue one Note, payable to the order of the Purchaser, in the principal amount of \$2,865,216, and Purchaser shall tender a wire transfer to the Company in the amount of \$2,000,000, and the exchange of the Prior Note having an aggregate outstanding principal balance of \$865,216, all in payment of the full purchase price for the Notes. In addition, the Company will deliver to the Purchaser, at the Closing, a check or wire transfer for all accrued and unpaid interest on the Prior Note, calculated through the Closing

(b) Use of Proceeds. The Company agrees to use the full proceeds from the sale of the Notes solely to assist in a stock buyback and refinancing of existing indebtedness and for working capital and agrees that full proceeds from the sale of the Notes will be utilized for purposes which increase or maintain equal opportunity employment in the Commonwealth of Massachusetts.

1.03. Payments and Endorsements. Payments of principal, interest and premium, if any, on the Notes, shall be made directly by check duly mailed or delivered to the Purchaser at its address referred to in Section 7.03 hereof or, if requested by the Purchaser, by wire transfer to an account designated by the Purchaser, without any presentment or notation of payment, except that prior to any transfer of any Note, the holder of record shall endorse on such Note a record of the date to which interest has been paid and all payments made on account of principal of such Note.

1.04. Redemptions.

(a) Required Redemptions. Beginning on and with August 31, 2022, and on the last day of each calendar month thereafter through and including July 31, 2026, the Company will redeem, without premium, \$59,692.00 in principal amount of the Notes, or such lesser amount as may be then outstanding, together with all accrued and unpaid interest then due on the amount so redeemed. On the stated or accelerated maturity of the Notes, the Company will pay the principal amount of the Notes then outstanding together with all accrued and unpaid interest then due thereon. No optional redemption of less than all of the Notes shall affect the obligation of the Company to make the redemptions required by this subsection.

(b) Optional Redemptions With Premium. The Company may at any time redeem the Notes in whole or in part (in integral multiples of \$50,000) together with interest due on the amount so redeemed through the date of redemption, and a premium equal to the percentage of the principal amount of the Notes redeemed under this subsection applicable to the period in which such redemption is made, as follows:

<u>Period Ending</u>	<u>Premium</u>
August 31, 2020	2.0%
August 31, 2021	1.0%
thereafter	0%

(c) Notice of Redemptions; Pro rata Redemptions. Notice of any optional redemptions pursuant to subsection 1.04(b) shall be given to all registered holders of the Notes at least ten (10) business days prior to the date of such redemption. Each redemption of Notes pursuant to subsections 1.04(a) or (b) shall be made so that the Notes then held by each holder shall be redeemed in a principal amount which shall bear the same ratio to the total principal amount of Notes being redeemed as the principal amount of Notes then held by such holder bears to the aggregate principal amount of the Notes then outstanding.

1.05. Payment on Non-Business Days. Whenever any payment to be made shall be due on a Saturday, Sunday or a public holiday under the laws of the Commonwealth of Massachusetts, such payment may be made on the next succeeding business day, and such extension of time shall in such case be included in the computation of payment of interest due.

1.06. Registration, etc. The Company shall maintain at its principal office a register of the Notes and shall record therein the names and addresses of the registered holders of the Notes, the address to which notices are to be sent and the address to which payments are to be made as designated by the registered holder if other than the address of the holder, and the particulars of all transfers, exchanges and replacements of Notes. No transfer of a Note shall be valid unless made on such register for the registered holder or his executors or administrators or his or their duly appointed attorney, upon surrender thereof for exchange as hereinafter provided, accompanied by an instrument in writing, in form and execution reasonably satisfactory to the Company. Each Note issued hereunder, whether originally or upon transfer, exchange or replacement of a Note or Notes, shall be registered on the date of execution thereof by the Company and shall be dated the date to which interest has been paid on such Notes or Note. The registered holder of a Note shall be that Person in whose name the Note has been so registered by the Company. A registered holder shall be deemed the owner of a Note for all purposes of this Agreement and, subject to the provisions hereof, shall be entitled to the principal, premium, if any, and interest evidenced by such Note free from all equities or rights of setoff or counterclaim between the Company and the transferor of such registered holder or any previous registered holder of such Note.

1.07. Transfer and Exchange of Notes. The registered holder of any Note or Notes may, prior to maturity or prepayment thereof, surrender such Note or Notes at the principal office of the Company for transfer or exchange. Within a reasonable time after notice to the Company from a registered holder of its intention to make such exchange and without expense (other than transfer taxes, if any) to such registered holder, the Company shall issue in exchange therefor another Note or Note, in such denominations as requested by the registered holder, for the same aggregate principal amount as the unpaid principal amount of the Note or Notes so surrendered, and having the same maturity and rate of interest, containing the same provisions and subject to the same terms and conditions as the Note or Notes so surrendered. Each new Note shall be made payable to such Person or Persons, or registered assigns, as the registered holder of such surrendered Note or Notes may designate, and such transfer or exchange shall be made in such a manner that no gain or loss of principal or interest shall result therefrom.

1.08. Replacement of Notes. Upon receipt of evidence satisfactory to the Company of the loss, theft, destruction or mutilation of any Note and, if requested in the case of any such loss, theft or destruction, upon delivery of an indemnity bond or other agreement or security reasonably satisfactory to the Company, or, in the case of any such mutilation, upon surrender and cancellation of such Note, the Company will issue a new Note, of like tenor and amount and dated the date to which interest has been paid, in lieu of such lost, stolen, destroyed or mutilated Note; provided, however, if any Note of which Massachusetts Capital Resource Company, its nominee, or any of its partners is the registered holder is lost, stolen or destroyed, the affidavit of the President, Treasurer or any Assistant Treasurer of the registered holder setting forth the circumstances with respect to such loss, theft or destruction shall be accepted as satisfactory evidence thereof, and no indemnification bond or other security shall be required as a condition to the execution and delivery by the Company of a new Note in replacement of such lost, stolen or destroyed Note other than the registered holder's written agreement to indemnify the Company.

1.09. Subordination. The Company, for itself, its successors and assigns, covenants and agrees, and the Purchaser and each successor holder of the Notes by its acceptance thereof, likewise covenants and agrees, that notwithstanding any other provision of this Agreement or the Notes, the payment of the principal of and interest on each and all of the Notes shall be subordinated in right of payment, to the extent and in the manner hereinafter set forth, to the prior payment in full of all Senior Debt (as hereinafter defined) at any time outstanding. The provisions of this Section 1.09 shall constitute a continuing representation to all Persons who, in reliance upon such provisions, become the holders of or continue to hold Senior Debt, and such provisions are made for the benefit of the holders of Senior Debt, and such holders are hereby made obligees hereunder the same as if their names were written herein as such, and they or any of them may proceed to enforce such provisions against the Company or against the holder of any Note without the necessity of joining the Company as a party.

(a) Payment of Senior Debt. In the event of any insolvency or bankruptcy proceedings, or any receivership, liquidation, reorganization or other similar proceedings in connection therewith, relative to the Company or to its property, or, in the event of any proceedings for voluntary liquidation, dissolution or other winding up of the Company or distribution or marshalling of its assets or any composition with creditors of the Company, whether or not involving insolvency or bankruptcy, then and in any such event all Senior Debt shall be paid in full before any payment or distribution of any character, whether in cash, securities or other property, shall be made on account of the Notes; and any such payment or distribution, except securities which are subordinated and junior in right of payment to the payment of all Senior Debt then outstanding in terms of substantially the same tenor as this Section 1.09, which would, but for the provisions hereof, be payable or deliverable in respect of the Notes shall be paid or delivered directly to the holders of Senior Debt (or their duly authorized representatives), in the proportions in which they hold the same, until all Senior Debt shall have been paid in full, and every holder of the Notes by becoming a holder thereof shall have designated and appointed the holder or holders of Senior Debt (and their duly authorized representatives) as his or its agents and attorney-in-fact to demand, sue for, collect and receive such Senior Debt holder's ratable share of all such payments and distributions and to file any necessary proof of claim therefor and to take all such other action in the name of the holders of the Notes or otherwise, as such Senior Debt holders (or their authorized representatives) may determine to be necessary or appropriate for the enforcement of this Section 1.09. The Purchaser and each successor holder of the Notes by its or his acceptance thereof agrees to execute, at the request of the Company, a separate agreement with any holder of Senior Debt on the terms set forth in this Section 1.09, and to take all such other action as such holder or such holder's representative may request in order to enable such holder to enforce all claims upon or in respect of such holder's ratable share of the Notes.

(b) No Payment on Notes Under Certain Conditions. In the event that any default occurs in the payment of the principal of or interest on any Senior Debt (whether as a result of the acceleration thereof by the holders of such Senior Debt or otherwise) and during the continuance of such default for a period up to one hundred twenty (120) days and thereafter if judicial proceedings shall have been instituted with respect to such defaulted payment, or (if a shorter period) until such payment has been made or such default has been cured or waived in writing by such holder of Senior Debt then and during the continuance of such event no payment of principal or interest on the Notes shall be made by the Company or accepted by any holder of the Notes who has received notice from the Company or from a holder of Senior Debt of such events.

(c) Payments Held in Trust. In case any payment or distribution shall be paid or delivered to any holder of the Notes before all Senior Debt shall have been paid in full, despite or in violation or contravention of the terms of this subordination, such payment or distribution shall be held in trust for and paid and delivered ratably to the holders of Senior Debt (or their duly authorized representatives), until all Senior Debt shall have been paid in full.

(d) Subrogation. Subject to the payment in full of all Senior Debt and until the Notes shall be paid in full, the holders of the Notes shall be subrogated to the rights of the holders of Senior Debt (to the extent of payments or distributions previously made to such holders of Senior Debt pursuant to the provisions of subsections (a) and (c) of this Section 1.09) to receive payments or distributions of assets of the Company applicable to the Senior Debt. No such payments or distributions applicable to the Senior Debt shall, as between the Company and its creditors, other than the holders of Senior Debt and the holders of the Notes, be deemed to be a payment by the Company to or on account of the Notes; and for the purposes of such subrogation, no payments or distributions to the holders of Senior Debt to which the holders of the Notes would be entitled except for the provisions of this Section 1.09 shall, as between the Company and its creditors, other than the holders of Senior Debt and the holders of the Notes, be deemed to be a payment by the Company to or on account of the Senior Debt.

(e) Scope of Section. The provisions of this Section 1.09 are intended solely for the purpose of defining the relative rights of the holders of the Notes, on the one hand, and the holders of the Senior Debt, on the other hand. Nothing contained in this Section 1.09 or elsewhere in this Agreement or the Notes is intended to or shall impair, as between the Company, its creditors other than the holders of Senior Debt, and the holders of the Notes, the obligation of the Company, which is unconditional and absolute, to pay to the holders of the Notes the principal of and interest on the Notes as and when the same shall become due and payable in accordance with the terms thereof, or to affect the relative rights of the holders of the Notes and creditors of the Company other than the holders of the Senior Debt, nor shall anything herein or therein prevent the holder of any Note from accepting any payment with respect to such Note or exercising all remedies otherwise permitted by applicable law upon default under such Note, subject to the rights, if any, under this Section 1.09 of the holders of Senior Debt in respect of cash, property or securities of the Company received by the holders of the Notes.

(f) Survival of Rights. The right of any present or future holder of Senior Debt to enforce subordination of the Notes pursuant to the provisions of this Section 1.09 shall not at any time be prejudiced or impaired by any act or failure to act on the part of the Company or any such holder of Senior Debt, including, without limitation, any forbearance, waiver, consent, compromise, amendment, extension, renewal, or taking or release of security of or in respect of any Senior Debt or by noncompliance by the Company with the terms of such subordination regardless of any knowledge thereof such holder may have or otherwise be charged with.

(g) Amendment or Waiver. The provisions of this Section 1.09 may not be amended or waived in any manner which is detrimental to any Senior Debt without the consent of the holders of all then existing Senior Debt.

(h) Senior Debt Defined. The term "Senior Debt" shall mean (i) all Indebtedness of the Company for money borrowed from banks or other institutional lenders, including without limitation Middlesex Savings Bank, including any extension or renewals thereof, whether outstanding on the date hereof or thereafter created or incurred, which is not by its terms subordinate and junior to or on a parity with the Notes and which is permitted hereby at the time it is created or incurred, and (ii) all guaranties by the Company which are not by their terms subordinate and junior to or on a parity with the Notes and which are permitted hereby at the time they are made, of Indebtedness of any Subsidiary if such Indebtedness would have been Senior Debt pursuant to the provisions of clause (i) of this sentence had it been Indebtedness of the Company. In making any loans which are (or the guaranties of which are) intended to be Senior Debt, the lenders or purchasers shall be entitled to rely as to the fact that such Indebtedness or guaranty is permitted hereby upon a certificate by the Company's chief financial officer purporting to show such Indebtedness or guaranty will not result in the Company's failure to comply with the provisions of Article IV hereof as of the date of the loan or guarantee.

(i) Subordination Agreement. For as long as there shall be any outstanding Liabilities (as such term is defined in that certain Subordination Agreement, dated as of May 1, 2014, between Middlesex Savings Bank, and the Company, as amended, modified or restated from time to time, the "Subordination Agreement") or any obligation of any nature on the part of Middlesex Savings Bank, or its successors or assigns, to extend credit, or make loans or advances to the Company or any Subsidiary, the terms and conditions of the Subordination Agreement shall supercede and replace all of the terms and conditions of this Section 1.09, except for clause (h) above and this clause (i).

1.10. Representations by the Purchaser. The Purchaser represents and warrants that:

- (a) Accredited Investor. Purchaser is an “accredited investor,” as defined in SEC Rule 501(a).
- (b) Notes not Registered. Purchaser acknowledges that the sale of the Notes has not been registered under the U.S. Securities Act of 1933 (the “Securities Act”) or any state securities law in reliance on Purchaser’s representations herein, and that no government agency has approved of the offering of the Notes.
- (c) Acquisition for Own Account. Purchaser is acquiring the Notes solely for its own account for investment and not with a view to or any present intention of selling, offering to sell, or otherwise disposing of or distributing the Notes or any portion thereof.
- (d) Availability of Information. Purchaser understands that the Notes are being sold without any particular prospectus or offering document, and that no government agency has approved of the adequacy or accuracy of the information provided to Purchaser. Purchaser has discussed the Company and its plans, technology, operations, financial condition, and prospects with its officers and/or directors. Purchaser has received satisfactory responses to all its inquiries and all such information as Purchaser deems necessary and appropriate to enable it to evaluate the risks inherent in making an investment in the Notes.
- (e) Investment Involves Substantial Risk and Illiquidity. Purchaser acknowledges that (i) the Company’s technology and business prospects are unproven, (ii) the acquisition of the Notes is a highly speculative investment involving substantial risk, (iii) there is not and may never be any market for the Notes, and (iv) it may be required to hold the Notes until maturity. Purchaser does not anticipate needing liquidity for the Notes, and it is able, without impairing its financial condition, to suffer a complete loss of its investment in the Notes.
- (f) Restrictions on Transfer. Purchaser understands that it may not sell, pledge or otherwise transfer any Notes unless the Company registers such Notes under the Securities Act and applicable state laws or unless an exemption from such registration requirements is available. Purchaser understands that the Company is under no obligation to register any transfer of the Notes by it unless such Notes are registered under the Securities Act and applicable state laws or unless an exemption from such registration requirements is available and that exemptions from registration may not be available or may not permit it to transfer or resell all or any Notes in the amounts or at the times proposed by Purchaser.

1.11. Disclosure of Information by the Purchaser. The Company understands that the Purchaser is a special purpose limited partnership organized under Chapter 109 of the General Laws of the Commonwealth of Massachusetts and Chapter 816 of the Acts and Resolves of 1977 of the Commonwealth of Massachusetts (the "Capital Resource Company Act"), and as such, in accordance with such provisions, the Purchaser, in order to obtain certain benefits for itself and its partners, is required to file certain reports and otherwise disclose information relating to the business, financial affairs, and future prospects of the Company and its affiliates (as defined in the aforesaid legislation) with the Clerk of the Senate and the Clerk of the House of Representatives of the General Court of the Commonwealth of Massachusetts, the Secretary of Manpower Affairs, the Commissioner of Insurance and the Department of Revenue of the Commonwealth of Massachusetts, and that such reports and other information may constitute "public records" within the purview of Section 7 of Chapter 4 of the General Laws of the Commonwealth of Massachusetts. In addition, information relating to the business, financial affairs and future prospects of the Company and its affiliates must be disclosed to others in order to obtain independent confirmation that financing on substantially similar terms to financing provided pursuant to this Agreement was not elsewhere available to the Company. The Company hereby authorizes the Purchaser to disclose all such information relating to the business, financial affairs and future prospects of the Company and its affiliates as has been or may in the future be presented to the Purchaser to all such persons as the Purchaser in good faith deems necessary or appropriate in order to fulfill its obligations under the Capital Resource Company Act. The Purchaser understands and has been advised that the provisions of SEC Regulation FD requires the public announcement of previously non-public material information if that information is disclosed to anyone who has not agreed to maintain the confidentiality of that information, and Purchaser agrees to take no action that would require the Company to make a public announcement pursuant to the requirements of Regulation FD, except as required by law, in which case Purchaser shall use reasonable efforts to give the Company written notice of the proposed action a reasonable time in advance of such proposed action; provided, however, that the Purchaser shall have no liability for failure to give such notice.

ARTICLE II

CONDITIONS TO PURCHASER'S OBLIGATION

The obligation of the Purchaser to purchase and pay for the Notes at the Closing is subject to the following conditions:

2.01. Representations and Warranties. Each of the representations and warranties of the Company set forth in Article III hereof shall be true in all material respects on the date of the Closing.

2.02. Documentation at Closing. The Purchaser shall have received prior to or at the Closing all of the following, each in form and substance satisfactory to the Purchaser and its counsel:

(a) The Company shall have executed and delivered to the Purchaser a Confirmation of the Security Agreement between the Company and the Purchaser, dated July 31, 2012 (as amended prior to the date hereof and as amended hereby, the "Company Security Agreement"), such Confirmation to be in form and substance acceptable to the Purchaser.

(b) Each Subsidiary shall have executed and delivered to the Purchaser a Confirmation of its Unconditional Guaranty, dated July 31, 2012 (as amended prior to the date hereof and as amended hereby, individually, a "Guaranty", and collectively, the "Guaranties"), each such Confirmation to be in form and substance acceptable to the Purchaser.

(d) Each Subsidiary shall have executed and delivered to the Purchaser a Confirmation of its Guarantor Security Agreement, dated July 31, 2012, (individually, "Guarantor Security Agreement", and collectively, the "Guarantor Security Agreements", and, together with the Company Security Agreement, the Guaranties, the "Security Documents"), each such Confirmation to be in form and substance acceptable to the Purchaser.

(e) The Company shall deliver to the Purchaser the consent of the Middlesex Savings Bank to this Agreement and the transactions contemplated herein, such consent being delivered pursuant to the Subordination Agreement.

(f) A certified copy of all charter documents of the Company and each Subsidiary, which have been amended on or after July, 31, 2012; a certified copy of the resolutions of the Board of Directors and, to the extent required, the stockholders of the Company and each Subsidiary evidencing approval of this Agreement, the Notes, the Security Documents and other matters contemplated hereby; a certified copy of the By-laws of the Company and each Subsidiary, which have been changed on or after July 31, 2012; and certified copies of all documents evidencing other necessary corporate or other action and governmental approvals, if any, with respect to this Agreement, the Notes and the Security Documents.

(g) A favorable opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C, counsel for the Company and its Subsidiaries, similar to the opinion delivered in connection with the Prior Purchase Agreement.

(h) A certificate of the Secretary or an Assistant Secretary from the Company and each Subsidiary which shall certify the names of the officers of the Company and such Subsidiary authorized to sign this Agreement, the Notes, Confirmations of the Security Documents and the other documents or certificates to be delivered pursuant to this Agreement or the Security Documents by the Company and each Subsidiary, or any of its officers, together with the true signatures of such officers. The Purchaser may conclusively rely on such certificates until it shall receive a further certificate of the Secretary or an Assistant Secretary of the Company or such Subsidiary canceling or amending the prior certificate and submitting the signatures of the officers named in such further certificate.

(i) A certificate from a duly authorized officer of the Company stating that (i) the representations and warranties of the Company contained in Article III hereof and otherwise made by the Company and any Subsidiary in writing in connection with the transactions contemplated hereby are true and correct, (ii) each of the transactions contemplated in Section 2.02 has been fully consummated, and (iii) that no condition or event has occurred or is continuing or will result from execution and delivery of this Agreement, the Notes or the Confirmations of the Security Documents which constitute an Event of Default or would constitute an Event of Default but for the requirement that notice be given or time elapse or both.

(j) Payment for the costs, expenses, taxes and filing fees identified in Section 7.04 as to which the Purchaser gives the Company notice prior to the Closing.

ARTICLE III

REPRESENTATIONS AND WARRANTIES

The Company represents and warrants as follows:

3.01. Organization and Standing. The Company and each Subsidiary is a duly organized and validly existing corporation or limited liability company, as the case may be, in good standing under the laws of the jurisdiction in which it was organized and has all requisite power and authority for the ownership and operation of its properties and for the carrying on of its business as now conducted and as now proposed to be conducted. The Company and each Subsidiary is duly licensed or qualified and in good standing as a foreign corporation or limited liability company, as the case may be, authorized to do business in all jurisdictions wherein the character of the property owned or leased, or the nature of the activities conducted, by it makes such licensing or qualification necessary, except where the failure to be so qualified and in good standing would not reasonably be expected to have a material adverse effect on the Company and its Subsidiaries, taken as a whole. Attached hereto as Exhibit 3.01 is a schedule which correctly identifies all Subsidiaries of the Company as of the date hereof and shows with respect to each Subsidiary its jurisdiction of organization. All of the outstanding capital stock or membership interest of each Subsidiary has been duly authorized and validly issued, is fully paid and nonassessable, and is owned beneficially and of record by the Company or by another Subsidiary as indicated in Exhibit 3.01, free and clear of any lien, right, encumbrance or restriction of any nature, including, without limitation, any lien, right, encumbrance or restriction on transfer, except as is otherwise set forth in Exhibit 3.01.

3.02. Corporate Action. The Company and each Subsidiary has all necessary corporate power and has taken all corporate action required to make all the provisions of this Agreement, the Notes, the Security Documents and any other agreements and instruments executed by it in connection herewith and therewith the valid and enforceable obligations they purport to be. The issuance of the Notes is not subject to preemptive or other similar statutory or contractual rights and will not conflict with any provisions of any agreement or instrument to which the Company or any Subsidiary is a party or by which it is bound.

3.03. Governmental Approvals. No authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, is or will be necessary for, or in connection with, the offer, issuance, sale, execution or delivery by the Company or any Subsidiary of, or for the performance by it of its obligations under, this Agreement, the Notes or the Security Documents, except for filings required in connection with the grant of the security interests pursuant to the Security Documents .

3.04. Litigation. There is no litigation or governmental proceeding or investigation pending or, to the knowledge of the Company, threatened against the Company or any Subsidiary affecting any of its properties or assets, or against any officer, key employee or principal stockholder of the Company or any Subsidiary where such litigation, proceeding or investigation, either individually or in the aggregate, would have a material adverse effect on the Company and its Subsidiaries, taken as a whole, nor, to the knowledge of the Company, has there occurred any event or does there exist any condition on the basis of which any litigation, proceeding or investigation might properly be instituted. Neither the Company nor any Subsidiary, nor, to the knowledge of the Company, any officer or key employee of the Company or any Subsidiary, or principal stockholder of the Company or any Subsidiary, is in default with respect to any order, writ, injunction, decree, ruling or decision of any court, commission, board or other government agency affecting the Company or any Subsidiary. There are no actions or proceedings pending or threatened (or any basis therefor known to the Company) which might result, either in any case or in the aggregate, in any material adverse change in the business, operations, affairs or condition of the Company and its Subsidiaries, taken as a whole, or in any of its properties or assets, or which might call into question the validity of this Agreement, the Notes, the Security Documents or any action taken or to be taken pursuant hereto or thereto.

3.05. Compliance with Other Instruments. The Company and each Subsidiary is in compliance in all respects with the terms and provisions of this Agreement and of its charter, by-laws or operating agreement, as the case may be, and in all material respects with the terms and provisions of the mortgages, indentures, leases, agreements and other instruments and of all judgments, decrees, governmental orders, statutes, rules and regulations by which it is bound or to which its properties or assets are subject. There is no term or provision in any of the foregoing documents and instruments which materially adversely affects the business, assets or financial condition of the Company or any Subsidiary. Except for consent from Middlesex Savings Bank being obtained contemporaneously herewith, neither the execution and delivery of this Agreement, the Notes or the Security Documents, nor the consummation of any transactions contemplated hereby or thereby has constituted or resulted in or will constitute or result in a default or violation of any term or provision in any of the foregoing documents or instruments. A consolidated schedule of Indebtedness of the Company and each Subsidiary (including lease obligations required to be capitalized in accordance with applicable Statements of Financial Accounting Standards), as of the date of this Agreement, is attached as Exhibit 3.05.

3.06. Federal Reserve Regulations. Neither the Company nor any Subsidiary is engaged in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulation U of the Board of Governors of the Federal Reserve System), and no part of the proceeds of the Notes will be used to purchase or carry any margin security or to extend credit to others for the purpose of purchasing or carrying any margin security or in any other manner which would involve a violation of any of the regulations of the Board of Governors of the Federal Reserve System.

3.07. Title to Assets, Patents. Except as is set forth in Exhibit 3.07, the Company and each Subsidiary has good and clear record and marketable title in fee to such of its fixed assets as are real property, and good and merchantable title to all of its other assets, now carried on its books including those reflected in the most recent consolidated balance sheet of the Company and its Subsidiaries which forms a part of Exhibit 3.08 attached hereto, or acquired since the date of such balance sheet (except personal property disposed of since said date in the ordinary course of business) free of any mortgages, pledges, charges, liens, security interests or other encumbrances. The Company and each Subsidiary enjoys peaceful and undisturbed possession under all leases under which it is operating, and all said leases are valid and subsisting and in full force and effect. The Company and each Subsidiary, to the best of their knowledge at the time of execution, owns or has a valid right to use the patents, patent rights, licenses, permits, trade secrets, trademarks, trademark rights, trade names or trade name rights or franchises, copyrights, inventions and intellectual property rights being used to conduct its business as now operated and as now proposed to be operated; and the conduct of its business as now operated and as now proposed to be operated does not and will not conflict with valid patents, patent rights, licenses, permits, trade secrets, trademarks, trademark rights, trade names or trade name rights or franchises, copyrights, inventions and intellectual property rights of others. Neither the Company nor any Subsidiary has any obligation to compensate any Person for the use of any such patents or such rights nor has the Company or any Subsidiary granted to any Person any license or other rights to use in any manner any of such patents or such rights of the Company or any Subsidiary.

3.08. Financial Information. The consolidated financial statements of the Company and its Subsidiaries set forth in the Company's Form 10-K for its fiscal year ended September 30, 2018 (the "Form 10-K") and in its Form 10-Q for the quarter ended March 31, 2019 (the "Form 10-Q"), both as filed with the Securities and Exchange Commission (the "SEC"), present fairly in all material respects the consolidated financial position of the Company and its Subsidiaries as at the dates thereof and its results of operations for the periods covered thereby and have been prepared in accordance with GAAP. Neither the Company nor any Subsidiary has any liability contingent or otherwise not disclosed in the aforesaid financial statements or in the notes thereto that would reasonably be expected, together with all such other liabilities, materially affect the financial condition of the Company or any Subsidiary, nor does the Company have any reasonable grounds to know of any such liability. Since the date of said September 30, 2018 audited financial statements, except as has been disclosed in the Company's reports filed with the SEC and which are publicly available on the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system (the "SEC Reports"), (i) there has been no material adverse change in the business, assets or condition, financial or otherwise, operations or prospects, of the Company or any Subsidiary; (ii) neither the business, condition, operations or prospects of the Company or any Subsidiary nor any of their properties or assets has been adversely affected as a result of any legislative or regulatory change, any revocation or change in any franchise, license or right to do business, or any other event or occurrence, whether or not insured against; and (iii) neither the Company nor any Subsidiary has entered into any material transaction or made any distribution on its capital stock except as is set forth in the Form 10-K or Form 10-Q.

3.09. Taxes. The Company and each Subsidiary has accurately prepared in all material respects and filed all federal, state and other tax returns required by law to be filed by it, and all taxes shown to be due and all additional assessments have been paid or provision made therefor. The Company knows of no additional assessments or adjustments pending or threatened against the Company or any Subsidiary for any period, nor of any basis for any such assessment or adjustment.

3.10. ERISA. Except as is set forth in [Exhibit 3.10](#), no employee benefit plan established or maintained, or to which contributions have been made, by the Company or any Subsidiary, which is subject to part 3 of Subtitle B of Title I of The Employee Retirement Income Security Act of 1974, as amended ("ERISA") had an accumulated funding deficiency (as such term is defined in Section 302 of ERISA) as of the last day of the most recent fiscal year of such plan ended prior to the date hereof, and no material liability to the Pension Benefit Guaranty Corporation has been incurred with respect to any such plan by the Company or any of its Subsidiaries.

3.11. Transactions with Affiliates. Except as is set forth in Exhibit 3.11, there are no loans, leases, royalty agreements or other continuing transactions between the Company or any Subsidiary and any Person owning five percent (5%) or more of any class of capital stock of the Company or any Subsidiary or other entity controlled by such stockholder or a member of such stockholder's family.

3.12. Assumptions or Guaranties of Indebtedness of Other Persons. Except for the Guaranties, neither the Company nor any Subsidiary has assumed, guaranteed, endorsed or otherwise become directly or contingently liable on (including, without limitation, liability by way of agreement, contingent or otherwise, to purchase, to provide funds for payment, to supply funds to or otherwise invest in the debtor or otherwise to assure the creditor against loss) any Indebtedness of any other Person.

3.13. Investments in Other Persons. Neither the Company nor any Subsidiary has made any loan or advance to any Person which is outstanding on the date of this Agreement, nor is the Company or any Subsidiary obligated or committed to make any such loan or advance, nor does the Company or any Subsidiary own any capital stock or assets comprising the business of, obligations of, or any interest in, any Person.

3.14. Equal Employment Opportunity. The Company has reviewed its employment practices and policies and those of each Subsidiary and, to its knowledge, the Company and each Subsidiary is in full compliance with (a) all applicable laws of the United States, of the Commonwealth of Massachusetts and of each other applicable jurisdiction, relating to equal employment opportunity (including, without limitation, Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. §000e-17), the Age Discrimination in Employment Act of 1967, as amended (29 U.S.C. §§621-634), the Equal Pay Act of 1963 (29 U.S.C. §206(d)), and any rules, regulations and administrative orders and Executive Orders relating thereto; Mass. Gen. Laws. c. 151B, Mass. Gen. Laws c. 149 §24A et seq. and §105A et seq., and any rules or regulations relating thereto; and (b) the applicable terms, relating to equal employment opportunity, of any contract, agreement or grant the Company or any Subsidiary has with, from, or relating (by way of subcontract or otherwise) to any other contract, agreement or grant of, any federal or state governmental unit ("Government Contract"), including, without limitation, any terms required pursuant to Federal Executive Order No. 11246 and Massachusetts Executive Order No. 74 (both as amended). To the Company's knowledge, it and each Subsidiary has kept all records required to be kept, and has filed all reports, affirmative action plans and forms (including, without limitation and where applicable, Form EEO-1) required to be filed pursuant to any such applicable law or the terms of any such Government Contract. Neither the Company nor any Subsidiary has been subject to any adverse final determination or order, with respect to any charge of employment discrimination made against it, by the United States Equal Employment Opportunity Commission, the Massachusetts Commission Against Discrimination or any other governmental unit (including, without limitation, any such governmental unit with which it has a Government Contract), and neither the Company nor any Subsidiary is presently, to the Company's knowledge, subject to any formal proceedings before, or investigations by, such commissions or governmental units.

3.15. Status of Notes as Qualified Investments. The Company has duly authorized the execution and delivery to the Purchaser on behalf of the Company of the certificate attached as Exhibit 3.15 hereto, setting forth such statements, information and related data as are necessary to permit the Purchaser to determine and demonstrate that the Notes issued pursuant to this Agreement will constitute "qualified investments" within the meaning of that term as set forth in the Capital Resource Company Act and that the full proceeds of the Notes will be used for purposes which will materially increase or maintain equal opportunity employment in the Commonwealth of Massachusetts. All such statements, information and related data presented in such certificate as are not based on estimates and projections of future events are true and correct as of the date of such certificate and all such statements, information and related data based upon estimates or projections of future events have been carefully considered and prepared on behalf of the Company.

3.16. Securities Act. Neither the Company nor anyone acting on its behalf has offered any of the Notes or similar securities, or solicited any offers to purchase or made any attempt by preliminary conversation or negotiations to dispose of the Notes or similar securities, to any Person other than the Purchaser or the institutions described in Exhibit 3.15. Neither the Company nor anyone acting on its behalf has offered or will offer to sell the Notes or similar securities to, or solicit offers with respect thereto from, or enter into any preliminary conversations or negotiations relating thereto with, any Person, so as to constitute "general solicitation" within the meaning of the Securities Act.

3.17. Disclosure. Neither this Agreement, the financial statements set forth in the Form 10-K and Form 10-Q, the notice of special meeting of stockholders to be held on August 7, 2019, and the related proxy statement as filed with the SEC on Schedule 14A, nor any other agreement, document, certificate or written statement furnished to the Purchaser or its counsel by or on behalf of the Company or any Subsidiary in connection with the transactions contemplated hereby contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained herein or therein in light of the circumstances in which they were made, not misleading, it being understood and acknowledged by the Purchaser that the Form 10-K and the Form 10-Q and any other agreement, document, certificate or written statement furnished to the Purchaser or its counsel that provides information as of a previous date will be deemed in compliance with this Section 3.17 if it does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances in which they were made, not misleading, as of such prior date. There is no fact within the knowledge of the Company or any of its executive officers which has not been disclosed herein or in writing by them to the Purchaser and which materially adversely affects, or in the future in their opinion would reasonably be expected, insofar as they can now foresee, materially adversely affect the business, properties, assets or condition, financial or otherwise, of the Company and its Subsidiaries, taken as a whole.

3.18. No Brokers or Finders. No Person has or will have, as a result of the transactions contemplated by this Agreement, any right, interest or valid claim against or upon the Company or any Subsidiary for any commission, fee or other compensation as a finder or broker because of any act or omission by the Company or any Subsidiary or any agent of the Company or any Subsidiary.

3.19. Other Agreements of Officers. To the knowledge of the Company, no officer or key employee of the Company or any Subsidiary is a party to or bound by any agreement, contract or commitment, or subject to any restrictions, particularly but without limitation in connection with any previous employment of any such person, which materially and adversely affects, or in the future may (so far as the Company can reasonably foresee) materially and adversely affect, the business or operations of the Company or any Subsidiary or the right of any such person to participate in the affairs of the Company or any Subsidiary. To the knowledge of the Company, no officer or key employee has any present intention of terminating his employment with the Company or any Subsidiary and neither the Company nor any Subsidiary has any present intention of terminating any such agreement.

3.20. Capitalization; Status of Capital Stock. The Company has a total authorized and issued capitalization of the Company as set forth in the financial statements filed as part of the Form 10-Q, subject to changes based on compensatory equity grants and the exercise of compensatory stock options under the Company's equity incentive plans. All the outstanding shares of capital stock of the Company have been duly authorized, are validly issued and are fully paid and nonassessable. Except as otherwise indicated in the Form 10-Q, there are no options (other than compensatory options issued to employees, directors or consultants since March 31, 2012 under the Company's equity compensation plans), warrants or rights to purchase shares of capital stock or other securities of the Company authorized, issued or outstanding, nor is the Company obligated in any other manner to issue shares of its capital stock or other securities. The offer and sale of all shares of capital stock and other securities of the Company issued before the Closing complied with or were exempt from all federal and state securities laws.

3.21. Labor Relations. To the knowledge of the Company, no labor union or any representative thereof has made any attempt to organize or represent employees of the Company or any Subsidiary. There are no unfair labor practice charges, pending trials with respect to unfair labor practice charges, pending material grievance proceedings or adverse decisions of a Trial Examiner of the National Labor Relations Board against the Company or any Subsidiary. Furthermore, to the knowledge of the Company, relations with employees of the Company and each Subsidiary are good and there is no reason to believe that any labor difficulties will arise in the foreseeable future.

3.22. Insurance. The Company and each Subsidiary carries insurance covering its properties and business adequate and customary for the type and scope of the properties and business, but in any event in amounts sufficient to prevent the Company or any Subsidiary from becoming a co-insurer.

3.23. Books and Records. The books of account, ledgers, order books, records and documents of the Company and each Subsidiary accurately and completely reflect all material information relating to the business of the Company and each Subsidiary, the nature, acquisition, maintenance, location and collection of the assets of the Company and each Subsidiary, and the nature of all transactions giving rise to the obligations or accounts receivable of the Company and each Subsidiary.

3.24. Foreign Corrupt Practices Act. The Company has reviewed its practices and policies and that of each Subsidiary and to its knowledge and belief neither it nor any Subsidiary is engaged, nor has any officer, director, employee or agent of the Company or any Subsidiary engaged, in any act or practice which would constitute a violation of the Foreign Corrupt Practices Act of 1977, or any rules or regulations promulgated thereunder.

3.25. Solvency, Etc. After giving effect to the consummation of all of the transactions contemplated in this Agreement, the Company and its Subsidiaries, taken as a whole, (a) will be able to pay their debts as they become due, (b) will have funds and capital sufficient to carry on their business, and (c) will own property having a value both at fair valuation and at fair saleable value in the ordinary course of the Company's and its Subsidiaries' business greater than the amount required to pay their debts as they become due. The Company will not be rendered insolvent by the execution and delivery of this Agreement, the borrowing hereunder and/or the consummation of any transactions contemplated herein.

3.26. Prior Purchase Agreement. As of the date of the Closing, there will exist no Event of Default (which for this Section 3.26 shall mean that term as defined in the Prior Purchase Agreement) nor any event which, but for the requirement that notice be given or time elapse or both, would constitute an Event of Default under the Prior Purchase Agreement.

ARTICLE IV

COVENANTS OF THE COMPANY

4.01. Affirmative Covenants of the Company. Without limiting any other covenants and provisions hereof, the Company covenants and agrees that, as long as any of the Notes are outstanding, it will perform and observe the following covenants and provisions and will cause each Subsidiary to perform and observe such of the following covenants and provisions as are applicable to such Subsidiary:

(a) Punctual Payment. Pay the principal of, premium, if any, and interest on each of the Notes at the times and place and in the manner provided in the Notes and herein.

(b) Payment of Taxes and Trade Debt. Pay and discharge, and cause each Subsidiary to pay and discharge, all taxes, assessments and governmental charges or levies imposed upon it or upon its income or profits or business, or upon any properties belonging to it, prior to the date on which penalties attach thereto, and all lawful claims which, if unpaid, might become a lien or charge upon any properties of the Company or any Subsidiary, provided that neither the Company nor the Subsidiary shall be required to pay any such tax, assessment, charge, levy or claim which is being contested in good faith and by appropriate proceedings if the Company or Subsidiary concerned shall have set aside on its books adequate reserves with respect thereto. Pay and cause each Subsidiary to pay, when due, or in conformity with customary trade terms, all lease obligations, all trade debt, and all other Indebtedness incident to the operations of the Company or its Subsidiaries, except such as are being contested in good faith and by appropriate proceedings if the Company or Subsidiary concerned shall have set aside on its books adequate reserves with respect thereto.

(c) Maintenance of Insurance. Maintain, and cause each Subsidiary to maintain, insurance with responsible and reputable insurance companies or associations in such amounts and covering such risks as is usually carried by companies engaged in similar businesses and owning similar properties in the same general areas in which the Company or such Subsidiary operates, but in any event sufficient to prevent the Company or such Subsidiary from being a co-insurer.

(d) Preservation of Corporate Existence. Preserve and maintain, and cause each Subsidiary to preserve and maintain, its corporate existence, rights, franchises and privileges in the jurisdiction of its incorporation, and qualify and remain qualified, and cause each Subsidiary to qualify and remain qualified, as a foreign corporation in each jurisdiction in which such qualification is necessary or desirable in view of its business and operations or the ownership of its properties except where the failure to be so qualified or to remain qualified would not reasonably be expected to have a material adverse effect on the Company and its Subsidiaries, taken as a whole; provided, however, that nothing herein contained shall prevent any merger, consolidation or transfer of assets permitted by subsection 4.02(e). Preserve and maintain, and cause each Subsidiary to preserve and maintain, all licenses and other rights to use patents, processes, licenses, trademarks, trade names, inventions, intellectual property rights or copyrights owned or possessed by it and necessary to the conduct of its business except those licenses or other rights the failure to so preserve or maintain would not reasonably be expected to have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

(e) Compliance with Laws. Comply, and cause each Subsidiary to comply, with all applicable laws, rules, regulations and orders of any governmental authority, noncompliance with which could materially adversely affect its business or condition, financial or other.

(f) Visitation Rights. At any reasonable time and from time to time, upon reasonable notice, permit the Purchaser or any agents or representatives thereof, to examine and make copies of and extracts from the records and books of account of, and visit and inspect the properties of, the Company and any Subsidiary, and to discuss the affairs, finances and accounts of the Company and any Subsidiary with any of their officers or directors and independent accountants.

(g) Keeping of Records and Books of Account. Keep, and cause each Subsidiary to keep, adequate records and books of account, in which complete entries will be made in accordance with generally accepted accounting principles consistently applied, reflecting all financial transactions of the Company and such Subsidiary, and in which, for each fiscal year, all proper reserves for depreciation, depletion, obsolescence, amortization, taxes, bad debts and other purposes in connection with its business shall be made.

(h) Maintenance of Properties, etc. Maintain and preserve, and cause each Subsidiary to maintain and preserve, all of its properties, necessary or useful in the proper conduct of its business, in good repair, working order and condition, ordinary wear and tear excepted.

(i) Compliance with ERISA. Comply, and cause each Subsidiary to comply, with all minimum funding requirements applicable to any pension or other employee benefit or employee contribution plans which are subject to ERISA or to the Internal Revenue Code of 1986, as amended (the "Code"), and comply, and cause each Subsidiary to comply, in all other material respects with the provisions of ERISA and the Code, and the rules and regulations thereunder, which are applicable to any such plan. Neither the Company nor any Subsidiary will permit any event or condition to exist which could permit any such plan to be terminated under circumstances which would cause the lien provided for in Section 4068 of ERISA to attach to the assets of the Company or any Subsidiary.

(j) Maintenance of Consolidated Maximum Leverage Ratio. Maintain at all times a Consolidated Maximum Leverage Ratio which is equal to or less than 4.0 to 1.00 for each of the rolling four quarter periods ending on and after September 30, 2019. Company's compliance with this covenant shall be tested on a rolling four (4) quarters basis as of the last day of each quarter of each Fiscal Year of Company.

(k) Maintenance of Debt Service Coverage. At the close of each fiscal quarter of Company, maintain a Debt Service Coverage ratio of at least 1.10 to 1.0 for the prior 12 month period. 'Debt Service Coverage' as used herein shall be determined for the relevant period, and shall mean (i) EBITDA excluding non-cash and/or non-recurring expenditures, (including without limitation, up to \$750,000 of certain Go-Dark Expenditures incurred in the delisting of certain of the Company's stock from NASDAQ and the deregistration of the Company's common stock) for the fiscal quarters ending June 30, 2019, September 30, 2019 and December 31, 2019 only, but effective for the subsequent three (3) fiscal quarters to give effect to the trailing twelve (12) month testing periods for this covenant, minus unfinanced capital expenditures, minus dividends and distributions, minus cash taxes paid for ongoing operations, divided by (ii) scheduled interest and principal payments made on all debt.

(l) Foreign Corrupt Practices Act. Comply, and cause each Subsidiary to comply, and cause each officer, director, employee and agent of the Company and each Subsidiary to comply, at all times with the prohibitions on certain acts and practices set forth in the Foreign Corrupt Practices Act of 1977, and any rules or regulations promulgated thereunder.

(m) Equal Employment Opportunity. Comply, and cause each Subsidiary to comply, with all applicable laws of the United States, the Commonwealth of Massachusetts, and of each other applicable jurisdiction relating to equal employment opportunity, any rules, regulations, administrative orders and Executive Orders relating thereto and the applicable terms, relating to equal employment opportunity, of any Government Contract; and keep, and cause each Subsidiary to file, all reports, affirmative action plans and forms required to be filed, pursuant to any such applicable law or the terms of any such Government Contract; provided, however, the Company or any Subsidiary shall not be considered to have failed to comply with the foregoing during any period that any matter relating to the Company's or such Subsidiary's employment practices is being contested by the Company or such Subsidiary in appropriate proceedings, or thereafter, if the Company or such Subsidiary complies with any final determination issued in such proceedings.

(n) Status of Notes as Qualified Investments. In the event that any of the statements, information and related data provided by or on behalf of the Company or any Subsidiary and relied upon by the Purchaser in determining that the Notes constitute "qualified investments" within the meaning of that term in the Capital Resource Company Act shall be put in issue in any formal or informal proceedings initiated or conducted by or on behalf of the Commonwealth of Massachusetts, the Company shall, upon reasonable notice and at its expense, provide, and, cause each Subsidiary to provide, such additional information, witnesses and related data as may be reasonably necessary or appropriate to support the representations and warranties set forth in Article III.

(o) Compensation. The Company shall pay to its management or management of any Subsidiary compensation at a rate of compensation which is not in excess of that commonly paid to management in companies of similar size, of similar maturity and in similar businesses and all management compensation and all policies relating thereto shall be approved in advance either by a majority of the members of that Company's Board of Directors or by a compensation committee composed entirely of independent directors.

(p) Compliance with Security Documents. Comply, and cause each Subsidiary, at all times and in all material respects with all of the terms and conditions of the Security Documents.

(q) Additional Subsidiaries. The Company shall provide the Purchaser with prompt written notice of the creation or acquisition of any Subsidiary and, so long as such Subsidiary is organized in the United States or any State thereof, immediately upon, and as a condition to, such creation or acquisition of a Subsidiary, the Company shall cause any such Subsidiary that is owned by the Company and/or another Subsidiary, to execute and deliver to the Purchaser a Guaranty, a Guarantor Security Agreement and a joinder to the Subordination Agreement which is in form and substance satisfactory to Middlesex Savings Bank

4.02. Negative Covenants of the Company. Without limiting any other covenants and provisions hereof, the Company covenants and agrees that, as long as any of the Notes are outstanding, it will comply with and observe the following covenants and provisions, and will cause each Subsidiary to comply with and observe such of the following covenants and provisions as are applicable to such Subsidiary, and will not:

(a) Liens. Create, incur, assume or suffer to exist, or permit any Subsidiary to create, incur, assume or suffer to exist, any mortgage, deed of trust, pledge, lien, security interest or other charge or encumbrance (including the lien or retained security title of a conditional vendor) of any nature, upon or with respect to any of its properties, now owned or hereinafter acquired, or assign or otherwise convey any right to receive income, except that the foregoing restrictions shall not apply to mortgages, deeds of trust, pledges, liens, security interests or other charges or encumbrances:

(i) for taxes, assessments or governmental charges or levies on property of the Company or any Subsidiary if the same shall not at the time be delinquent or thereafter can be paid without penalty, or are being contested in good faith and by appropriate proceedings;

(ii) imposed by law, such as landlord's, carriers', warehousemen's and mechanics' liens and other similar liens arising in the ordinary course of business;

(iii) securing Senior Debt in favor of Middlesex Savings Bank or another holder of Senior Debt;

(iv) arising out of pledges or deposits under workmen's compensation laws, unemployment insurance, old age pensions, or other social security or retirement benefits, or similar legislation;

(v) securing the performance of bids, tenders, contracts (other than for the repayment of borrowed money), statutory obligations and surety bonds;

(vi) in the nature of zoning restrictions, easements and rights or restrictions of record on the use of real property which do not materially detract from its value or impair its use;

(vii) arising by operation of law in favor of the owner or sublessor of leased premises and confined to the property rented;

(viii) arising from any litigation or proceeding which is being contested in good faith by appropriate proceedings, provided, however, that no execution or levy has been made;

(ix) described in Exhibit 3.07 which secure the Indebtedness set forth in Exhibit 3.05, provided that no such lien is extended to cover other or different property of the Company or any Subsidiary;

(x) arising out of a purchase money mortgage or security interest on personal property to secure the purchase price of such property (or to secure Indebtedness incurred solely for the purpose of financing the acquisition of any such property), provided that such purchase money mortgage or security interest does not extend to any other or different property of the Company or any Subsidiary; and

(xi) now or hereafter granted to the Purchaser pursuant to the Company Security Agreement and the Guarantor Security Agreements.

(b) Indebtedness. Create, incur, assume or suffer to exist, or permit any Subsidiary to create, incur, assume or suffer to exist, any liability with respect to Indebtedness except for:

- (i) the Notes;
- (ii) Indebtedness set forth in Exhibit 3.05;
- (iii) Senior Debt owed to Middlesex Savings Bank
- (iv) Indebtedness for money borrowed, provided that such Indebtedness for money borrowed does not result in the Company's failure to comply with all of the other provisions of Article IV hereof;
- (v) Current Liabilities, other than for borrowed money, which are incurred in the ordinary course of business; and
- (vi) Indebtedness with respect to lease obligations, provided that such lease obligations do not violate subsection 4.02(c).

(c) Lease Obligations. Create, incur, assume or suffer to exist, or permit any Subsidiary to create, incur, assume or suffer to exist, any obligations as lessee for the rental or hire of real or personal property in connection with any sale and leaseback transaction.

(d) Assumptions or Guaranties of Indebtedness of Other Persons. Except for (i) the Guaranties and (ii) guaranties in favor of Middlesex Savings Bank or another holder of Senior Debt, assume, guarantee, endorse or otherwise become directly or contingently liable on, or permit any Subsidiary to assume, guarantee, endorse or otherwise become directly or contingently liable on (including, without limitation, liability by way of agreement, contingent or otherwise, to purchase, to provide funds for payment, to supply funds to or otherwise invest in the debtor or otherwise to assure the creditor against loss) any Indebtedness of any other Person, except for guaranties by endorsement of negotiable instruments for deposit or collection in the ordinary course of business.

(e) Mergers, Sale of Assets, etc. Merge or consolidate with, or sell, assign, lease or otherwise dispose of or voluntarily part with the control of (whether in one transaction or in a series of transactions) a material portion of its assets (whether now owned or hereinafter acquired) or sell, assign or otherwise dispose of (whether in one transaction or in a series of transactions) any of its accounts receivable (whether now in existence or hereinafter created) at a discount or with recourse, to, any Person, or permit any Subsidiary to do any of the foregoing, except for sales or other dispositions of assets in the ordinary course of business and except that (1) any Subsidiary may merge into or consolidate with or transfer assets to any other Subsidiary, (2) any Subsidiary may merge into or transfer assets to the Company, and (3) the Company or any Subsidiary may merge any Person into it or otherwise acquire such Person as long as the Company or such Subsidiary is the surviving entity, such merger or acquisition does not result in the violation of any of the provisions of this Agreement and no such violation exists at the time of such merger or acquisition, and, provided that such merger or acquisition does not result in the issuance (in one or more transactions) of shares of the voting stock of the Company representing in the aggregate more than twenty percent (20%) of the total outstanding voting stock of the Company, on a fully diluted basis, immediately following the issuance thereof.

(f) Investments in Other Persons. Make or permit any Subsidiary to make, any loan or advance to any person, or purchase, otherwise acquire, or permit any Subsidiary to purchase or otherwise acquire, the capital stock, assets comprising the business of, obligations of, or any interest in, any Person, except:

(i) investments by the Company or a Subsidiary in evidences of indebtedness issued or fully guaranteed by the United States of America and having a maturity of not more than one year from the date of acquisition;

(ii) investments by the Company or a Subsidiary in certificates of deposit, notes, acceptances and repurchase agreements having a maturity of not more than one year from the date of acquisition issued by a bank organized in the United States having capital, surplus and undivided profits of at least \$100,000,000 and whose parent holding company has long-term debt rated Aa1 or higher, and whose commercial paper (if rated) is rated Prime 1, by Moody's Investors Service, Inc.;

(iii) investments by the Company or a Subsidiary in the highest-rated commercial paper having a maturity of not more than one year from the date of acquisition;

(iv) loans or advances from a Subsidiary to the Company; and

(v) advances made to employees, officers and directors for travel and other expenses arising in the ordinary course of business.

(g) Distributions. Declare or pay any dividends, purchase, redeem, retire, or otherwise acquire for value any of its capital stock (or rights, options or warrants to purchase such shares) now or hereafter outstanding, return any capital to its stockholders as such, or make any distribution of assets to its stockholders as such, or permit any Subsidiary to do any of the foregoing (such transactions being hereinafter referred to as "Distributions"), except that the Subsidiaries may declare and make payment of cash and stock dividends, return capital and make distributions of assets to the Company; provided, however, that nothing herein contained shall prevent the Company from:

(i) effecting a stock split or declaring or paying any dividend consisting of shares of any class of capital stock to the holders of shares of such class of capital stock, or

(ii) redeeming any stock of a deceased stockholder out of insurance held by the Company on that stockholder's life,

if in the case of any such transaction there does not exist at the time of such Distribution an Event of Default or an event which, but for the requirement that notice be given or time elapse or both, would constitute an Event of Default and provided that such Distribution can be made in compliance with the other terms of this Agreement.

(h) Dealings with Affiliates. Enter or permit any Subsidiary to enter into any transaction with any holder of 5% or more of any class of capital stock of the Company, or any member of their families or any corporation or other entity in which any one or more of such stockholders or members of their immediate families directly or indirectly holds five percent (5%) or more of any class of capital stock except (i) in the ordinary course of business and on terms not less favorable to the Company or the Subsidiary than it would obtain in a transaction between unrelated parties or (ii) compensatory and similar arrangements with officers and directors of the Company.

(i) Maintenance of Ownership of Subsidiaries. Sell or otherwise dispose of any shares of capital stock of any Subsidiary, except to the Company or another Subsidiary, or permit any Subsidiary to issue, sell or otherwise dispose of any shares of its capital stock or the capital stock of any Subsidiary, except to the Company or another Subsidiary, provided, however, that nothing herein contained shall prevent any merger, consolidation or transfer of assets permitted by subsection 4.02(e).

(j) Change in Nature of Business. Make, or permit any Subsidiary to make, any material change in the nature of its business as carried on at the date hereof.

4.03. Reporting Requirements. The Company will furnish to each registered holder of any Note:

(a) as soon as possible and in any event within five (5) days after the occurrence of each Event of Default or each event which, with the giving of notice or lapse of time or both, would constitute an Event of Default, the statement of the chief financial officer of the Company setting forth details of such Event of Default or event and the action which the Company proposes to take with respect thereto;

(b) as soon as available and in any event within forty-five (45) days after the end of each of the first three quarters of each fiscal year of the Company, consolidated balance sheets of the Company and its Subsidiaries as of the end of such quarter and consolidated statements of income and retained earnings and of changes in financial position of the Company and its Subsidiaries for the period commencing at the end of the previous fiscal year and ending with the end of such quarter, setting forth in each case in comparative form the corresponding figures for the corresponding period of the preceding fiscal year, all in reasonable detail and duly certified (subject to year-end audit adjustments) by the chief financial officer of the Company as having been prepared in accordance with generally accepted accounting principles consistently applied;

(c) as soon as available and in any event within ninety (90) days after the end of each fiscal year of the Company, a copy of the reviewed report for such year for the Company and its Subsidiaries, including therein consolidated balance sheets of the Company and its Subsidiaries as of the end of such fiscal year and consolidated statements of income and retained earnings and of changes in financial position of the Company and its Subsidiaries for such fiscal year, setting forth in each case in comparative form the corresponding figures for the preceding fiscal year, all duly reviewed by independent public accountants of recognized standing acceptable to the Purchaser;

(d) at the time of delivery of each quarterly and annual statement, a certificate, executed by the chief executive officer or chief financial officer in the case of quarterly statements and the Company's independent public accountants in the case of annual statements, stating that such officer or accountants, as the case may be, has caused this Agreement, the Notes and the Security Documents to be reviewed and has no knowledge of any default by the Company or any Subsidiary in the performance or observance of any of the provisions of this Agreement, the Notes or the Security Documents, if such officer or accountant has such knowledge, specifying such default and the nature thereof. Each such certificate shall set forth computations in reasonable detail demonstrating compliance with the provisions of subsections 4.01(j) and (k) and subsections 4.02(b) and (c);

(e) promptly upon receipt thereof, any written report submitted to the Company by independent public accountants in connection with an annual or interim review of the books of the Company and its Subsidiaries made by such accountants;

(f) no later than 90-days after the start of each fiscal year, consolidated capital and operating expense budgets, cash flow projections and income and loss projections for the Company and its Subsidiaries in respect of such fiscal year, all itemized in reasonable detail and prepared on a quarterly basis, and, promptly after preparation, any revisions to any of the foregoing;

(g) promptly after the commencement thereof, notice of all actions, suits and proceedings before any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, affecting the Company or any Subsidiary of the type described in Section 3.04; and

(h) promptly after sending, making available, or filing the same, such reports and financial statements as the Company or any Subsidiary shall send or make available to the stockholders of the Company or the Securities and Exchange Commission and such other information respecting the business, properties or the condition or operations, financial or otherwise, of the Company or any of its Subsidiaries as the Purchaser may from time to time reasonably request.

ARTICLE V

EVENTS OF DEFAULT

5.01. Events of Default. If any of the following events ("Events of Default") shall occur and be continuing:

(a) The Company shall fail to pay any installment of principal of any of the Notes when due; or

(b) The Company shall fail to pay any interest or premium on any of the Notes when due and such failure shall continue for five (5) business days; or

(c) The Company shall default in the performance of any covenant contained in subsections 4.01(j) or (k) or shall default for ten (10) days in the performance of any covenant contained in Section 4.02; or

(d) Any representation or warranty made by the Company or any Subsidiary in this Agreement or by the Company or any Subsidiary (or any officers of the Company or any Subsidiary) in any certificate, instrument or written statement contemplated by or made or delivered pursuant to or in connection with this Agreement, the Notes or the Security Documents, shall prove to have been incorrect when made in any material respect; or

(e) The Company or any Subsidiary shall fail to perform or observe any other term, covenant or agreement contained in this Agreement, the Notes or the Security Documents on its part to be performed or observed and any such failure remains unremedied for ten (10) business days after written notice thereof shall have been given to the Company by any registered holder of the Notes; or

(f) The Company or any Subsidiary shall fail to pay any Indebtedness for borrowed money in excess of \$250,000 in the aggregate (other than as evidenced by the Notes) owing by the Company or such Subsidiary (as the case may be), or any interest or premium thereon, when due (or, if permitted by the terms of the relevant document, within any applicable grace period), whether such Indebtedness shall become due by scheduled maturity, by required prepayment, by acceleration, by demand or otherwise, or shall fail to perform any material term, covenant or agreement on its part to be performed under any agreement or instrument (other than this Agreement or the Notes) evidencing or securing or relating to any Indebtedness for borrowed money in excess of \$250,000 in the aggregate owing by the Company or any Subsidiary, as the case may be, when required to be performed (or, if permitted by the terms of the relevant document, within any applicable grace period), if the effect of such failure to pay or perform is to accelerate, or to permit the holder or holders of such Indebtedness, or the trustee or trustees under any such agreement or instrument to accelerate, the maturity of such Indebtedness, unless such failure to pay or perform shall be waived by the holder or holders of such Indebtedness or such trustee or trustees; or

(g) The Company or any Subsidiary shall be involved in financial difficulties as evidenced (i) by its admitting in writing its inability to pay its debts generally as they become due; (ii) by its commencement of a voluntary case under Title 11 of the United States Code as from time to time in effect, or by its authorizing, by appropriate proceedings of its Board of Directors or other governing body, the commencement of such a voluntary case; (iii) by its filing an answer or other pleading admitting or failing to deny the material allegations of a petition filed against it commencing an involuntary case under said Title 11, or seeking, consenting to or acquiescing in the relief therein provided, or by its failing to controvert timely the material allegations of any such petition; (iv) by the entry of an order for relief in any involuntary case commenced under said Title 11 which order is not stayed or dismissed within 60 days from the date of entry; (v) by its seeking relief as a debtor under any applicable law, other than said Title 11, of any jurisdiction relating to the liquidation or reorganization of debtors or to the modification or alteration of the rights of creditors, or by its consenting to or acquiescing in such relief; (vi) by the entry of an order by a court of competent jurisdiction (a) finding it to be bankrupt or insolvent, (b) ordering or approving its liquidation, reorganization or any modification or alteration of the rights of its creditors, or (c) assuming custody of, or appointing a receiver or other custodian for, all or a substantial part of its property; or (vii) by its making an assignment for the benefit of, or entering into a composition with, its creditors, or appointing or consenting to the appointment of a receiver or other custodian for all or a substantial part of its property; or

(h) Any judgment, writ, warrant of attachment or execution or similar process shall be issued or levied against a substantial part of the property of the Company or any Subsidiary and such judgment, writ, or similar process shall not be released, vacated or fully bonded within (60) days after its issue or levy; or

(i) A Change of Control;

then, and in any such event, the Purchaser or any other holder of the Notes may, by notice to the Company, declare the entire unpaid principal amount of the Notes, all interest accrued and unpaid thereon and all other amounts payable under this Agreement to be forthwith due and payable, whereupon the Notes, all such accrued interest and all such amounts shall become and be forthwith due and payable (unless there shall have occurred an Event of Default under subsection 5.01(g) in which case all such amounts shall automatically become due and payable), without presentment, demand, protest or further notice of any kind, all of which are hereby expressly waived by the Company.

5.02. Annulment of Defaults. Section 5.01 is subject to the condition that, if at any time after the principal of any of the Notes shall have become due and payable, and before any judgment or decree for the payment of the moneys so due, or any thereof, shall have been entered, all arrears of interest upon all the Notes and all other sums payable under the Notes and under this Agreement (except the principal of the Notes which by such declaration shall have become payable) shall have been duly paid, and every other default and Event of Default shall have been made good or cured, then and in every such case the holders of seventy-five percent (75%) or more in principal amount of all Notes then outstanding may, by written instrument filed with the Company, rescind and annul such declaration and its consequences; but no such rescission or annulment shall extend to or affect any subsequent default or Event of Default or impair any right consequent thereon.

ARTICLE VI

DEFINITIONS AND ACCOUNTING TERMS

6.01. Certain Defined Terms. As used in this Agreement, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

"Adjusted EBITDA" shall mean, EBITDA, excluding therefrom non-cash and/or recurring expenditures, including without limitation, up to \$750,000 of Certain Go-Dark Expenditures incurred in the de-listing of certain of the Company's stock from NASDAQ and the deregistration of the Company's common stock for the twelve (12) month testing periods ending June 30, 2019, September 30, 2019 and December 31, 2019 only, or gains (as permitted), and the operating income or loss of the Xcede joint venture that is consolidated into Company's financial results.

"Agreement" means this Note Purchase Agreement as from time to time amended and in effect between the parties.

"Capital Lease" shall mean any lease of property which, in accordance with GAAP, should be capitalized on the lessee's balance sheet.

"Capital Lease Obligation" shall mean the amount of the liability which, according to GAAP, should be capitalized or disclosed with respect to a Capital Lease.

"Capital Resource Company Act" shall have the meaning assigned to that term in Section 1.11.

"Change of Control" shall mean the occurrence of one or more of the following events:

(a) any Person (or group of related Persons for the purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended) shall become the owner, directly or indirectly, beneficially or of record, of shares representing more than forty percent (40%) of the voting stock of the Company; or

(b) the replacement, in any one-year period, of a majority of the members of the Board of Directors of the Company from the directors who constituted the members of the Board of Directors of the Company at the beginning of such period, and such replacement shall not have been approved by a vote of at least a majority of the Board of Directors of the Company then still in office who were either members of such Board of Directors at the beginning of such period or whose election as a member of such Board of Directors was previously so approved.

"Code" shall have the meaning assigned to that term in Section 4.01(i).

"Company" means and shall include Dynasil Corporation of America and its successors and assigns.

"Company Security Agreement" shall have the meaning assigned to that term in Section 2.02(a).

"Consolidated" and "consolidating" when used with reference to any term defined herein mean that term as applied to the accounts of the Company and its Subsidiaries consolidated in accordance with generally accepted accounting principles.

"Current Liabilities" means all liabilities of any corporation which would, in accordance with generally accepted accounting principles consistently applied, be classified as current liabilities of a corporation conducting a business the same as or similar to that of such corporation, including, without limitation, all rental payments due under leases required to be capitalized in accordance with applicable Statements of Financial Accounting Standards and fixed prepayments of, and sinking fund payments with respect to, Indebtedness (including Indebtedness evidenced by the Notes), which payments are required to be made within one year from the date of determination.

"Distribution" shall have the meaning assigned to that term in Section 4.02(g).

"ERISA" shall have the meaning assigned to that term in Section 3.10.

"Events of Default" shall have the meaning assigned to that term in Section 5.01.

"Fiscal Year" shall mean each twelve (12) month accounting period of the Company, which ends on September 30 of each year.

"Form 10-Q" shall have the meaning assigned to that term in Section 3.08.

"Form 10-K" shall have the meaning assigned to that term in Section 3.08.

"GAAP" shall mean generally accepted accounting principles in the United States as in effect on the Closing and applied on a basis consistent with those used in the financial statements included in the Form 10-K.

"Government Contract" shall have the meaning assigned to that in Section 3.14.

"Guarantor Security Agreement" or "Guarantor Security Agreements" shall have the meaning assigned to that in Section 2.02(c).

"Guaranty" or "Guaranties" shall have the meaning assigned to that in Section 2.02(b).

"Indebtedness" means all obligations, contingent and otherwise, which should, in accordance with generally accepted accounting principles consistently applied, be classified upon the obligor's balance sheet as liabilities, but in any event including, without limitation, liabilities secured by any mortgage on property owned or acquired subject to such mortgage, whether or not the liability secured thereby shall have been assumed, and also including, without limitation, (i) all guaranties, endorsements and other contingent obligations, in respect of Indebtedness of others, whether or not the same are or should be so reflected in said balance sheet, except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business and (ii) the present value of any lease payments due under leases required to be capitalized in accordance with applicable Statements of Financial Accounting Standards, determined in accordance with applicable Statements of Financial Accounting Standards.

"Interest Expense" shall mean, as of any date, with respect to any Person, for any fiscal measurement period, the sum of (a) all cash interest, unused commitment fees, letter of credit fees and similar fees (in each case as such expenses are calculated according to GAAP) paid or payable for such fiscal period by such Person (including without limitation, the interest and fees (as applicable) payable under this Agreement and the net amount payable in cash under all Hedging Agreements in respect of such period (or minus the net amount receivable under all Hedging Agreements in respect of such period)), plus (b) the portion of rent paid or payable (without duplication) for such fiscal period by that Person under Capitalized Lease Obligations that should be treated as interest in accordance with GAAP; provided that all debt issuance costs, debt discounts or premiums, prepayment premiums and other financing fees and expenses incurred by Company and directly related to the consummation of the transactions contemplated by this Agreement shall be excluded from the calculation of Interest Expense.

"Maximum Leverage Ratio" shall mean that quotient equal to (a) the sum of (i) Senior Secured Debt plus (ii) Subordinated Debt, divided by (b) Adjusted EBITDA.

"Notes" shall have the meaning assigned to that term in Section 1.01.

"Person" shall mean any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, entity, party or foreign or United States government (whether federal, state, county, city, municipal or otherwise), including, without limitation, any instrumentality, division, agency, body or department thereof.

"Prior Purchase Agreements" shall have the meaning assigned to that term in the "Background" Section.

"Prior Notes" shall have the meaning assigned to that term in the "Background" Section.

"Purchaser" means and shall include not only the Massachusetts Capital Resource Company but also any other holder or holders of any of the Notes.

"Securities Act" means the Securities Act of 1933 or any similar Federal statute, and the rules and regulations of the Securities and Exchange Commission (or of any other Federal agency then administering the Securities Act) thereunder, all as the same shall be in effect at the time.

"SEC" shall have the meaning assigned to that term in Section 3.08.

"SEC Reports" shall have the meaning assigned to that term in Section 3.08.

"Security Documents" shall have the meaning assigned to that term in Section 2.02(c).

"Senior Debt" shall have the meaning assigned to that term in Section 1.09(h).

"Subsidiary" or "Subsidiaries" means shall mean, as to any Person, any corporation of which more than fifty percent (50%) of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether at the time stock of any other class of such corporation shall have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, owned by such

Person, or any partnership, joint venture or limited liability company of which more than fifty percent (50%) of the outstanding equity interests are at the time, directly or indirectly, owned by such Person or any partnership of which such Person is a general partner. Xcede Technologies Inc. is specifically excluded.

"Subordination Agreement" shall have the meaning assigned to that term in Section 1.09(i).

6.02. Accounting Terms. All accounting terms not specifically defined herein shall be construed in accordance with generally accepted accounting principles consistent with those applied in preparation of the financial statements attached hereto as Exhibit 3.08, and all financial data submitted pursuant to this Agreement and all financial tests to be calculated in accordance with this Agreement shall be prepared and calculated in accordance with such principles.

ARTICLE VII

MISCELLANEOUS

7.01. No Waiver; Cumulative Remedies. No failure or delay on the part of the Purchaser, or any other holder of the Notes in exercising any right, power or remedy hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

7.02. Amendments, Waivers and Consents. Any provision in this Agreement, the Notes or the Security Agreement to the contrary notwithstanding, changes in or additions to this Agreement may be made, and compliance with any covenant or provision herein or therein set forth may be omitted or waived, with the consent of the Company, if the Company shall, in the case of the Notes, obtain consent thereto in writing from the holder or holders of at least seventy-five percent (75%) in principal amount of all Notes then outstanding; provided that no such consent shall be effective to reduce or to postpone the date fixed for the payment of the principal (including any required redemption) or interest payable on any Note, without the consent of the holder thereof, or to reduce the percentage of the Notes the consent of the holders of which is required under this Section. Any waiver or consent may be given subject to satisfaction of conditions stated therein and any waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. Written notice of any waiver or consent effected under this subsection shall promptly be delivered by the Company to any holders who did not execute the same.

7.03. Addresses for Notices, etc. All notices, requests, demands and other communications provided for hereunder shall be in writing and mailed or delivered by reputable overnight courier to the applicable party at the addresses indicated below:

If to the Company:

Dynasil Corporation of America
44 Hunt Street
Watertown, Massachusetts 02472
Attention: President

If to the Purchaser:

Payments should be mailed to:

Massachusetts Capital Resource Company
P. O. Box 3707
Boston, Massachusetts 02241

and all other deliveries and other communications made at or sent to:

Massachusetts Capital Resource Company
420 Boylston Street
Boston, Massachusetts 02116
Attention: Suzanne L. Dwyer, Managing Director

If to any other holder of the Notes: at such holder's address for notice as set forth in the register maintained by the Company, or, as to each of the foregoing, at such other address as shall be designated by such Person in a written notice to the other party complying as to delivery with the terms of this Section. All such notices, requests, demands and other communications shall, when mailed, be effective when deposited in the mails or otherwise delivered, addressed as aforesaid.

7.04. Costs, Expenses and Taxes. The Company agrees to pay on demand all costs and expenses of the Purchaser in connection with the preparation, execution and delivery of this Agreement, the Notes, the Security Documents and other instruments and documents to be delivered hereunder, including the reasonable fees and out-of-pocket expenses of George W. Thibeault, Esq., counsel for the Purchaser, with respect thereto, as well as the reasonable fees and out-of-pocket expenses of legal counsel, independent public accountants and other outside experts reasonably retained by the Purchaser in connection with the amendment or enforcement of this Agreement, the Notes, the Security Documents and other instruments and documents to be delivered hereunder or thereunder. In addition, the Company shall pay any and all stamp and other taxes payable or determined to be payable in connection with the execution and delivery of this Agreement, the Notes, the Security Documents and the other instruments and documents to be delivered hereunder or thereunder and agrees to save the Purchaser harmless from and against any and all liabilities with respect to or resulting from any delay in paying or omission to pay such taxes and filing fees.

7.05. Binding Effect; Assignment. This Agreement shall be binding upon and inure to the benefit of the Company and the Purchaser and their respective successors and assigns, except that the Company shall not have the right to assign its rights hereunder or any interest herein without the prior written consent of the Purchaser.

7.06. Survival of Representations and Warranties. All representations and warranties made in this Agreement, the Notes, the Security Documents or any other instrument or document delivered in connection herewith or therewith, shall survive the execution and delivery hereof or thereof and the making of the loans.

7.07. Prior Agreements. This Agreement constitutes the entire agreement between the parties and supersedes any prior understandings or agreements concerning the subject matter hereof.

7.08. Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

7.09. Governing Law; Construction; Forum Selection. This Agreement and the other agreements to be executed in connection herewith are submitted by the Company to the Purchaser for Purchaser's acceptance or rejection at Purchaser's principal place of business as an offer by the Company to issue the Notes to the Purchaser, and shall not be binding upon the Purchaser or become effective until accepted by the Purchaser, in writing, at said place of business. If so accepted by the Purchaser, this Agreement and such other agreements shall be deemed to have been made at said place of business. **THIS AGREEMENT AND SUCH OTHER AGREEMENTS SHALL BE GOVERNED AND CONTROLLED BY THE INTERNAL LAWS OF THE COMMONWEALTH OF MASSACHUSETTS AS TO INTERPRETATION, ENFORCEMENT, VALIDITY, CONSTRUCTION, EFFECT, AND IN ALL OTHER RESPECTS, INCLUDING, WITHOUT LIMITATION, THE LEGALITY OF THE INTEREST RATE AND OTHER CHARGES, BUT EXCLUDING PERFECTION OF THE SECURITY INTERESTS IN COLLATERAL LOCATED OUTSIDE OF THE COMMONWEALTH OF MASSACHUSETTS, WHICH SHALL BE GOVERNED AND CONTROLLED BY THE LAWS OF THE RELEVANT JURISDICTION IN WHICH SUCH COLLATERAL IS LOCATED.** If any provision of this Agreement shall be held to be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or remaining provisions of this Agreement.

To induce the Purchaser to accept this Agreement, the Company irrevocably agree that, subject to the Purchaser's sole and absolute election, **ALL ACTIONS OR PROCEEDINGS IN ANY WAY, MANNER OR RESPECT, ARISING OUT OF OR FROM OR RELATED TO THIS AGREEMENT, SUCH OTHER AGREEMENTS OR THE COLLATERAL SHALL BE LITIGATED IN COURTS HAVING SITUS WITHIN THE COMMONWEALTH OF MASSACHUSETTS. THE COMPANY HEREBY CONSENTS AND SUBMITS TO THE JURISDICTION OF ANY LOCAL, STATE OR FEDERAL COURTS LOCATED WITHIN SAID JURISDICTION.** The Company hereby waives personal service of any and all process upon it and consents that all such service of process may be made by intentionally recognized overnight courier or hand delivery directed to the Company at its notice address as provided for in Section 7.03. **THE COMPANY HEREBY WAIVES ANY RIGHT IT MAY HAVE TO TRANSFER OR CHANGE THE VENUE OF ANY LITIGATION BROUGHT AGAINST THE COMPANY BY THE PURCHASER IN ACCORDANCE WITH THIS SECTION.**

7.10. Headings. Article, Section and subsection headings in this Agreement are included herein for convenience of reference only and shall not constitute a part of this Agreement for any other purpose.

7.11. Sealed Instrument. This Agreement is executed as an instrument under seal.

7.12. Counterparts. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument, and each of the parties hereto may execute this Agreement by signing any such counterpart.

7.13. Further Assurances. From and after the date of this Agreement, upon the request of the Purchaser, the Company and each Subsidiary shall execute and deliver such instruments, documents and other writings as may be necessary or desirable to confirm and carry out and to effectuate fully the intent and purposes of this Agreement, the Notes and the Security Documents.

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3191509

THIS NOTE IS SUBJECT TO THE SUBORDINATION AGREEMENT DATED AS OF MAY 1, 2014 AMONG THE COMPANY, CERTAIN AFFILIATES OF THE COMPANY, THE PAYEE AND MIDDLESEX SAVINGS BANK

DYNASIL CORPORATION OF AMERICA

NOTE DUE 2026

\$2,865,216

August 6, 2019

For value received, **Dynasil Corporation of America**, a Delaware corporation (the "Company"), hereby promises to pay to **Massachusetts Capital Resource Company** or registered assigns (hereinafter referred to as the "Payee"), on or before July 31, 2026, the principal sum of Two Million, Eight Hundred Sixty Five Thousand, Two Hundred Sixteen Dollars (\$2,865,216.00) or such part thereof as then remains unpaid, to pay interest from the date hereof on the whole amount of said principal sum remaining from time to time unpaid at the rate of eight percent (8%) per annum, such interest to be payable monthly on the last day of each calendar month in each year, the first such payment to be due and payable on August 31, 2019, until the whole amount of the principal hereof remaining unpaid shall become due and payable, and to pay interest at the rate of fourteen percent (14%) (so far as the same may be legally enforceable) on all overdue principal (including any overdue required redemption), premium and interest. Principal, premium, if any, and interest shall be payable in lawful money of the United States of America, in immediately available funds, at the principal office of the Payee or at such other place as the legal holder may designate from time to time in writing to the Company. Interest shall be computed on the basis of a 360-day year and a 30-day month.

This Note is issued pursuant to and is entitled to the benefits of a certain Note Purchase Agreement, dated as of August 6, 2019, between the Company and Massachusetts Capital Resource Company (as the same may be amended from time to time, hereinafter referred to as the "Agreement"), and each holder of this Note, by his acceptance hereof, agrees to be bound by the provisions of the Agreement, including, without limitation, that (i) this Note is subject to prepayment, in whole or in part, as specified in said Agreement, (ii) the principal of and interest on this Note is subordinated to Senior Debt, as defined in the Agreement and (iii) in case of an Event of Default, as defined in the Agreement, the principal of this Note may become or may be declared due and payable in the manner and with the effect provided in the Agreement.

As further provided in the Agreement, upon surrender of this Note for transfer or exchange, a new Note or new Notes of the same tenor dated the date to which interest has been paid on the surrender Note and in an aggregate principal amount equal to the unpaid principal amount of the Note so surrendered will be issued to, and registered in the name of, the transferee or transferees. The Company may treat the person in whose name this Note is registered as the owner hereof for the purpose of receiving payment and for all other purposes.

DYNASIL CORPORATION OF AMERICA

List of Subsidiaries

As of the date of the Agreement to which this Exhibit is attached, the Company had the following Subsidiaries (as defined in Section 6.01 of the Agreement):

<u>Name of Subsidiary</u>	<u>Jurisdiction of Incorporation/Organization</u>	<u>Ownership</u>
Dynasil International, Inc. (Inactive)	New Jersey	100% by Company
Hibshman Corporation (Inactive)	California	100% by Company
Optometrics Corporation (*)	Delaware	100% by Company
Evaporated Metal Films Corp. (*)	New York	100% by Company
Radiation Monitoring Devices, Inc. (*)	Delaware	100% by Company
RMD Instruments Corp. (*)	Delaware	100% by Company
Hilger Crystals, Ltd.	United Kingdom	100% by Company
Dynasil Biomedical Corp. (*)	Delaware	100% by Company

(*) To execute and deliver at the Closing a Confirmation of its Unconditional Guaranty and its Guarantor Security Agreement

DYNASIL CORPORATION OF AMERICA

Schedule of Indebtedness

As of the date of the Agreement to which this Exhibit is attached, the Company and its Subsidiaries had the following Indebtedness (as defined in Section 6.01 of the Agreement) outstanding:

Middlesex Savings Bank

1. Loan and Security Agreement, dated as of May 1, 2014, and as amended from time to time, between Middlesex Savings Bank and Dynasil Corporation of America.
 2. Term Note, dated as of Feb. 1, 2016 from Dynasil Corporation of America payable to Middlesex Savings Bank
Balance as of Aug. 1, 2019: \$649,000
 3. General Revolving Credit Note, dated May 1, 2014, in the principal amount of \$4,000,000 from Dynasil Corporation of America, payable to Middlesex Savings Bank
Balance as of Aug. 1, 2019: \$-0-
 4. Revolving Equipment Line of Credit Note from Dynasil Corporation of America payable to Middlesex Savings Bank, in the principle amount of \$750,000
Balance as of Aug. 1, 2019: \$0
 5. Equipment Term Note I from Dynasil Corporation of America payable to Middlesex Savings Bank, original principle of \$753,000
Balance as of Aug. 1, 2019: \$642,000
 6. Equipment Term Note II from Dynasil Corporation of America payable to Middlesex Savings Bank original principle of \$484,000
Balance as of Aug. 1, 2019: \$477,000
- Current aggregate balance: \$1,857,546
-

Capital Leases:

US Bank Equipment Finance – Evaporated Metal Films Corp. has two equipment finance arrangements 1.) original principle of \$28,000 balance as of Aug. 1, 2019 \$15,000 and 2.) original principle of \$12,000 balance as of Aug. 1, 2019 \$8,000.

C.T.I. Leasing dated March 31, 2016 original principle of \$100,000, Balance as of Aug. 1, 2019 \$35,000

Xcede Note with Cook Biotech Inc.

Xcede has a Note with Cook Biotech Inc. original principle of \$500,000, plus outstanding interest of \$26,000. Dynasil is in no way responsible for payment of the Xcede note, however it is included in the Company's consolidated financial statements.

DYNASIL CORPORATION OF AMERICA

Schedule of Mortgages, Pledges, Etc.

As of the date of the Agreement to which this Exhibit is attached, the Company and its Subsidiaries had the following outstanding mortgages, pledges, charges, liens, security interest and other encumbrances:

Middlesex Savings Bank (“Middlesex”)

Loan and Security Agreement, dated as of May 1, 2014 and as amended from time to time, between Sovereign Bank and Dynasil Corporation of America.

Leasehold Mortgage, Security Agreement and Fixture Filing, dated as of May 1, 2014 between Evaporated Metal Films Corp. and Middlesex.

Assignment of Rents and Leases, dated as of May 1, 2014 from Evaporated Metal Films Corp. to Middlesex.

Guarantor Security Agreement, dated May 1, 2014, from Evaporated Metal Films Corp. to Middlesex.

Guarantor Security Agreement, dated July 7, 2010, from Optometrics Corporation to Sovereign Bank.

Guarantor Security Agreement, dated July 7, 2010, from Radiation Monitoring Devices, Inc. to Sovereign Bank.

Guarantor Security Agreement, dated July 7, 2010, from RMD Instruments Corp. to Sovereign Bank.

Guarantor Security Agreement, dated May 19, 2011, from Dynasil Biomedical Corp. to Sovereign Bank.

Collateral Assignment of Agreements Affecting Real Estate, dated July 7, 2010, from Evaporated Metal Films Corp. to Sovereign Bank.

Other Security Interests

US Bank Equipment Finance – Evaporated Metal Films Corp. has an equipment finance arrangement with US Bank Equipment Finance.

C.T.I. Leasing dated March 31, 2016 original principle of \$100,000, Balance as of Aug. 1, 2019 \$35,000

DYNASIL CORPORATION OF AMERICA

Schedule of ERISA Plans

As of the date of the Agreement to which this Exhibit is attached, the Company and its Subsidiaries had the following ERISA Plans

-None-

DYNASIL CORPORATION OF AMERICA

Schedule of Transactions with Affiliates

As of the date of the Agreement to which this Exhibit is attached, the Company and its Subsidiaries had the following outstanding transactions with Affiliates:

1. 1. A month to month lease agreement with Charles River Realty, dba Bachrach, Inc., which is owned by Gerald Entine 1988 Family Trust, an 8% stockholder Peter Sulick, a holder of a 20% interest in the Company is currently serving as the President, Chairman and Chief Executive Officer of the Company.
 2. On December 18, 2018, Mr. Sulick purchased 1,450,000 shares of our common stock, at a price of \$1.00 per share, from the Gerald Entine 1988 Family Trust in a private transaction. On December 27, 2018, Mr. Sulick purchased 540,000 shares of our common stock, at a price of \$1.00 per share, in a private transaction.
 3. Patricia Tuohy, V.P. of Corporate Development is the daughter of Peter Sulick the Company's Chairman, Chief Executive Officer and President.
 4. In October 2013, the Company's subsidiary, Dynasil Biomedical, formed Xcede Technologies, Inc. ("Xcede"), a joint venture with Mayo Clinic, to spin out and separately fund the development of its tissue sealant technology. As of March 31, 2019, Mr. Sulick and family own the equivalent of 11.4% of Xcede's outstanding common stock, Mr. Fox owns the equivalent of 1.7% of Xcede's outstanding common stock, Dr. Hagan owns the equivalent of 0.3% of Xcede's outstanding common stock, Dr. Shah owns the equivalent of 0.3% of Xcede's outstanding common stock, and the Entine Trust owns the equivalent of 1.2% of Xcede's outstanding common stock
-

EXHIBIT 31.1 (a)

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) and SECTION 302 OF THE SARBANES-OXLEY ACT

I, Peter Sulick, certify that:

1. I have reviewed this Form 10-Q of Dynasil Corporation of America;
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 15 d-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 13, 2019

/s/ Peter Sulick

Peter Sulick,
Chief Executive Officer and President

EXHIBIT 31.1(b)

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) and SECTION 302 OF THE SARBANES-OXLEY ACT

I, Robert Bowdring, certify that:

1. I have reviewed this Form 10-Q of Dynasil Corporation of America;
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 15 d-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 13, 2019

/s/ Robert J. Bowdring

Robert J. Bowdring
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of DYNASIL CORPORATION OF AMERICA (the "Company") on Form 10-Q for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Peter Sulick, Chief Executive Officer and President of the Company and Robert J. Bowdring, Chief Financial Officer of the Company, each certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Peter Sulick
Peter Sulick
Chief Executive Officer and President

/s/ Robert J. Bowdring
Robert J. Bowdring
Chief Financial Officer

August 13, 2019

**Contact:**

Patty Kehe
 Corporate Secretary
 Dynasil Corporation of America
 Phone: 617.668.6855
pkehe@dynasil.com

Dynasil Corporation of America Reports Third Quarter Fiscal 2019 Results

Newton, MA, August 13, 2019 – Dynasil Corporation of America (NASDAQ: DYSL), a developer and manufacturer of optics and photonics products, optical detection and analysis technology and components for the homeland security, medical and industrial markets, today announced third quarter fiscal 2019 results.

Third Quarter Fiscal 2019 Results

Consolidated revenue was \$11.1 million for the three months ended June 30, 2019. This \$0.6 million or 5% revenue increase over the quarter ended June 30, 2018 resulted from an 18% increase in Innovations and Development segment revenue, which was partially offset by a 4% decrease in Optics segment revenue.

Gross profit for the quarter ended June 30, 2019 was \$4.1 million, or 37% of revenue, as compared to the gross profit of \$4.2 million, or 40% of revenue for the quarter ended June 30, 2018.

Total operating expenses were \$4.3 million for the three-month period ended June 30, 2019, a 19% increase over the \$3.6 million in operating expenses for the three months ended June 30, 2018. The increase was attributable to \$0.5 million expended in the Company's efforts to delist from The Nasdaq Stock Market, as well as increased recruitment and personnel expenses as the Company continues to fill key positions.

Income (loss) from operations for the quarter ended June 30, 2019 was a loss of (\$0.1) million, compared with income from operations of \$0.6 million for the quarter ended June 30, 2018.

Certain key metrics by segment for the current quarter and the same quarter last year are presented below:

Results of Operations for the Three Months Ended June 30, 2019

	Optics	Innovation and Development*	Biomedical	Total
Revenue	\$ 5,899,000	\$ 5,191,000	\$ -	\$ 11,090,000
Gross profit	2,112,000	1,994,000	-	4,106,000
GM %	36%	38%	-	37%
Operating expenses	2,237,000	1,992,000	23,000	4,252,000
Operating income (loss)	\$ (125,000)	\$ 2,000	\$ (23,000)	\$ (146,000)

Results of Operations for the Three Months Ended June 30, 2018

	Innovation and Development*			Biomedical	Total
	Optics				
Revenue	\$ 6,159,000	\$ 4,383,000	\$ -	\$ -	\$ 10,542,000
Gross profit	2,299,000	1,876,000	-	-	4,175,000
GM %	37%	43%	-	-	40%
Operating expenses	1,721,000	1,760,000	84,000	-	3,565,000
Operating income (loss)	\$ 578,000	\$ 116,000	\$ (84,000)	\$ -	\$ 610,000

***Formerly Contract Research**

Net income for the three months ended June 30, 2019 was loss of (\$0.3) million, or (\$0.02) per share, as compared to income of \$0.4 million, or \$0.02 per share for the quarters ended June 30, 2019 and 2018, respectively, largely as a result of the increased expenses in the fiscal year 2019. The provision for income taxes for the third quarter of 2019 was approximately \$0.1 million, whereas, during the quarter ended June 30, 2018, the Company had a tax provision of \$0.2 million.

Plan to Deregister and Delist the Common Stock

As previously announced, on August 7, 2019, the Company completed a stockholder-approved transaction whereby the Company effected a reverse stock split of its common stock followed immediately by a forward stock split of its common stock. As a result of the Transaction, based on information provided to the Company by its transfer agent, Continental Stock Transfer & Trust Company, and the Depository Trust Company (DTC) 2,825,268 pre-split shares of common stock are due to be exchanged for cash, and the aggregate amount payable by the Company to the former holders of such shares is approximately \$3,249,000. The transaction was completed as part of the Company's plan to terminate the registration of its common stock under Section 12(g) of the Securities Exchange Act of 1934, as amended, and suspend the Company's duty to file periodic reports and other information with the Securities and Exchange Commission and delist the Company's common stock from the Nasdaq Capital Market. The Company has notified the Nasdaq Stock Market of its intent to voluntarily delist its common stock and to withdraw the registration of its common stock with the Securities and Exchange Commission. The Company expects that listing of its shares on the Nasdaq Capital Market will be terminated on or about August 29, 2019, at which time the Company intends to file a Form 15 with the SEC to suspend the Company's reporting obligations under Section 15(d) of the Exchange Act.

As a result, the Company will not be hosting a quarterly conference call with respect to its third quarter fiscal 2019 results.

About Dynasil

Dynasil Corporation of America (NASDAQ: DYSL) develops and manufactures optics and photonics products, optical detection and analysis technology and optical components for the homeland security, medical and industrial markets. Combining world-class expertise in research and materials science with extensive experience in manufacturing and product development, Dynasil is selling and continuing to develop products for dual-mode radiation detection solutions for security and commercial applications and sensors for non-destructive testing. Dynasil has an impressive and growing portfolio of issued and pending U.S. patents. The Company is based in Newton, Massachusetts, with additional operations in Massachusetts, New Jersey, New York and the United Kingdom. More information about the Company is available at www.dynasil.com.

Forward-Looking Statements

This press release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements regarding future events and our future results are based on current expectations, estimates, forecasts, and projections and the beliefs and assumptions of our management, including, without limitation, our expectations regarding results of operations, our compliance with the financial covenants under our loan agreements with Middlesex Savings Bank and Massachusetts Capital Resource Company, our expectations regarding results of operations, the commercialization of our technology, including the Xcede patch and our dual mode detectors, the success of efforts to develop a successful Xcede Patch and to fund that development, our development of new technologies including at Dynasil Biomedical, the adequacy of our current financing sources to fund our current operations, our growth initiatives, our capital expenditures, the strength of our intellectual property portfolio, statements about the timing and effectiveness of the reverse and forward stock splits, the deregistration and delisting of the Company's common stock and the perceived benefits and costs of the proposed transaction. These forward-looking statements may be identified by the use of words such as "plans," "intends," "may," "could," "expect," "estimate," "anticipate," "continue," or similar terms, though not all forward-looking statements contain such words. The actual results of the future events described in such forward looking statements could differ materially from those stated in such forward looking statements due to a number of important factors. These factors that could cause actual results to differ from those anticipated or predicted include, without limitation, our ability to develop and commercialize our products, including obtaining regulatory approvals, the size and growth of the potential markets for our products and our ability to serve those markets, the rate and degree of market acceptance of any of our products, general economic conditions, costs and availability of raw materials and management information systems, our ability to obtain and maintain intellectual property protection for our products, Xcede's ability to produce preclinical data sufficient to enable it to initiate clinical studies of hemostatic patch, clinical results of Xcede's programs which may not support further development, the ability of our RMD business unit to identify and pursue possible continued development opportunities for the Xcede patch, which is not assured, competition, the loss of key management and technical personnel, our ability to obtain timely payment of our invoices to governmental customers, litigation, the effect of governmental regulatory developments, the availability of financing sources, our ability to deleverage our balance sheet, our ability to identify and execute on acquisition opportunities and integrate such acquisitions into our business, seasonality, the many variables that may impact the Company's projected cost savings, variables and risks related to the stock split transaction, SEC regulatory review of the Company's filings related to the such transaction, and the continuing determination of the Board of Directors and Special Committee that such transaction is in the best interests of all stockholders, as well as the uncertainties set forth in the Company's Annual Report on Form 10-K, filed on December 21, 2018, including the risk factors contained in Item 1A, and from time to time in the Company's other filings with the Securities and Exchange Commission. The Company disclaims any intention or obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

Dynasil Corporation of America and Subsidiaries
Consolidated Balance Sheets (Unaudited)

	June 30, 2019	September 30, 2018
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 519,000	\$ 2,327,000
Accounts receivable, net	5,347,000	4,069,000
Unbilled receivables	2,422,000	1,215,000
Contract assets	62,000	-
Inventories, net of reserves	4,544,000	4,106,000
Prepaid expenses and other current assets	717,000	664,000
Total current assets	13,611,000	12,381,000
Property, Plant and Equipment, net	7,762,000	8,098,000
Other Assets		
Intangibles, net	665,000	755,000
Deferred tax asset	4,128,000	4,333,000
Goodwill	5,864,000	5,900,000
Long term contract assets	7,000	7,000
Security deposits	53,000	58,000
Total other assets	10,717,000	11,053,000
Total Assets	\$ 32,090,000	\$ 31,532,000
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Equipment line of credit	\$ 961,000	\$ -
Current portion of long-term debt	1,431,000	1,246,000
Capital lease obligations, current	33,000	40,000
Accounts payable	2,544,000	2,355,000
Contract liabilities	33,000	253,000
Accrued expenses and other liabilities	2,667,000	2,803,000
Total current liabilities	7,669,000	6,697,000
Long-term Liabilities		
Long-term debt	1,797,000	2,075,000
Long-term capital lease obligations	30,000	52,000
Deferred tax liability	200,000	205,000
Other long-term liabilities	181,000	175,000
Total long-term liabilities	2,208,000	2,507,000
Stockholders' Equity		
Dynasil stockholders' equity	20,943,000	21,029,000
Noncontrolling interest	1,270,000	1,299,000
Total stockholders' equity	22,213,000	22,328,000
Total Liabilities and Stockholders' Equity	\$ 32,090,000	\$ 31,532,000

Dynasil Corporation of America
Consolidated Statement of Operations and Comprehensive Income (Loss)
(Unaudited)

	Three Months Ended June 30,		Nine Months Ended June 30,	
	2019	2018	2019	2018
Net revenue	\$ 11,090,000	\$ 10,542,000	\$ 32,650,000	\$ 29,985,000
Cost of revenue	6,984,000	6,367,000	20,494,000	18,326,000
Gross profit	4,106,000	4,175,000	12,156,000	11,659,000
Operating expenses:				
Sales and marketing	425,000	288,000	1,300,000	955,000
Research and development	162,000	177,000	486,000	701,000
General and administrative	3,665,000	3,100,000	10,317,000	9,519,000
Total operating expenses	4,252,000	3,565,000	12,103,000	11,175,000
Income (loss) from operations	(146,000)	610,000	53,000	484,000
Interest expense, net	56,000	44,000	144,000	132,000
Income (loss) before taxes	(202,000)	566,000	(91,000)	352,000
Income tax (benefit)	66,000	190,000	207,000	(404,000)
Net income (loss)	(268,000)	376,000	(298,000)	756,000
Less: Net loss attributable to noncontrolling interest	(5,000)	(15,000)	(18,000)	(124,000)
Net income (loss) attributable to common stockholders	\$ (263,000)	\$ 391,000	\$ (280,000)	\$ 880,000
Net income (loss)	\$ (268,000)	\$ 376,000	\$ (298,000)	\$ 756,000
Other comprehensive income (loss):				
Foreign currency translation	(136,000)	(384,000)	(132,000)	(127,000)
Total comprehensive income (loss)	(404,000)	(8,000)	(430,000)	629,000
Less: comprehensive income (loss) attributable to noncontrolling interest	(5,000)	(15,000)	(18,000)	(124,000)
Total comprehensive income (loss) attributable to common stockholders	\$ (399,000)	\$ 7,000	\$ (412,000)	\$ 753,000
Basic net income (loss) per common share	\$ (0.02)	\$ 0.02	\$ (0.02)	\$ 0.05
Diluted net income (loss) per common share	\$ (0.02)	\$ 0.02	\$ (0.02)	\$ 0.05
Weighted average shares outstanding				
Basic	17,522,644	17,203,965	17,426,316	17,127,834
Diluted	17,522,644	17,221,199	17,426,316	17,147,228