

**U.S. SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended September 30, 2016.

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 001-35011

**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.)
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313 Washington Street, Suite 403, Newton, MA (Address of principal executive offices)	02458 (Zip Code)
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Registrant's telephone number, including area code: (617) 668-6855

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

Title of each class	Name of each exchange on which registered
Common Stock, \$0.0005 par value	The NASDAQ Stock Market LLC (NASDAQ Capital Market)

Securities registered pursuant to Section 12(g) of the Act: none

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input type="checkbox"/>	Smaller reporting company <input checked="" type="checkbox"/>

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

As of March 31, 2016, the aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately \$15,798,335.

As of December 8, 2016 there were 16,906,265 shares of common stock, par value \$0.0005 per share, outstanding.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the Annual Meeting of Stockholders scheduled to be held on February 23, 2017 are incorporated by reference into Part III of this report.

### PART I

*This annual report on Form 10-K contains or incorporates by reference not only historical information, but also forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and are subject to the safe harbor created by those sections. We refer you to the information under the heading "Forward-Looking Statements."*

*As used in this annual report on Form 10-K, references to "Dynasil," the "Company," "we," "our" or "us," unless the context otherwise requires, refer to Dynasil Corporation of America and our subsidiaries.*

*All trademarks or trade names referred to in this report are the property of their respective owners.*

## ITEM 1. BUSINESS

### General

Dynasil Corporation of America was founded as a New Jersey corporation in 1960 and incorporated in the state of Delaware through a migratory merger in March 2008. Our corporate headquarters are located at 313 Washington Street, Suite 403, Newton, MA 02458, and our corporate website is [www.dynasil.com](http://www.dynasil.com). You can access, free of charge, our filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K, our quarterly reports on Form 10-Q, current reports on Form 8-K and any other amendments to those reports, through a link at our website, or at the Commission's website at [www.sec.gov](http://www.sec.gov).

We have the following three reporting segments based on our main operating activities:

- *Contract Research:* The Contract Research segment consists of the Radiation Monitoring Devices, Inc. ("RMD") business unit, which is among the largest small business participants in U.S. government-funded research.
- *Optics:* The Optics segment encompasses four business units – Dynasil Fused Silica, Optometrics, Hilger Crystals, 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.
- *Biomedical:* The Biomedical segment consists of a single business unit, Dynasil Biomedical Corporation ("Dynasil Biomedical"), a medical technology incubator which owns rights to certain early stage medical technologies. In October 2013, Dynasil Biomedical formed Xcede Technologies, Inc. ("Xcede"), a joint venture with Mayo Clinic to spin out and separately fund the development of a tissue sealant technology. At September 30, 2016, Dynasil Biomedical owned 83% of the common stock of Xcede, thus Xcede is included in our consolidated financial statements. Dynasil Biomedical currently has no operations other than relating to its equity ownership in Xcede.

The segment amounts included in MD&A are presented on a basis consistent with our internal management reporting and accounting principles generally accepted in the U.S. ("U.S. GAAP"). Segment information appearing in Note 16 – Segment, Customer and Geographical Reporting of the Notes to Financial Statements is also presented on this basis.

Our business strategy is based on continued development and expansion of our funded research portfolio,

investment in the commercialization of the technologies originating from our Contract Research segment, organic growth of existing Optics segment products, continuing development of the Xcede medical technologies using outside funding and acquisitions that align with our core competencies.

### **Historical Growth by Acquisition**

Through a series of acquisitions beginning in March 2005, Dynasil has evolved from a single product line optics company to one focused on multiple optical product lines and a significant contract research business focused on advanced materials used in radiation detection and other advanced instrumentation. Our revenue has increased from \$2 million in FY 2004 to \$43 million in FY 2016.

The acquisitions we completed during this period included:

- *Optometrics*: In March 2005, we acquired Optometrics LLC (“Optometrics”), a worldwide supplier of optical components and instruments, including diffraction gratings, interference filters, monochromators, laser optics and specialized optical systems.
- *Evaporated Metal Films*: In October 2006, we acquired Evaporated Metal Films Corporation (“EMF”), an optical thin-film coatings company with a broad range of application markets, including solar energy, display systems, dental photography, optical instruments, satellite communications and lighting.
- *RMD*: In July 2008, we acquired Radiation Monitoring Devices, Inc. (“RMD”), a contract research company, and RMD Instruments, LLC (“Dynasil Products”), a precision instruments company that manufactured and sold instruments in the medical imaging and industrial markets, including hand-held analyzers for lead paint and gamma medical probes for cancer surgery. The lead paint detector and gamma medical probe businesses were sold in fiscal 2014.
- *Hilger Crystals*: In July 2010, we acquired Hilger Crystals, Ltd., (“Hilger”) a manufacturer of synthetic crystals applicable to a wide range of industrial, medical, and homeland security applications with a long history of supplying high-quality synthetic crystals for infrared spectroscopy, X-ray and gamma ray detection.
- *Biomedical technologies*: In April 2011, we acquired the rights to six early stage biomedical technologies from Dr. Daniel Ericson, a former hematologist at the Mayo Clinic, which jointly owns rights to certain of the technologies acquired. The activity of our Biomedical segment is currently focused on the development of the tissue sealant technology that was part of this transaction in its Xcede subsidiary.
- *DichroTec Thin Films*: In June 2014, our EMF subsidiary acquired the assets of DichroTec Thin Films LLC, another optical thin-film coatings company with a broad range of applications, many of which are similar to EMF’s applications.

### **Contract Research – the Science Behind our Technology**

Our Contract Research segment’s business unit, RMD, is among the largest small business participants in U.S. government-funded research, performing research and development activities for government agencies including Department of Energy, Department of Defense, Department of Homeland Security, Domestic Nuclear Detection Office, National Institutes of Health and NASA.

RMD develops advanced technology in materials, sensors and prototype instruments that detect or measure radiation, light, magnetism or sound for use in security, medical and industrial applications. RMD has research expertise in material science, radiation detection, digital imaging technology, magnetic imaging, laser optics and photonics. As of September 30, 2016, our Contract Research segment had a total of 79 employees, including 27 Ph.D. level scientists. RMD serves as an incubator to expand our patent portfolio enabling the opportunity to advance our technology from development to commercialization using government-funded research. As of September 30, 2016, RMD had a portfolio of 68 issued U.S. patents and 42 pending patent applications, compared with 61 issued patents and 53 pending patent applications at the same point in 2015.

For nearly thirty years, RMD has successfully conducted government research under the auspices of the Small Business Innovation Research (“SBIR”) program. In recent years, RMD has augmented its SBIR research with larger, competitively bid government research and development contracts. To grow our research portfolio within the federal government, we are broadening our relationships within key federal funding agencies and the U.S. military.

RMD also provides research for non-governmental entities in areas where it has the appropriate expertise. Such research is currently not a significant portion of RMD's revenue. Our research initiatives are aligned with our focus on the homeland security, medical and industrial markets. As of September 30, 2016, RMD had a contract backlog of approximately \$30 million, of which approximately 48% is SBIR contracts.

RMD competes for contract research work against a variety of small and large entities, including universities that submit research proposals based on specific government solicitations. We generate revenue under various types of contracts, which include Cost Reimbursement, Time & Materials (T&M), Fixed Price-Level of Effort and Firm Fixed Price (FFP) contracts. We believe that RMD's reputation for conducting state-of-the art research and development, as well as the quality of its proposals, are significant competitive advantages. In addition, RMD maintains strong working relationships with universities, government agencies, national laboratories, research hospitals and corporations. However, some of our competitors may have greater financial, technical and human resources than we have and may be better able to operate large, well-funded research and development programs.

We believe that research projects can provide an important source for new commercial products in areas such as medical imaging, industrial sensors, critical care and point of care diagnostics and homeland security. For example, Dynasil Products' lead paint analyzer and gamma medical probes businesses, which were sold in fiscal year 2014, emanated from the RMD portfolio. Most recently, our government-funded research work supported the development of our CLYC dual-mode radiation detection technology which we are currently selling commercially.

### **Our Optical Technology**

We specialize in the production of optical materials, components and coatings for various applications in the medical, industrial, and homeland security/defense sectors.

Our Optics segment supplies synthetic crystals, optical materials, components, and coatings that are used in devices such as baggage scanners, medical imaging systems, optical instruments, lasers, analytical instruments, automotive components, semiconductor/electronic devices, spacecraft/aircraft components and advertising displays. These products are offered through four business units (Dynasil Fused Silica, Optometrics, Hilger and EMF).

We compete for business with fabricators of industrial optical materials, other optical components manufacturers, other optical crystal manufacturers and other optical coaters as well as other analytical instruments manufacturers and synthetic crystal manufacturers. We believe our proprietary processes, reputation, specialty product offering, products in development and the price at which we offer our products enable us to successfully compete in these markets. However, many of our competitors have greater financial, sales and marketing resources than we do, which may enable them to develop and market products that would compete against those developed by us.

Our products are distributed through a direct sales and marketing staff of ten people and through other channels, including manufacturer's representatives and distributors in various foreign countries for international sales and U.S. manufacturers' representatives for certain product lines. Marketing efforts include direct customer contact through sales visits, advertising in trade publications and attendance at trade shows.

### **Biomedical: Xcede and Our Development of a Tissue Sealant Technology**

Xcede's first product currently under development is a resorbable hemostatic patch to be used when conventional techniques are inadequate or impractical during general surgery for the kidneys, liver and spleen. The Xcede Patch is intended to be used during surgical procedures to stop bleeding (Hemostasis). Preclinical testing to date indicates this product promotes hemostasis within 60 seconds, a time that is faster than currently approved hemostatic patches. As described above, in 2011, Dynasil Biomedical acquired rights to the underlying tissue sealant technology as part of a transaction with a former hematologist at the Mayo Clinic. Since that time, Dynasil Biomedical has invested significant capital developing this tissue sealant technology, including costs to further the related intellectual property rights and to conduct animal studies.

In October 2013, Dynasil Biomedical formed a new subsidiary, Xcede, and transferred its rights in the tissue sealant technology to it. Xcede was formed as a means of focusing our development efforts on this tissue sealant technology and facilitating the third-party funding of the development costs.

Xcede received \$2.9 million in cash since inception from external investors and certain directors and officers of the Company in exchange for 5% convertible notes pursuant to a note purchase agreement dated October 2013 and

amended July 2016 that provided for the issuance of up to \$5.2 million in aggregate principal amount of such notes. The notes were convertible into equity of Xcede at a 20% discount to the first equity financing of Xcede of at least \$3.0 million, inclusive of the notes and interest. At September 30, 2016, the total outstanding principal of these convertible notes was \$5.1 million, including \$2.2 million of notes to Dynasil Biomedical which are eliminated in the consolidated financial statements.

The note purchase agreement was amended in April 2014, May 2015 and July 2016 to allow for the issuance of an additional \$3.2 million in aggregate principal amount of such notes (of which \$0.8 million was issued in fiscal year 2016) and extend the notes' maturity date. As amended, the notes were payable after June 30, 2017 upon the demand of the holders of a majority of the aggregate outstanding amount of the notes. Xcede used the net proceeds from the issuances of the notes to finance its pre-clinical research activities.

In January 2016, Xcede announced that it had signed three agreements with Cook Biotech Inc. of West Lafayette, Indiana, including a Development Agreement, a License Agreement and a Supply Agreement, in connection with the development, regulatory approval and production of Xcede's resorbable hemostatic patch. In November 2016, Xcede announced Cook Biotech Inc. had agreed to fund the pre-clinical testing of, and subject to the receipt of applicable regulatory approvals initiate clinical trials for, its first tissue sealant product. In addition, in November 2016, the Company committed to invest \$1.2 million of cash into Xcede over the following 18 months, and all \$5.1 million of existing notes and accrued interest were converted into preferred stock of Xcede.

Through Dynasil Biomedical, as of September 30, 2016, Dynasil owned approximately 83% of the outstanding equity in Xcede, but with the conversion of the outstanding notes described above, the Company owned approximately 59%, as of December 1, 2016. Xcede's investors consist of Mayo Clinic Ventures, Southern Initiative Minnesota Foundation, Rochester Area Economic Development Inc., angel investors and certain members of Dynasil's executive management team and board of directors.

### **Strategy to Commercialize our Technologies**

Our business strategy focuses on combining our expertise in funded research, product development and technology innovation to commercialize detection and analysis equipment for the homeland security, industrial and medical markets. We are executing on this strategy by:

- developing and expanding our research portfolio;
- seeking to commercialize the technologies coming from our Contract Research segment;
- growing organically through investment in existing businesses; and
- identifying and investing in those technologies with the greatest revenue and growth potential in the market.

For example, our CLYC dual mode nuclear detection crystal technology was developed by RMD under a program for the Department of Homeland Security for use in locating nuclear bombs or nuclear materials at our nation's major cities, ports and borders. This technology has the potential to be very important to our national security, as well as other radiation detection applications, such as nuclear power plant safety. Our dual mode detection crystals are being commercialized while RMD continues to further enhance this technology.

Our CLYC dual mode detection crystals technology is designed to be a single detector that replaces two detector subsystems – the gamma radiation detector and also the helium-3 detectors for neutrons. Increasing our value proposition is the fact that the stockpile of the chemical element helium-3, a byproduct of nuclear weapons production, is in short supply. The stockpile of helium-3 has been drawn down during the past 10 years, as the federal government has increased its use in neutron detectors to help prevent nuclear and radiological material from being smuggled into the U.S.

### **Intellectual Property (IP)**

From October 2015 through September 2016, we have been granted eight new U.S. patents and have filed 13 new patent applications. Our current portfolio, company-wide, is 71 issued and 59 pending applications, the largest percentage of which are issued to RMD. We believe that intellectual property represents an important strategic advantage for us.

### **Customers**

We have more than 600 customers, with approximately 58% of our business concentrated in our top 10 customers. Our largest customer is a customer of our Optics segment and accounted for 12% of our overall revenue during

fiscal year 2016. Our next four largest customers are agencies and agents of the Federal government and accounted for approximately 11%, 10%, 5% and 5%, respectively, of our revenue during fiscal year 2016. The loss of any of these top five customers would likely have a material adverse effect on our business, financial condition and results of operations. Generally, our customers provide purchase orders for a specific part and quantity or they provide a contract for research projects. Product orders are normally filled over a period ranging from one to six weeks. We also have blanket orders that call for monthly deliveries of predetermined amounts. Contract research projects generally run for a one to two year period.

## **Employees**

As of September 30, 2016, we had a total of 226 employees, 213 of which are full-time. Of the total, 41 of our employees are engaged in administration, 10 are engaged in sales, 84 are engaged in research and/or engineering and 91 are engaged in manufacturing. The Company has a total of 32 Ph.D. level employees. Our operations are non-union except for a two-person union in one location.

## **Suppliers**

Our largest supplier for materials and components is a supplier of scintillator crystal material fabricated and sold by our U.K. facility. We believe that we have excellent relationships with our suppliers. If any of our suppliers should become unavailable to us for any reason, we believe that there are a number of potential replacements, although we might incur some delay in identifying such replacements.

## **Research and Development**

Our RMD business unit primarily provides research and development ("R&D") activities under government funded research contracts. The RMD business unit recognized revenue of \$19.8 million and \$18.8 million in fiscal years 2016 and 2015, respectively. The direct costs associated with this revenue were \$12.2 million and \$10.5 million in 2016 and 2015, respectively. Substantially all the Contract Research segment's cost of revenue relates to research performed by RMD which are in turn billed to the contracting party.

R&D for our other businesses, which totaled \$1.0 million in fiscal year 2016 and \$1.2 million in fiscal year 2015, was primarily new product development, changes to our manufacturing processes and the introduction of improved methods and equipment,

## **Government Regulation**

The businesses that we operate are subject to various federal and states regulations.

Our Contract Research segment is subject to the rules and regulations applicable to government contracting, including: the Federal Acquisition Regulation (FAR) and supplements, which regulate the formation, administration and performance of U.S. Government contracts; the Truth in Negotiations Act, which requires certification and disclosure of cost and pricing data in connection with certain contract negotiations; the Procurement Integrity Act, which regulates access to competitor bids and proposal information and government source selection information, and our ability to provide compensation to certain former government officials; the Civil False Claims Act, which provides for substantial civil penalties for violations, including for submission of a false or fraudulent claim to the U.S. Government for payment or approval; and the U.S. Government Cost Accounting Standards, which impose accounting requirements that govern our right to reimbursement under certain cost-based U.S. Government contracts.

The tissue sealant being developed by Xcede, our joint venture with Mayo Clinic, is subject to FDA regulations and approval in the United States and requires CE marking and other regulatory agency approval in other countries around the world.

Our use of radioactive materials in research and certain of our products (our dual-mode detector) subject us to laws regulating hazardous wastes under United States federal and certain state, environmental and atomic energy regulatory laws and similar laws in each jurisdiction in which our research and manufacturing facilities are located. Environmental compliance costs, which totaled \$34,000 for fiscal year 2016, have not historically had a material effect on our operating results.

With respect to our intellectual property rights, we rely on, and are subject to, the laws in the U.S. and abroad governing intellectual property protection.

## Item 1A. RISK FACTORS

*In your evaluation of our company and our businesses, you should carefully consider the risks and uncertainties described below, together with the information included elsewhere in this Annual Report on Form 10-K and the other documents we file with the SEC. The following factors describe the risks and uncertainties that we consider significant to the operation of our business, but should not be considered a complete listing of all potential risks and uncertainties that could adversely affect our operating results, financial position or liquidity. Additionally, our business is subject to the same general risks and uncertainties that affect many other companies, such as the overall U.S. and global economic conditions, international conflicts, geopolitical events, changes in laws or accounting rules, fluctuations in interest and exchange rates or other disruptions of expected economic and business conditions.*

### **Risks Related To Our Business**

***The Company relies on its Contract Research segment for approximately half of its revenue. A decline in or temporary suspension of U.S. Government spending, changes in federal budgetary priorities, the timing of contract awards or a restructuring of the SBIR/STTR programs may adversely affect our future revenue and limit our growth prospects.***

Our Contract Research business unit, RMD, is among the largest small business participants in U.S. government-funded research, performing research and development activities for government agencies including Department of Energy, Department of Defense, Department of Homeland Security, Domestic Nuclear Detection Office, National Institutes of Health, and National Aeronautics and Space Administration. Historically RMD has conducted its government research contracts through the SBIR (Small Business Innovation Research Program) and the STTR (Small Business Technology Transfer Program). Though RMD has augmented its SBIR contracts with larger competitively bid government contracts in recent years, a reduction in or elimination of the SBIR or the STTR programs could result in our inability to win contracts, as we may not have the resources to compete effectively against much larger, better-funded companies. Further, a significant decline in overall U.S. Government spending, including in the areas of national security, intelligence and homeland security, a significant shift in its spending priorities, the substantial reduction or elimination of particular defense-related programs or significant delays in contract or task order awards for large programs could adversely affect our future revenue and limit our growth prospects. While the October 2013 government shutdown did not have a significant impact on the Company, a future government shutdown could result in the suspension of work on contracts in progress or in payment delays which would adversely affect our future revenue and cash flow.

***The Company relies on a small number of key customers for a substantial portion of its revenue.***

Ten customers accounted for approximately 58% of the Company's revenue in 2016. Five of those ten customers were agencies of the U.S. Government and accounted for 35% of revenue. Although we have had business relationships with these customers for many years, there can be no guarantee that we will be able to win contracts with these agencies in the future. Accordingly our performance could be adversely affected by the loss of one or more of these key customers.

***The U.S. Government may terminate, cancel, modify or curtail our contracts at any time prior to their completion and, if we do not replace them, we may be unable to achieve our expected future revenue and may suffer a decline in revenue.***

As of September 30, 2016, our total backlog for Contract Research was approximately \$30 million. Backlog consists of the portion of existing contracts yet to be performed and awards of projects by agencies in favor of RMD. Many of the U.S. Government programs in which we participate as a contractor or subcontractor may extend for several years and include one or more base years and one or more option years. These programs are normally funded on an annual basis. Under our contracts, the U.S. Government generally has the right not to exercise options to extend or expand our contracts and may otherwise terminate, cancel, modify or curtail our contracts at its convenience. Any decisions by the U.S. Government not to exercise contract options or to terminate, cancel, modify or curtail our major programs or contracts would adversely affect our revenue, revenue growth and profitability.

The U.S. Government also has the right to terminate a contract for default, in which case, we may be exposed to liability, including for excess costs incurred by the customer in procuring undelivered services and products from another source. Depending on the nature and value of the contract, a performance issue or termination for default could cause our actual results to differ from those anticipated and could harm our reputation.

***Our earnings and profitability may be adversely affected by our failure to accurately estimate and manage costs, time and resources.***

We generate revenue under various types of contracts, which include cost reimbursement, Time & Materials (T&M), Fixed Price-Level of Effort and Firm Fixed Price contracts (FFP). Our earnings and profitability may vary materially depending on changes in the proportionate amount of revenue derived from each type of contract, the nature of services or products provided, as well as the achievement of performance objectives and the stage of performance at which the right to receive fees, particularly under incentive and award fee contracts, is finally determined. Cost reimbursement and T&M contracts generally have lower profitability than FFP contracts. Our operating results in any period may also be affected, positively or negatively, by variable purchasing patterns by our customers of our more profitable proprietary products. Our failure to accurately estimate costs or the resources and technology needed to perform our contracts or to effectively manage and control our costs during the performance of our work could result, and in some instances has resulted, in reduced profits or in losses. More generally, any increased or unexpected costs or unanticipated delays in connection with the performance of our contracts, including costs and delays caused by contractual disputes or other factors outside of our control, such as performance failures of our subcontractors, natural disasters or other force majeure events, could make our contracts less profitable than expected or unprofitable.

***Goodwill and other intangible assets represent approximately 27% of our total assets and any impairment of these assets could negatively impact our results of operations.***

Non-amortizing intangible assets, including goodwill, are tested for impairment annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Examples of events or changes in circumstances indicating that the carrying value of such intangible assets may not be recoverable could include a significant adverse change in legal factors or in the business climate, an adverse action or assessment by a regulator, unanticipated competition, loss of key personnel, or a more-likely-than-not expectation that a reporting unit or a significant portion of a reporting unit will be sold or otherwise disposed of.

Any future impairment of goodwill or other intangible assets would have a negative impact on our profitability and financial results.

***Our Contract Research business faces aggressive competition that can impact our ability to obtain contracts and therefore affect our future revenue and growth prospects.***

RMD's competitors include other small high technology companies performing SBIR R&D, large firms such as Raytheon which performs related R&D, universities and national laboratories.

The markets in which we operate are characterized by rapid technology development and the needs of our customers change and evolve regularly. Accordingly, our success depends on our ability to develop services and products that address these changing needs and to provide people and technology needed to deliver these services and products. To remain competitive, we must consistently provide superior service, technology and performance on a cost-effective basis to our customers. Our competitors may be able to provide our customers with different or greater capabilities or technologies or better contract terms than we can provide, including technical qualifications, past contract experience, geographic presence, price and the availability of qualified professional personnel. In addition, our competitors may consolidate or establish teaming or other relationships among themselves or with third parties to increase their ability to address customers' needs. Accordingly, larger or new competitors or alliances among competitors may emerge which may adversely affect our ability to compete.

***Our business is subject to reviews, audits and cost adjustments by the U.S. Government, which, if resolved unfavorably to us, could adversely affect our profitability, cash position or growth prospects.***

U.S. Government agencies, including the DCAA (Defense Contract Audit Agency), DCMA (Defense Contract Management Agency) and others, routinely audit and review a contractor's performance on government contracts, indirect rates and pricing practices, and compliance with applicable contracting and procurement laws, regulations and standards. They also review the adequacy of the contractor's compliance with government standards for its accounting and management internal control systems, including: control environment and overall accounting system, estimating system, purchasing system, property system and earned value management system. Both contractors and the U.S. Government agencies conducting these audits and reviews have come under increased scrutiny.



A finding of significant control deficiencies in our system audits or other reviews could result in decremented billing rates to our U.S. Government customers until the control deficiencies are corrected and our corrections are accepted by the auditing agency. Government audits and reviews may conclude that our practices are not consistent with applicable laws and regulations and result in adjustments to contract costs and mandatory customer refunds. Such adjustments can be applied retroactively, which could result in significant customer refunds. Our receipt of adverse audit findings or the failure to obtain an “approved” determination of our various accounting and management internal control systems, including our changes to indirect cost and direct labor estimating systems, from the responsible U.S. Government agency could significantly and adversely affect our business, including our ability to bid on new contracts and our competitive position in the bidding process. A determination of non-compliance with applicable contracting and procurement laws, regulations and standards could also result in the U.S. Government imposing penalties and sanctions against us, including withholding of payments, suspension of payments and increased government scrutiny that could delay or adversely affect our ability to invoice and receive timely payment on contracts, perform contracts or compete for contracts with the U.S. Government. We may suffer harm to our reputation if allegations of impropriety are made against us, which would impair our ability to win new contract awards or receive contract renewals.

Our indirect cost audits by the DCAA have been completed for fiscal 2012 while fiscal years 2013 through 2016 remain open pending DCAA audit. Although we have recorded contract revenue subsequent to fiscal 2012 based upon our estimate of costs that we believe will be approved upon final audit or review, we do not know the outcome of any ongoing or future audits or reviews and adjustments and, if future adjustments exceed our estimates, our profitability would be adversely affected.

***Our failure to comply with a variety of complex procurement rules and regulations could result in our being liable for penalties, including termination of our U.S. Government contracts, disqualification from bidding on future U.S. Government contracts and suspension or debarment from U.S. Government contracting.***

We must comply with laws and regulations relating to the formation, administration and performance of U.S. Government contracts, which affect how we do business with our customers and may impose added costs on our business. Some significant statutes and regulations that affect us include:

- the Federal Acquisition Regulation (FAR) and supplements, which regulate the formation, administration and performance of U.S. Government contracts;
- the Truth in Negotiations Act, which requires certification and disclosure of cost and pricing data in connection with certain contract negotiations;
- the Procurement Integrity Act, which regulates access to competitor bid and proposal information and government source selection information, and our ability to provide compensation to certain former government officials;
- the Civil False Claims Act, which provides for substantial civil penalties for violations, including for submission of a false or fraudulent claim to the U.S. Government for payment or approval; and
- the U.S. Government Cost Accounting Standards, which impose accounting requirements that govern our right to reimbursement under certain cost-based U.S. Government contracts.

Our failure to comply with any of these rules or regulations could result in loss of business or penalties that could have a material adverse effect on our financial condition or results of operations.

***Our loan agreements impose restrictions on our ability to take certain corporate actions and raise additional capital, and include a material adverse change (“MAC”) clause.***

Our loan agreements contain numerous customary restrictions that limit our ability to undertake certain activities without the express prior written approval of our lenders. These include, but are not limited to, restricting our ability to:

- incur additional indebtedness;
- pay or declare dividends;
- enter into a business substantially different from existing operations;
- issue or authorize any additional or new equity that will result in a change of control; and
- take any corporate action outside the ordinary course of the business, including without limitation, the sale of material assets or other strategic divestitures, without the prior written approval of our lender.

These restrictions could significantly hamper our ability to raise additional capital. Our ability to receive the necessary approvals is largely dependent upon our relationship with our lenders and our financial performance, and no assurances can be given that we will be able to obtain the necessary approvals in the future. Our inability

to raise additional capital could lead to working capital deficits that could have a material adverse effect on our operations in future periods.

One of our loan agreements also includes a MAC clause which permits the bank to call the loan if any event, fact, circumstance, change in, or effect on the Company could reasonably be expected to be materially adverse to the business.

***We may not be able to generate sufficient positive cash flow in the future to fund our operations.***

In addition to our bank financing, we are dependent upon cash flow from our businesses to fund our operations. It is our expectation that we can continue to increase our cash flows; however, there can be no assurance that we will be able to continue to do so. If we are unable to fund our operations from future cash flows together with our available bank financing, we will need to seek additional debt and/or equity financing, which may not be available on attractive terms, if at all, in which case there could be a material adverse effect on our results of operations and financial condition.

***Our Xcede joint venture requires further funding to support the development of its technology.***

Xcede's initiated financing efforts raised approximately \$2.9 million of funding through convertible notes from external investors (including officers and directors of the Company) through September 30, 2016. In November 2016, Xcede announced Cook Biotech Inc. committed to fund the pre-clinical testing of, and subject to the receipt of applicable regulatory approvals initiate clinical trials for, Xcede's resorbable hemostatic patch currently under development. In addition, in November 2016, the Company committed to invest an additional \$1.2 million of cash into Xcede over the following 18 months, and all \$5.1 million in existing notes and accrued interest from both external investors and the Company were converted into preferred stock. As of December 1, 2016, Dynasil owned approximately 59% of the outstanding equity in Xcede. We expect Xcede to continue to require periodic investor funding in amounts larger than what has been raised to date in order to fund additional pre-clinical development activities and any human clinical trials we may initiate. To the extent Xcede is successful in raising additional equity financing from outside sources, our equity interest in Xcede will decrease. There can be no assurance, however, that Xcede will be able to obtain future financing as needed or on terms which are attractive, in which case it might be required to close its operations and liquidate its assets in which case our investment would likely not be recovered.

***Our failure to attract, train and retain skilled employees, including our management team, would adversely affect our ability to execute our strategy.***

Portions of our business involve the development of tailored solutions for our customers, a process that relies heavily upon the expertise and services of our employees. Our continued success depends on our ability to recruit and retain highly trained and skilled engineering, technical and professional personnel. Competition for skilled personnel is intense and competitors aggressively recruit key employees. Particularly in highly specialized areas, it may become more difficult to retain employees and meet all of our needs for employees in a timely manner, which may affect our growth in the current fiscal year and in future years. Although we intend to continue to devote significant resources to recruit, train and retain qualified employees, we may not be able to attract and retain these employees. Any failure to do so could impair our ability to perform our contractual obligations efficiently and timely meet our customers' needs and win new business, which could adversely affect our future results.

In addition to attracting and retaining qualified engineering, technical and professional personnel, we believe that our success will also depend on the continued employment of a highly qualified and experienced senior management team and its ability to retain existing business and generate new business. Our senior management team is important to our business because personal reputations and individual business relationships are a critical element of retaining and obtaining customer contracts in our industry, particularly with agencies performing classified operations. Our inability to hire and retain appropriately qualified and experienced senior executives could cause us to lose customers or new business opportunities.

***Misconduct of employees, subcontractors, agents and business partners could cause us to lose existing contracts or customers and adversely affect our ability to obtain new contracts and customers and could have a significant adverse impact on our business and reputation.***

Misconduct, should it occur, could include fraud or other improper activities such as falsifying time or other records and violations of laws, including the Anti-Kickback Act. Other examples could include the failure to comply with our policies and procedures or with federal, state or local government procurement regulations, regulations regarding

the use and safeguarding of classified or other protected information, legislation regarding the pricing of labor and other costs in government contracts, laws and regulations relating to environmental, health or safety matters, bribery of foreign government officials, import-export control, lobbying or similar activities, and any other applicable laws or regulations. Intentional or unintentional violation of the Export Control Act or International Traffic in Arms Regulations could result in severe fines which could adversely affect our profitability. Any data loss or information security lapses resulting in the compromise of personal information or the improper use or disclosure of sensitive or classified information could result in claims, remediation costs, regulatory sanctions against us, loss of current and future contracts and serious harm to our reputation. Although we have implemented policies, procedures and controls to prevent and detect these activities, these precautions may not prevent all misconduct, and as a result, we could face unknown risks or losses. Our failure to comply with applicable laws or regulations or misconduct by any of our employees, subcontractors, agents or business partners could damage our reputation and subject us to fines and penalties, restitution or other damages, loss of security clearance, loss of current and future customer contracts and suspension or debarment from contracting with federal, state or local government agencies, any of which would adversely affect our business and our future results.

***Quality problems with our processes, goods, and services could harm our reputation for producing high-quality products and erode our competitive advantage, sales and market share.***

Quality is extremely important to us and our customers due to the serious and costly consequences of product failure. Our quality certifications are critical to the marketing success of our goods and services. If we fail to meet these standards, our reputation could be damaged, we could lose customers, and our revenue and results of operations could decline. Aside from specific customer standards, our success depends generally on our ability to manufacture to exact tolerances precision-engineered components, subassemblies, and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation as a manufacturer of high-quality components will be harmed, our competitive advantage could be damaged, and we could lose customers and market share.

***From time to time we may make acquisitions. The failure to successfully integrate future acquisitions could harm our business, financial condition and operating results.***

One component of our growth strategy is to selectively pursue strategic acquisitions. These transactions require significant investment of time and resources and may disrupt our business and distract our management from other responsibilities. Even if successful, these transactions could reduce earnings for a number of reasons, including the amortization of intangible assets, impairment charges, acquired operations that are not yet profitable or the payment of additional consideration under earn-out arrangements if an acquisition performs better than expected. Acquisitions, investments and joint ventures pose many other risks that could adversely affect our reputation, operations or financial results, including:

- we may not be able to identify, compete effectively for or complete suitable acquisitions and investments at prices we consider attractive;
- we may not be able to accurately estimate the financial effect of acquisitions and investments on our business and we may not realize anticipated synergies or acquisitions may not result in improved operating performance;
- we may encounter performance problems with acquired technologies, capabilities and products, particularly with respect to those that are still in development when acquired;
- we may have trouble retaining key employees and customers of an acquired business or otherwise integrating such businesses, such as incompatible accounting, information management, or other control systems, which could result in unforeseen difficulties;
- we may assume material liabilities that were not identified as part of our due diligence or for which we are unable to receive a purchase price adjustment or reimbursement through indemnification;
- we may assume legal or regulatory risks, particularly with respect to smaller businesses that have immature business processes and compliance programs;
- acquired entities or joint ventures may not operate profitably, which could adversely affect our operating income or operating margins and we may be unable to recover investments in any such acquisitions;
- acquisitions, investments and joint ventures may require us to spend a significant amount of cash or to issue capital stock, resulting in dilution of ownership; and
- we may not be able to effectively influence the operations of our joint ventures or we may be exposed to certain liabilities if our joint venture partners do not fulfill their obligations.

If our acquisitions fail, perform poorly or their value is otherwise impaired for any reason, including contractions in credit markets and global economic conditions, our business and financial results could be adversely affected.

In addition, we periodically divest businesses, including businesses that are no longer a part of our ongoing strategic plan. These divestitures similarly require significant investment of time and resources, may disrupt our business, distract management from other responsibilities and may result in losses on disposal or continued financial involvement in the divested business, including through indemnification, guarantee or other financial arrangements, for a period of time following the transaction, which would adversely affect our financial results.

***Our financial results may vary significantly from period-to-period.***

Our financial results may fluctuate as a result of a number of factors, many of which are outside of our control. For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our financial results may be negatively affected by any of the risk factors listed in this "Risk Factors" section and other matters described elsewhere in this Annual Report on Form 10-K and the other documents we file with the SEC.

***Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our financial condition and results of operations.***

We are subject to income taxes as well as non-income based taxes, in both the U.S. and U.K. We are subject to tax audits in various jurisdictions. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our consolidated earnings and financial condition. Additionally, changes in tax laws or tax rulings could materially impact our effective tax rate.

***We face risks associated with our international business.***

In 2016 and 2015, we generated approximately 25% and 24% of our sales outside the U.S., respectively. Our international business operations may be subject to additional and different risks than our U.S. business. Our ability to achieve and maintain profitable growth in international markets is subject to risks related to the differing legal, political, social and regulatory requirements and economic conditions of many countries. As a result of our expansion outside the U.S., we are subject to certain inherent risks, including political and economic uncertainty, inflation rates, exchange rates, trade protection measures, local labor conditions and laws, restrictions on foreign investments and repatriation of earnings, and weak intellectual property protection. If we are unable to manage these risks it would have a material adverse effect on our results of operations and financial condition.

***Political and economic uncertainty arising from the outcome of the recent referendum on the membership of the United Kingdom in the European Union could adversely impact our financial results.***

In June 2016, a majority of voters in the United Kingdom (U.K.) elected to withdraw from the European Union (E.U.) in a national referendum (also referred to as "Brexit"). Our Hilger Crystals Ltd. business unit is located in the U.K. The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business, including the British pound. We translate revenue denominated in foreign currency (including the British pound) into U.S. dollars for our financial statements. During periods of a strengthening dollar, our reported international revenue is reduced because foreign currencies translate into fewer U.S. dollars.

As a result of the referendum being passed into law, the two year negotiation process is expected to commence in March 2017 to determine the future terms of the U.K.'s relationship with the E.U., including the terms of trade between the U.K. and the E.U. The effects of Brexit will depend on any agreements the U.K. makes to retain access to E.U. markets either during a transitional period or more permanently. The measures could potentially disrupt the markets we serve and may cause us to lose customers, suppliers and employees. Additionally, disruptions and uncertainty caused by Brexit may cause our customers to closely monitor their costs and reduce their spending budget on our products and services. Brexit may also lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Any of these effects of Brexit, among others, could adversely affect our business, financial condition or future results.

***Increases in prices and declines in the availability of raw materials could negatively impact our financial results.***

Our financial results are significantly affected by the cost of raw materials and energy. Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and plans to

continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts, multiple sources, and identifying alternative materials or technology whenever possible. An inability to obtain critical raw materials would adversely impact our ability to produce products. Increases in the cost of raw materials and energy may have an adverse effect on our earnings or cash flow in the event we are unable to mitigate these higher costs in a timely manner.

***Our business and operations expose us to numerous legal and regulatory requirements and any violation of these requirements could harm our business.***

We are subject to numerous federal, state and foreign legal requirements on matters as diverse as data privacy and protection, employment and labor relations, immigration, taxation, anticorruption, import/export controls, trade restrictions, internal and disclosure control obligations, securities regulation, environmental and anti-competition. We are also focused on expanding our business in certain identified growth areas, such as homeland security and biomedical technologies, which are highly regulated and may expose us to increased compliance risk. Compliance with diverse and changing legal requirements is costly, time-consuming and requires significant resources. Violations of one or more of these requirements in the conduct of our business could result in significant fines and other damages, criminal sanctions against us or our officers, prohibitions on doing business and damage to our reputation. Violations of these regulations or contractual obligations related to regulatory compliance in connection with the performance of customer contracts could also result in liability for significant monetary damages, fines and/or criminal prosecution, unfavorable publicity and other reputational damage, restrictions on our ability to compete for certain work and allegations by our customers that we have not performed our contractual obligations.

Moreover, we use controlled hazardous and radioactive materials in our business and generate wastes that are regulated as hazardous wastes under United States federal and certain state, environmental and atomic energy regulatory laws and similar laws in each jurisdiction in which our facilities are located. Our use of these substances and materials is subject to stringent, and periodically changing, regulation that can impose costly compliance obligations on us and have the potential to adversely affect our manufacturing activities. The risk of accidental contamination or injury from these materials cannot be completely eliminated. If an accident with these substances occurs, we could be held liable for any damages that result, in addition to incurring clean-up costs and liabilities, which can be substantial. Additionally, an accident could damage our research and manufacturing facilities resulting in delays and increased costs.

***Our insurance may be insufficient to protect us from product and other liability claims or losses.***

We maintain insurance coverage with third-party insurers as part of our overall risk management strategy and because some of our contracts require us to maintain specific insurance coverage limits. However, not every risk or liability is or can be protected by insurance, and, for those risks we insure, the limits of coverage we purchase or that are reasonably obtainable in the market may not be sufficient to cover all actual losses or liabilities incurred. If any of our third-party insurers fail, cancel our coverage or otherwise are unable to provide us with adequate insurance coverage, then our overall risk exposure and our operational expenses would increase and the management of our business operations would be disrupted. Our insurance may be insufficient to protect us from significant product and other liability claims or losses. Moreover, there is a risk that commercially available liability insurance will not continue to be available to us at a reasonable cost, if at all. If liability claims or losses exceed our current or available insurance coverage, our business and prospects may be harmed. Regardless of the adequacy of our liability insurance coverage, any significant claim may have an adverse effect on our industry and market reputation, leading to a substantial decrease in demand for our products and services and reduced revenue.

***Our business and financial results could be negatively affected by cyber or other security threats.***

As a U.S. Government contractor operating in multiple regulated industries and geographies, we handle sensitive information. Therefore, we are continuously exposed to cyber and other security threats, including computer viruses, attacks by hackers or physical break-ins. Any electronic or physical break-in or other security breach or compromise may jeopardize security of information stored or transmitted through our information technology systems and networks. This could lead to disruptions in mission critical systems, unauthorized release of confidential or otherwise protected information and corruption of data. Although we have implemented policies, procedures and controls to protect against, detect and mitigate these threats, attempts by others to gain unauthorized access to our information technology systems are becoming more sophisticated. These attempts include covertly introducing malware to our computers and networks and impersonating authorized users, among others, and may be perpetrated by well-funded organized crime or state sponsored efforts. We seek to detect and investigate all security incidents and to prevent their occurrence or recurrence. We continue to improve our threat protection, detection and mitigation policies, procedures and controls. In addition, we work with other companies in the industry and government

participants on increased awareness and enhanced protections against cyber security threats. However, because of the evolving nature of these security threats, there can be no assurance that our policies, procedures and controls have or will detect or prevent any of these threats and we cannot predict the full impact of any such incident. We may experience similar security threats to the information technology systems that we develop, install or maintain under customer contracts. Although we work cooperatively with our customers and other business partners to seek to minimize the impacts of cyber and other security threats, we must rely on the safeguards put in place by those entities. Any remedial costs or other liabilities related to cyber or other security threats may not be fully insured or indemnified by other means. Occurrence of any of these security threats could adversely affect our reputation, ability to work on sensitive U.S. Government contracts, business operations and financial results.

## **Risks Relating To Dynasil's Stock**

***Xcede, our joint venture, is a pre-clinical stage business with no approved products, which makes it difficult to assess the business's future viability.***

In October 2013, Dynasil Biomedical formed Xcede, a joint venture with Mayo Clinic, to focus on and separately fund the development of its tissue sealant technology. Xcede has not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biomedical area. For example, to execute its business plan, Xcede will need to successfully:

- raise the funds necessary to execute its product development plan;
- manage its spending as costs and expenses increase during the clinical trial and regulatory approval processes;
- obtain required regulatory approvals for the development and commercialization of the tissue sealant product applications;
- maintain and expand the tissue sealant intellectual property portfolio;
- build and maintain robust sales, distribution and marketing capabilities, either on its own or in collaboration with strategic partners; and
- gain market acceptance for its products.

If Xcede is unsuccessful in accomplishing these objectives, it may not be able to develop its tissue sealant product, raise capital, expand its business or continue its operations, which may have a material adverse effect on our stock price.

***The market price for our common stock is particularly volatile given our status as a relatively unknown company with a small and thinly traded public float, which could lead to wide fluctuations in our share price.***

The market for our common stock is characterized by significant price volatility when compared to the shares of larger, more established companies that have large public floats, and we expect that our share price will continue to be more volatile than the shares of such larger, more established companies for the indefinite future. The volatility in our share price is attributable to a number of factors. First, as noted above, our common stock is, compared to the shares of such larger, more established companies, sporadically and thinly traded. As a consequence of this limited liquidity, the trading of relatively small quantities of shares by our stockholders may disproportionately influence the price of those shares in either direction. The price for our shares could, for example, decline precipitously in the event that a large number of our common stock is sold on the market without commensurate demand. As a consequence of this enhanced risk, more risk-averse investors may, under the fear of losing all or most of their investment in the event of negative news or lack of progress, be more inclined to sell their shares on the market more quickly and at greater discounts than would be the case with the stock of a larger, more established company that has a large public float. Many of these factors are beyond our control and may decrease the market price of our common stock, regardless of our operating performance. We cannot make any predictions or projections as to what the prevailing market price for our common stock will be at any time, including as to whether our common stock will sustain its current market price, or as to what effect that the sale of shares or the availability of common stock for sale at any time will have on the prevailing market price.

***We do not currently intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.***

We have never declared or paid any cash dividends on our common stock and do not currently intend to do so for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, you are not likely to receive any dividends on your common stock for the foreseeable future and the success of an investment in shares of our common stock will depend upon any future appreciation in its value. There is no

guarantee that shares of our common stock will appreciate in value or even maintain the price at which our stockholders have purchased their shares.

***If our internal control over financial reporting is found not to be effective or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls, investors could lose confidence in our financial reports, and our stock price may be adversely affected.***

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to include an internal control report with our Annual Report on Form 10-K. That report must include management's assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year. We evaluate our existing internal control over financial reporting based on the integrated framework issued in 2013 by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement, and may have to design enhanced processes and controls to address issues identified through this review. Remedying any deficiencies, significant deficiencies or material weaknesses that we identify may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

#### **ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

#### **ITEM 2. PROPERTIES**

We own a manufacturing and office facility consisting of a one-story, masonry and steel building containing approximately 15,760 square feet in West Berlin, NJ. We lease a 10,000 square foot manufacturing and office building in Ayer, MA with a lease that expires in May 2025. We lease 3,600 square feet of office space in a building in Littleton, MA with a lease that expires in July 2018. We lease a 52,880 square foot manufacturing and office building in Rochester, NY with a lease that expires in March 2018. We own a two-story, 44,000 square foot manufacturing and office facility in Ithaca, NY. We own a two-story, 17,000 square foot manufacturing and office facility in Margate, Kent, in the U.K. All of the foregoing owned and leased properties are used by our Optics segment. We lease a 40,000 square foot manufacturing, research, and office building in Watertown, MA for our RMD business from a related party with a month-to-month lease that continues until terminated by the landlord with not less than three years' prior written notice or by the Company with not less than six months' prior written notice. We lease 2,868 square feet of office space in Newton, MA for our Dynasil Corporation of America office with a lease that expires in December 2017. We believe that the properties are in satisfactory condition and suitable for our purposes. The New Jersey, New York, and U.K. properties are collateral against notes payable to banks.

#### **ITEM 3. LEGAL PROCEEDINGS**

None.

#### **ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

### **PART II**

#### **ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

##### **Market Information**

Since September 30, 2013, the Company's Common Stock has been listed on the NASDAQ Capital Market under the symbol "DYSL". From December 20, 2010 until September 30, 2013, the Company's Common Stock was listed on the NASDAQ Global Market. Prior to December 20, 2010, the Company's Common Stock was quoted on the

NASD-OTC Bulletin Board under the symbol "DYSL.OB".

The following table reflects the range of high and low common stock sales prices for the four quarters of fiscal 2016 and fiscal 2015 as reported by the NASDAQ Capital Market.

	<b>High &amp; Low Sale Prices</b>			
	<b>Years ended September 30,</b>			
	<b>2016</b>		<b>2015</b>	
	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
First quarter	\$ 2.04	\$ 1.45	\$ 1.59	\$ 1.15
Second quarter	2.01	1.36	1.62	1.26
Third quarter	1.78	1.27	1.64	1.29
Fourth quarter	1.56	0.91	2.88	1.34

As of December 1, 2016, there were 16,906,265 shares of the Company's common stock outstanding held by approximately 232 holders of record.

The Company has paid no cash dividends on its common stock since its inception. The Company intends to retain any future earnings for use in its business and does not intend to pay cash dividends on its common stock in the foreseeable future.

## **ITEM 6. SELECTED FINANCIAL DATA**

Not applicable.

## **ITEM 7. 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 appearing elsewhere in this Annual Report on Form 10-K.

### **Overview**

#### **Reportable Segments**

We have three reporting segments based on our main operating activities. Below is a summary of these segments:

- *Optics*: The Optics segment encompasses four business units – our original optics business (doing business as Dynasil Fused Silica), Optometrics, Hilger, and EMF – 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.
- *Contract Research*: The Contract Research segment consists of the Radiation Monitoring Devices, Inc. ("RMD") business unit.
- *Biomedical*: The Biomedical segment consists of a single business unit, Dynasil Biomedical Corporation, a medical technology incubator which owns rights to certain early stage medical technologies. In October 2013, Dynasil Biomedical formed Xcede Technologies, Inc, a joint venture with the Mayo Clinic to spin out and separately fund the development of a tissue sealant technology. Dynasil Biomedical currently has no operations other than relating to its equity ownership in Xcede.

The segment amounts included in MD&A are presented on a basis consistent with our internal management reporting and accounting principles generally accepted in the U.S. ("U.S. GAAP"). Segment information appearing in Note 16 – Segment, Customer and Geographical Reporting of the Notes to Financial Statements included in this Report is also presented on this basis. A description of our strategy is included in Item 1 of this Annual Report on Form 10-K. A description of our strategy is included in Item 1 of this Annual Report on Form 10-K.

Our markets are characterized by rapidly changing technology and the needs of our customers, which change and



evolve regularly. Accordingly, our success depends on our ability to develop services and products that address these changing needs and to provide the people and technology needed to deliver these services and products. To remain competitive, we must consistently provide superior service, technology and performance on a cost-effective basis to our customers. Our business performance also is influenced by a variety of other factors including, but not limited to, economic conditions, U.S. Government spending on research and development programs, competition, regulatory requirements and insurance costs. Further information on certain risks to our Company is included in Item 1A of this Annual Report on Form 10-K.

### **Fiscal 2016 Financial Overview**

Our revenue improved \$2.9 million to \$43.4 million in 2016, or 7%, compared to \$40.5 million in 2015. The Optics segment revenue continued to grow and increased \$1.9 million, or 9%, to \$23.7 million in 2016, while our Contract Research segment revenue increased \$1.0 million, or 5%, to \$19.8 million in 2016.

In fiscal year 2016, we had net income of \$0.3 million compared to a net loss of \$0.4 million in 2015. The net loss in 2015 included a \$0.4 million charge for the final termination and settlement of a subsidiary's pension plan as well as a \$0.2 million gain on the sale of a product line. Excluding the pension charge and the gain on sale of the product line in 2015, our net loss would have been \$0.2 million in 2015 compared to net income of \$0.3 million in 2016.

Our net income (loss) included losses of approximately \$2.1 million and \$1.7 million in 2016 and 2015, respectively, associated with research and start-up costs of Xcede, a joint venture with Mayo, in which we owned 83% of the common stock as of September 30, 2016. Because Dynasil has voting control of Xcede via its common stock ownership, Xcede is required to be included in our consolidated net income for financial reporting purposes.

The majority of the funding for Xcede in 2016 and 2015 was from the issuance of approximately \$0.8 million and \$0.7 million, respectively, of Xcede Convertible Notes to external investors (including certain officers and directors of the Company). Although it is anticipated that Dynasil will continue for the foreseeable future to hold a significant interest in Xcede, we expect that our interest will decrease over time, if and to the extent that Xcede is successful in raising equity financing from outside sources.

## Results of Operations

Results of Operations for the Fiscal Year Ended September 30,				
2016				
	Optics	Contract Research	Biomedical	Total
Revenue	\$ 23,686,000	\$ 19,756,000	\$ -	\$ 43,442,000
Gross profit	8,010,000	7,593,000	-	15,603,000
GM %	34%	38%	-	36%
SG&A	6,239,000	6,619,000	2,070,000	14,928,000
Gain on sale of assets	(4,000)	-	-	(4,000)
Operating income (loss)	1,775,000	974,000	(2,070,000)	679,000
Depreciation and amortization	949,000	249,000	69,000	1,267,000
Capital expenditures	1,503,000	432,000	109,000	2,044,000
Intangibles, net	517,000	230,000	320,000	1,067,000
Goodwill	959,000	4,939,000	-	5,898,000
Total assets	\$ 17,397,000	\$ 8,325,000	\$ 647,000	\$ 26,369,000
Results of Operations for the Fiscal Year Ended September 30,				
2015				
	Optics	Contract Research	Biomedical	Total
Revenue	\$ 21,783,000	\$ 18,753,000	\$ -	\$ 40,536,000
Gross profit	6,818,000	8,176,000	-	14,994,000
GM %	31%	44%	-	37%
SG&A	6,020,000	7,301,000	1,717,000	15,038,000
Gain on sale of assets	(178,000)	-	-	(178,000)
Operating income (loss)	976,000	875,000	(1,717,000)	134,000
Depreciation and amortization	839,000	296,000	61,000	1,196,000
Capital expenditures	1,173,000	91,000	119,000	1,383,000
Intangibles, net	678,000	264,000	283,000	1,225,000
Goodwill	1,192,000	4,939,000	-	6,131,000
Total assets	\$ 15,984,000	\$ 7,692,000	\$ 828,000	\$ 24,504,000

### Revenue

Revenue for the fiscal year ended September 30, 2016 was \$43.4 million, an increase of \$2.9 million or 7% from the \$40.5 million of revenue recorded in 2015.

Revenue in our Optics segment increased 9% to \$23.7 million, from \$21.8 million in 2015, the result of growth at two of our Optics business units. The majority of the increase was the result of sales related to the three-year crystal component supply agreement at our U.K. subsidiary. The other business unit achieved revenue growth in 2016 due to increases in volume.

Contract Research segment revenue increased 5% to \$19.8 million in 2016, from \$18.8 million in 2015, reflecting a slight improvement during the continued softness in Federal Agency contracting, including both award and funding timing. The contract revenue backlog has held steady at or near \$30 million from 2015, of which approximately 48% is SBIR grants. The Contract Research segment continues to seek to diversify its contracting sources and to limit reliance on both the SBIR program and the limited number of government agencies that currently contract for its research. This diversification also includes contract research for commercial businesses rather than governmental agencies.

The Biomedical segment is engaged in development of a tissue sealant product through its Xcede joint venture and

currently has no revenue.

### *Gross Profit*

Gross profit for fiscal year 2016 increased \$0.6 million, or 4%, to \$15.6 million from the prior year amount of \$15.0 million. Gross profit as a percentage of revenue decreased to 36% in 2016 from 37% in 2015 primarily as a result of lower gross profit margins in the Contract Research segment associated with the funding delays we experienced in the first half of 2016 when a large agency was having some system difficulties.

The Optics segment's gross profit improved increasing to \$8.0 million in 2016 from \$6.8 million in 2015. Gross profit as a percentage of revenue followed suit improving to 34% in 2016 from 31% in 2015 primarily as a result of changes implemented in manufacturing processes and upgrades made to certain capital equipment during the second half of fiscal year 2015, resulting in improvements in production yields.

Gross profit for the Contract Research segment declined \$0.6 million to \$7.6 million in 2016 from \$8.2 million in 2015 as a result of a decrease in the volume of direct labor hours billed and more costs in material and subcontract consulting. Gross profit as a percentage of revenue decreased to 38% in 2016 from 44% in 2015 as a result of the higher revenue in 2016.

### *Selling, General & Administrative ("SG&A") Expenses*

SG&A expenses remained unchanged at \$15.0 million or 34% of revenue in fiscal year 2016, this is a decrease from the 37% of revenue in fiscal year 2015 due to the higher revenue recorded in 2016.

SG&A within the Optics segment decreased to 26% of revenue from 28% of revenue in 2015. Spending increased in actual dollars to \$6.2 million in 2016 from \$6.0 million in 2015, primarily due to higher expenses associated with increases in research and marketing costs at certain of the business units.

Contract Research SG&A decreased to \$6.6 million, or 33%, of revenue in fiscal 2016 from \$7.3 million, or 39%, of revenue in the prior year. The lower SG&A expense in 2016 was a result of the continued implementation of the cost savings measures started in 2014 in response to the decline in government spending and contract awards, and Dynasil's decision in 2016 to allocate overhead expenses to our Xcede subsidiary in the Biomedical segment.

Finally, SG&A costs in the Biomedical segment in fiscal year 2016 were approximately \$2.1 million as compared to \$1.7 million in fiscal year 2015. The \$0.4 million increase in expenses year over year was primarily the result of Xcede issuing 238,535 shares of Xcede Common Stock to the Mayo Foundation for Medical Education and Research ("Mayo") in June per the anti-dilution clause in the existing licensing agreement. The issuance incurred a charge of \$0.2 million in stock compensation expense. The remaining SG&A expenses in 2016 and 2015 were substantially all a result of spending by the Xcede joint venture on the development and patent protection of the tissue sealant technology.

In fiscal years 2016 and 2015, Xcede raised approximately \$0.8 million and \$0.7 million of funding, respectively, from external investors, including certain of Dynasil's officers and directors, through the issuance of convertible notes. Although Dynasil has committed to fund \$1.2 million to Xcede, we expect Xcede will continue to require periodic external investor funding in amounts larger than what has been raised to date in order to pursue clinical trials and regulatory approvals of its tissue sealant technology. We are continuing to explore the availability of outside financing, including through a sale, licensing or joint venture, though we may not be able to secure any such financing arrangement on favorable terms or at all.

### *Net Interest Expense*

Net interest expense decreased 40% to \$0.3 million in 2016 from \$0.5 million in fiscal 2015, primarily as a result of a stronger operating performance in 2016. In addition, we implemented a cash sweep program at Middlesex Savings Bank of our bank accounts during the fourth quarter of fiscal 2015. Together, these items reduced borrowings under our secured line of credit with Middlesex and, therefore, interest expense.

### *Income Tax Expense*

Total income tax expense increased to \$51,000 in fiscal 2016 as compared to a tax credit of \$6,000 in fiscal 2015. The increase in tax expense is primarily due to a decrease in the current UK tax benefit due to a decrease in refundable UK research tax credits.

## *Net Income*

As a result of the items mentioned previously, our net income for the year ended September 30, 2016 was \$0.3 million, compared to a net loss of \$0.4 million in the prior year. The net loss in fiscal 2015 included a \$0.4 million charge for the final termination and settlement of a subsidiary's pension plan as well as a \$0.2 million gain on the sale of a product line. Net income in 2016 does not include any out of the ordinary items.

Our net income (loss) includes losses of approximately \$2.1 million and \$1.7 million in the years ended September 30, 2016 and 2015, respectively, from our Biomedical segment. Substantially all of the Biomedical losses in 2016 and 2015 were funded through the proceeds from Xcede's convertible notes offerings in fiscal years 2016 and 2015.

## **Liquidity and Capital Resources**

### *Liquidity Overview*

As of September 30, 2016, Dynasil is in compliance with the terms of all its outstanding indebtedness. As of such date, we had total indebtedness consisting of:

- \$1.8 million senior debt term loan with Middlesex Saving Bank, subject to the terms and conditions of the Middlesex Savings Bank Loan Agreement;
- approximately \$1.0 million of subordinated debt owed to Massachusetts Capital Resources Company;
- approximately \$3.1 million of Xcede Convertible Notes, including accrued interest, convertible into Xcede stock;
- approximately \$0.1 million of equipment loan financing; and
- approximately \$0.3 million of Notes Payable to two government entities.

In addition, our net cash as of September 30, 2016 was \$2.6 million, which was an increase of \$1.3 million, as compared to \$1.3 million at September 30, 2015. The cash improvement was primarily the result of the increased operating income.

We believe our cash on hand and borrowing capacity under our revolving line of credit will be sufficient to fund our current debt obligations, estimated capital expenditures and working capital needs for the next twelve months.

On May 1, 2014, Dynasil entered into a three year revolving line of credit arrangement with Middlesex Savings Bank ("Middlesex") for up to \$4.0 million with the amount available for advances determined monthly based on eligible billed and unbilled accounts receivable and inventory. As of September 30, 2016, no amounts were outstanding under the revolving line of credit with Middlesex.

The Middlesex line of credit is secured by substantially all our personal property and certain of the Company's equity interests in our foreign subsidiary, and is guaranteed by all of our wholly owned subsidiaries. The interest rate under the line of credit note is equal to the Prime Rate, but in no event less than 3.25%. The Middlesex loan agreement provides that the loan expires on May 1, 2017, at which time all outstanding principal and unpaid interest shall become due and payable.

The Middlesex line of credit was amended on September 29, 2015 to allow us to repay up to \$3 million of the subordinated debt owed to MCRC and also provided for us to convert up to \$2 million of the advances under the line of credit to a fixed rate note with the principal amortizing monthly over a five year term. On February 1, 2016, we converted \$2 million of our outstanding advances under the line of credit note to a fixed rate, five-year term note bearing at an annual interest rate of 4.5%.

Effective October 1, 2015, MCRC agreed to reduce the interest rate on its remaining outstanding indebtedness to 6% from 10% and to amend the principal repayment terms to provide for repayment of the remaining \$1 million outstanding on a monthly basis over two years beginning on September 30, 2016.

In May 2015, the terms of the Xcede convertible notes were amended to provide for an additional \$1 million of Convertible Notes issuances and to extend the notes maturity date. As of September 30, 2016, the terms of the

convertible notes provided that the notes were payable upon the demand of the holders of a majority of the aggregate outstanding amount of the notes, after June 30, 2017.

In November 2016, Xcede announced Cook Biotech Inc. committed to fund the pre-clinical testing of, and subject to the receipt of applicable regulatory approvals initiate clinical trials for, its first tissue sealant product. In addition, in November 2016, Dynasil committed to invest \$1.2 million of cash into Xcede over the following 18 months and all \$5.1 million in existing notes and accrued interest were converted into preferred stock of Xcede at a 20% discount to the price per share of the investments the Company has committed to make in Xcede, in accordance with the provisions of the notes.

#### *Net Cash Provided by Operating Activities*

Net cash provided by operating activities was \$2.1 million for fiscal year 2016 versus \$0.8 million for fiscal year 2015.

In 2016, the principal differences between the net income of \$0.3 million and net cash provided of \$2.1 million are for stock compensation expense of \$0.7 million, depreciation and amortization of \$1.3 million and inventory increase of \$1.1 million while changes to the short term asset and liability accounts in our balance sheet provided \$0.9 million.

In 2015, the principal differences between the net loss of \$0.4 million and the net cash provided of \$0.8 million are stock compensation expense of \$0.5 million, depreciation and amortization expense of \$1.2 million, pension expense of \$0.4 million and a gain on the sale of property, plant and equipment of \$0.2 million while changes to the short term asset and liability amounts in our balance sheet used \$1.0 million.

#### *Cash Flows from Investing Activities*

Cash flows from investing activities were a use of \$1.6 million for fiscal 2016 compared with a use of \$1.1 million for fiscal 2015. The use in both fiscal 2016 and 2015 were primarily the result of purchasing property, plant and equipment. We currently plan for capital expenditures of \$2.0 million during fiscal year 2017, depending on the availability of cash and/or financing.

Substantially all of the \$2.1 million of Biomedical loss in 2016 and the \$1.7 million Biomedical loss in 2015 were funded using the proceeds from Xcede's convertible notes offerings during 2016 and 2015 which raised an aggregate of \$1.4 million.

#### *Cash Flows from Financing Activities*

Cash flows from financing activities generated \$0.9 million of net cash in fiscal 2016, primarily through our Xcede joint venture which raised \$0.8 million in convertible notes in 2016. We implemented a cash sweep process in 2015 which resulted in the full repayment of the line of credit in July. We have the full \$4.0 million line available.

#### *Terms of Outstanding Indebtedness*

The following is a summary of the terms of the existing loan agreement in place with our senior lender, Middlesex Savings Bank, and the terms of subordinated debt owed to Massachusetts Capital Resources Company.

#### *Middlesex Savings Bank Loan Agreement*

On May 1, 2014, Dynasil entered into a loan and security agreement (the "Bank Loan Agreement") and line of credit note (the "Note") with Middlesex Savings Bank pursuant to which Middlesex agreed to provide up to \$4 million, subject to the availability restrictions described below, under a revolving line of credit loan to Dynasil for general corporate purposes. The Bank Loan Agreement provides that the loan expires on May 1, 2017, at which time all outstanding principal and unpaid interest shall become due and payable.

The Bank Loan Agreement and the Note are secured by (i) a security interest in substantially all of the Company's personal property and (ii) sixty-five percent (65%) of the Company's equity interests in its U.K. subsidiary, Hilger Crystals, Ltd. Under the note, the borrowing base is determined monthly based on eligible billed and unbilled accounts receivable and eligible inventory. The interest rate under the Note is equal to the Prime Rate, but in no event less than 3.25%.

The Bank Loan Agreement also contains other terms, conditions and provisions that are customary for commercial lending transactions of this sort. The Bank Loan Agreement requires Dynasil, at the close of each fiscal quarter, to

maintain a Debt Service Coverage ratio, as defined, of at least 1.20 to 1.00 and a Maximum Leverage Ratio, as defined of less than 3.00 to 1.00, both on a trailing four quarter basis.

The Bank Loan Agreement was amended on September 29, 2015 to allow the Company to repay up to \$3 million of the subordinated debt owed Massachusetts Capital Resources Company ("MCRC") and also provide for the Company, if it meets certain conditions, to convert up to \$2 million of the advances under the line of credit to a fixed rate note with the principal amortizing monthly over a five year term.

On February 1, 2016, the Company converted \$2 million of its outstanding advances under the line of credit note to a fixed rate, five-year term note bearing at an annual interest rate of 4.5%.

The Bank Loan Agreement provides for events of default customary for credit facilities of this type, including but not limited to non-payment, defaults on other debt, misrepresentation, breach of covenants, representations and warranties, insolvency and bankruptcy, change of management, as defined and the occurrence of a material adverse change, as defined. As a result of the material adverse change clause, all Middlesex Savings Bank outstanding debt has been classified as a current liability.

#### *Note Purchase Agreement – Massachusetts Capital Resource Company*

On July 31, 2012, the Company entered into a Note Purchase Agreement (the "Agreement") with MCRC. Pursuant to the terms of the Agreement, the Company issued and sold to MCRC a \$3.0 million subordinated note (the "Subordinated Note") for proceeds of \$3.0 million. The Subordinated Note initially matured on July 31, 2017, unless accelerated pursuant to an event of default, as described below. The Subordinated Note initially provided for interest at the rate of ten percent (10%) per annum, with 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, 2012. Under the original terms of the Agreement, beginning on and with September 30, 2015, and on the last day of each calendar month thereafter through and including July 31, 2017, the Company would redeem, without premium, \$130,000 in principal amount of the Subordinated Note together with all accrued and unpaid interest then due on the amount redeemed.

Effective October 1, 2015, in connection with the prepayment of \$2 million of the Subordinated Note, MCRC agreed to adjust the interest rate to 6% and to amend the principal repayment terms such that beginning on September 30, 2016, the Company will redeem monthly, without premium, \$43,478 in principal amount of the Subordinated Note together with all accrued and unpaid interest then due on the amount redeemed.

Under the terms of the Agreement and a Subordination Agreement dated July 31, 2012, MCRC and any successor holder of the Subordinated Note have agreed that the payment of the principal of and interest on the Subordinated Note shall be subordinated in right of payment, to the prior payment in full of all indebtedness of the Company for money borrowed from banks or other institutional lenders at any time outstanding.

The Agreement contains customary representations, warranties and covenants, including covenants by the Company limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. In addition, the Agreement contains financial covenants by the Company (as further defined in the Agreement) that (i) impose a Consolidated Maximum Leverage Ratio (consolidated total funded debt to consolidated EBITDA) equal to or less than 4.5 to 1.0 for each rolling four quarter period ending on or after March 31, 2013, and (ii) require a Consolidated Fixed Charge Coverage Ratio (consolidated EBITDA to consolidated fixed charges) of not less than 0.95 to 1.00 for each rolling four quarter period ending on or after September 30, 2013.

The Agreement also provides for events of default customary for agreements of this type, including, but not limited to, non-payment, breach of covenants, insolvency and defaults on other debt. Upon an event of default, MCRC may elect to declare all obligations (including principal, interest and all others amounts payable) immediately due and payable, which shall occur automatically if the Company becomes insolvent.

## **“Off Balance Sheet” Arrangements**

Dynasil has no “Off Balance Sheet” arrangements.

## **NEW ACCOUNTING PRONOUNCEMENTS**

See Note 2, "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements for a full description of recent accounting pronouncements, including the respective dates of adoption or expected adoption and effects on our consolidated financial position, results of operations and cash flows.

## **CRITICAL ACCOUNTING POLICIES**

Our discussion and analysis of financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America and pursuant to the rules and regulations of the SEC. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We have identified the following as the items that require the most significant judgment and often involve complex estimation: revenue recognition, valuation of long-lived assets, intangible assets and goodwill, estimating allowances for doubtful accounts receivable, stock-based compensation and accounting for income taxes.

### **Revenue Recognition**

Revenue from sales of products is recognized at the time title and the risks and rewards of ownership pass. Revenue is recognized when the products are shipped per customers' instructions, the contract has been executed, the contract or sales price is fixed or determinable, delivery of services or products has occurred and our ability to collect the contract price is considered reasonably assured.

Revenue from research and development activities is derived generally from the following types of contracts: reimbursement of costs plus fees, fixed price or time and material type contracts. Government funded services revenue from cost plus contracts are recognized as costs are incurred on the basis of direct costs plus allowable indirect costs and an allocable portion of the contracts' fixed fees. Revenue from fixed-type contracts is recognized under the percentage of completion method with estimated costs and profits included in contract revenue as work is performed. Revenue from time and materials contracts are recognized as costs are incurred at amounts generally commensurate with billing amounts. Recognition of losses on projects is taken as soon as the loss is reasonably determinable.

The majority of our contract research revenue is derived from the United States government and government related contracts. Such contracts have certain risks which include dependence on future appropriations and administrative allotment of funds and changes in government policies. Costs incurred under United States government contracts are subject to audit. We believe the results of such audits will not have a material adverse effect on our financial position or results of operations.

### **Goodwill**

Goodwill and intangible assets which have indefinite lives are subject to annual impairment tests. 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.

We generally perform our annual impairment testing of goodwill during the fourth quarter of the fiscal year, or more frequently if events or changes in circumstances indicate that the assets might be impaired. We test impairment at the reporting unit level using the two-step process. Our primary reporting units tested for impairment are RMD, which comprises our Contract Research segment, and Hilger, which is a component of the Optics segment.

Step one of the impairment testing compares the carrying value of a reporting unit to its fair value. The carrying value represents the net book value of the net assets of the reporting unit or simply the equity of the reporting unit if the reporting unit is the entire entity. If the fair value of the reporting unit is greater than its carrying value, no impairment

has been incurred and no further testing or analysis is necessary. We estimate fair value using a discounted cash flow methodology which calculates fair value based on the present value of estimated future cash flows. Estimating future cash flows requires significant judgment and includes making assumptions about projected growth rates, industry-specific factors, working capital requirements, weighted average cost of capital, and current and anticipated operating conditions. Assumptions by management are necessary to evaluate the impact of operating and economic changes. Our evaluation includes assumptions on future growth rates and cost of capital that are consistent with internal projections and operating plans. The use of different assumptions or estimates for future cash flows could produce different results. We regularly assesses the estimates based on the actual performance of each reporting unit.

If the carrying value of a reporting unit is greater than its fair value, step two of the impairment testing process is performed to determine the amount of impairment to be recognized. Step two requires us to estimate an implied fair value of the reporting unit's goodwill by allocating the fair value of the reporting unit to all of the assets and liabilities other than goodwill. An impairment then exists if the carrying value of the goodwill is greater than the goodwill's implied fair value. With respect to our annual goodwill impairment testing performed during the fourth quarter of fiscal year 2016, step one of the testing determined the estimated fair value of RMD and Hilger exceeded their carrying values by more than 20%. Accordingly, we concluded that no impairment had occurred and no further testing was necessary.

### **Impairment of Long-Lived Assets**

Our long-lived assets include property, plant and equipment and intangible assets subject to amortization. We evaluate 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, we estimate 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.

There was no impairment charge during the years ended September 30, 2016 and 2015.

### **Intangible Assets**

Our intangible assets consist of acquired customer relationships and trade names of Hilger Crystals, Ltd., acquired know-how of Radiation Monitoring Devices, Inc. and provisionally patented technologies within Dynasil Biomedical Corp.

We estimate the fair value of indefinite-lived intangible assets using an income approach, and recognize an impairment loss when the estimated fair value of the indefinite-lived intangible assets is less than the carrying value. During the fourth quarter of fiscal year 2016, we conducted our annual impairment review of indefinite-lived intangible assets and concluded the fair value exceeded the carrying value.

We review intangible assets with finite lives for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. Recoverability of these intangible assets is assessed based on the undiscounted future cash flows expected to result from the use of the asset. If the undiscounted future cash flows are less than the carrying value, the intangible assets with finite lives are considered to be impaired. The amount of the impairment loss, if any, is measured as the difference between the carrying amount of these assets and the fair value based on a discounted cash flow approach or, when available and appropriate, to comparable market values.

We amortize our intangible assets with definitive lives over their useful lives, which range from 4 to 20 years, based on the time period we expect to receive the economic benefit from these assets.



## **Allowance for Doubtful Accounts Receivable**

We perform ongoing credit evaluations of our customers and adjust credit limits based upon payment history and the customer's current credit worthiness, as determined by a 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 historical experience and any specific customer collection issues that have been 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 as 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 future operating results.

## **Stock-Based Compensation**

We account for stock-based compensation using fair value. Compensation costs are recognized for stock options granted to employees and directors. Options and warrants granted to employees and non-employees are recorded as an expense over the requisite service period based on the grant date estimated fair value of the grant, 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 taxes considering several factors, including our estimate of the likelihood of our generating sufficient taxable income in future years during the period over which temporary differences reverse. We believe it is more likely than not that these carry-forwards will not be realized and, therefore, a valuation allowance has been applied.

As a result of the conversion of the Xcede convertible notes in November 2016, our ownership percentage in Xcede decreased to less than 80%. Based on this ownership percentage, beginning in fiscal year 2017, Xcede will no longer be included in the consolidated federal tax return and we will no longer be able to offset taxable income or share net operating losses with Xcede. The tax accounting impact, including the assessment on the valuation allowance against the U.S. net deferred tax assets, will be evaluated in subsequent periods. The valuation allowance will be addressed independently for Dynasil and Xcede, instead of on a consolidated basis.

## **Forward-Looking Statements**

The statements contained in this Annual Report on Form 10-K 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 fund Xcede, results of our pre-clinical and planned clinical trials, regulatory approvals, 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 and the strength of our intellectual property portfolio. 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 its resorbable hemostatic patch, clinical results of Xcede's programs which may not support further development, 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, and seasonality, as well as the uncertainties set forth in this Annual Report on Form 10-K, 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 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

### Financial Statements

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	F-2
Consolidated Financial Statements:	
Balance Sheets as of September 30, 2016 and 2015	F-3
Statements of Operations and Comprehensive Income (Loss) for the years ended September 30, 2016 and 2015	F-5
Statements of Stockholders' Equity for the years ended September 30, 2016 and 2015	F-6
Statements of Cash Flows for the years ended September 30, 2016 and 2015	F-7
Notes to Consolidated Financial Statements	F-8

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders  
Dynasil Corporation of America and Subsidiaries  
Newton, Massachusetts

We have audited the accompanying consolidated balance sheets of Dynasil Corporation of America and Subsidiaries (the Company) as of September 30, 2016 and 2015 and the related consolidated statements of operations and comprehensive income (loss), stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Dynasil Corporation of America and Subsidiaries as of September 30, 2016 and 2015, and the results of their operations and their cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ RSM US LLP

Boston, Massachusetts  
December 21, 2016

**DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
**SEPTEMBER 30, 2016 and 2015**

<b>ASSETS</b>		
	<b>September 30,</b>	<b>September 30,</b>
	<b>2016</b>	<b>2015</b>
<b>Current Assets</b>		
Cash and cash equivalents	\$ 2,607,000	\$ 1,295,000
Accounts receivable, net of allowances of \$171,000 and \$168,000 at September 30, 2016 and 2015, respectively	3,502,000	3,382,000
Costs in excess of billings and unbilled receivables	1,208,000	1,518,000
Inventories, net of reserves	3,726,000	3,066,000
Prepaid expenses and other current assets	1,078,000	1,167,000
<b>Total current assets</b>	<b>12,121,000</b>	<b>10,428,000</b>
Property, Plant and Equipment, net	7,223,000	6,662,000
<b>Other Assets</b>		
Intangibles, net	1,067,000	1,225,000
Goodwill	5,898,000	6,131,000
Security and other deposits	60,000	58,000
<b>Total other assets</b>	<b>7,025,000</b>	<b>7,414,000</b>
<b>Total Assets</b>	<b>\$ 26,369,000</b>	<b>\$ 24,504,000</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>Current Liabilities</b>		
Line of credit	\$ -	\$ 1,455,000
Current portion of long-term debt	2,477,000	113,000
Capital lease obligations, current portion	105,000	76,000
Convertible notes	3,085,000	2,123,000
Accounts payable	1,627,000	1,886,000
Deferred revenue	238,000	109,000
Accrued expenses and other liabilities	2,955,000	2,650,000
<b>Total current liabilities</b>	<b>10,487,000</b>	<b>8,412,000</b>
<b>Long-term Liabilities</b>		
Debt, net of current portion and deferred financing costs	736,000	1,287,000
Capital lease obligations, net of current portion	173,000	43,000
Deferred tax liability	263,000	284,000
Other long-term liabilities	43,000	50,000
<b>Total long-term liabilities</b>	<b>1,215,000</b>	<b>1,664,000</b>

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

**DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
**SEPTEMBER 30, 2016 and 2015 (Continued)**

<b>LIABILITIES AND STOCKHOLDERS' EQUITY (Continued)</b>		
	<b>September 30,</b>	<b>September 30,</b>
	<b>2016</b>	<b>2015</b>
Stockholders' Equity		
Common Stock, \$0.0005 par value, 40,000,000 shares authorized, 17,677,284 and 17,368,738 shares issued, 16,867,124 and 16,558,578 shares outstanding at September 30, 2016 and 2015, respectively.	9,000	9,000
Additional paid in capital	20,128,000	19,650,000
Accumulated other comprehensive income (loss)	(699,000)	110,000
Accumulated deficit	(3,479,000)	(4,167,000)
Less 810,160 shares of treasury stock - at cost	(986,000)	(986,000)
Total Dynasil stockholders' equity	14,973,000	14,616,000
Noncontrolling interest	(306,000)	(188,000)
Total stockholders' equity	14,667,000	14,428,000
<b>Total Liabilities and Stockholders' Equity</b>	<b>\$ 26,369,000</b>	<b>\$ 24,504,000</b>

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

**DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)**  
**FOR THE YEARS ENDED SEPTEMBER 30, 2016 and 2015**

	<b>2016</b>	<b>2015</b>
Net revenue	\$ 43,442,000	\$ 40,536,000
Cost of revenue	27,839,000	25,542,000
Gross profit	15,603,000	14,994,000
Operating expenses:		
Sales and marketing	1,153,000	1,200,000
Research and development	998,000	1,244,000
General and administrative	12,777,000	12,594,000
(Gain) loss on sale of assets	(4,000)	(178,000)
Total operating expenses	14,924,000	14,860,000
Income (loss) from operations	679,000	134,000
Interest expense, net	294,000	493,000
Income (loss) before taxes	385,000	(359,000)
Income tax (credit)	51,000	(6,000)
Net income (loss)	334,000	(353,000)
Less: Net loss attributable to noncontrolling interest	(354,000)	(119,000)
Net income (loss) attributable to common stockholders	\$ 688,000	\$ (234,000)
Net income (loss)	\$ 334,000	\$ (353,000)
Other comprehensive income (loss):		
(Increase) decrease in pension liability	-	318,000
Foreign currency translation	(809,000)	(306,000)
Total comprehensive income (loss)	\$ (475,000)	\$ (341,000)
Basic net income (loss) per common share	\$ 0.04	\$ (0.01)
Diluted net income (loss) per common share	\$ 0.04	\$ (0.01)
Weighted average shares outstanding		
Basic	16,657,563	16,402,893
Diluted	16,693,501	16,402,893

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

**DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**  
**FOR THE YEARS ENDED SEPTEMBER 30, 2016 and 2015**

	Common Shares	Common Amount	Additional Paid-in Capital	Other Comprehensive Income (Loss)	Accumulated Deficit	Treasury Stock Shares	Treasury Stock Amount	Noncontrolling Interest	Total Stockholders' Equity
Balance, September 30, 2014	17,140,182	\$ 9,000	\$ 19,195,000	\$ 98,000	\$ (3,933,000)	810,160	\$ (986,000)	\$ (69,000)	\$ 14,314,000
Issuance of shares of common stock under employee stock purchase plan	9,698	-	13,000	-	-	-	-	-	13,000
Stock-based compensation costs	228,500	-	459,000	-	-	-	-	-	459,000
Adjustment for escrow settlement	(9,642)	-	(17,000)	-	-	-	-	-	(17,000)
Settlement of pension obligation, net of tax	-	-	-	318,000	-	-	-	-	318,000
Foreign currency translation adjustment	-	-	-	(306,000)	-	-	-	-	(306,000)
Net loss	-	-	-	-	(234,000)	-	-	(119,000)	(353,000)
Balance, September 30, 2015	17,368,738	\$ 9,000	\$ 19,650,000	\$ 110,000	\$ (4,167,000)	810,160	\$ (986,000)	\$ (188,000)	\$ 14,428,000
Issuance of shares of common stock under employee stock purchase plan	13,742	-	16,000	-	-	-	-	-	16,000
Stock-based compensation costs	294,804	-	462,000	-	-	-	-	236,000	698,000
Foreign currency translation adjustment	-	-	-	(809,000)	-	-	-	-	(809,000)
Net income	-	-	-	-	688,000	-	-	(354,000)	334,000
Balance, September 30, 2016	17,677,284	\$ 9,000	\$ 20,128,000	\$ (699,000)	\$ (3,479,000)	810,160	\$ (986,000)	\$ (306,000)	\$ 14,667,000

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



**DYNASIL CORPORATION OF AMERICA AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**FOR THE YEARS ENDED SEPTEMBER 30, 2016 and 2015**

	<b>2016</b>	<b>2015</b>
Cash flows from operating activities:		
Net income (loss)	\$ 334,000	\$ (353,000)
Adjustments to reconcile net income (loss) to net cash:		
Stock compensation expense	698,000	459,000
Foreign exchange loss (gain)	143,000	70,000
Gain on sale of assets	(4,000)	(178,000)
Depreciation and amortization	1,267,000	1,196,000
Pension expense	-	318,000
Provision for inventories	182,000	137,000
Other	201,000	209,000
Other changes in assets and liabilities:		
Accounts receivable, net	(271,000)	(196,000)
Inventories	(1,080,000)	(365,000)
Costs in excess of billings and unbilled receivables	310,000	(283,000)
Prepaid expenses and other assets	8,000	(346,000)
Accounts payable	(176,000)	304,000
Accrued expenses and other liabilities	368,000	(145,000)
Deferred revenue	129,000	9,000
<b>Net cash from operating activities</b>	<b>2,109,000</b>	<b>836,000</b>
Cash flows from investing activities:		
Proceeds from sale of assets	4,000	244,000
Purchases of property, plant and equipment	(1,616,000)	(1,310,000)
<b>Net cash from investing activities</b>	<b>(1,612,000)</b>	<b>(1,066,000)</b>
Cash flows from financing activities:		
Proceeds from issuance of common stock	16,000	12,000
Net proceeds from issuance of convertible notes	840,000	613,000
Principal payments on capital leases	(118,000)	(147,000)
Proceeds from (payments of) line of credit, net	545,000	2,501,000
Payments on long-term debt	(349,000)	(5,244,000)
<b>Net cash from financing activities</b>	<b>934,000</b>	<b>(2,265,000)</b>
Effect of exchange rates on cash and cash equivalents	(119,000)	(52,000)
<b>Net change in cash and cash equivalents</b>	<b>1,312,000</b>	<b>(2,547,000)</b>
Cash and cash equivalents, beginning	\$ 1,295,000	\$ 3,842,000
Cash and cash equivalents, ending	<u>\$ 2,607,000</u>	<u>\$ 1,295,000</u>

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

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 1 – Nature of Operations**

**Nature of Operations**

Dynasil Corporation of America (“Dynasil” or the “Company”) is primarily engaged in the development, marketing and manufacturing of detection, sensing and analysis technology and optical components as well as contract research. The Company’s products and services are used in a broad range of application markets including the homeland security, industrial and medical markets sectors. The products and services are sold throughout the United States (“U.S.”) and internationally.

**Note 2 – Summary of Significant Accounting Policies**

**Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts of assets and liabilities and the disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

**Principles of Consolidation**

The accompanying consolidated financial statements include the accounts of Dynasil Corporation of America and its wholly-owned subsidiaries: Optometrics Corporation (“Optometrics”), Evaporated Metal Films Corporation (“EMF”), Dynasil Products, formerly known as RMD Instruments Corp. (“Dynasil Products”), Radiation Monitoring Devices, Inc. (“RMD”), Hilger Crystals, Ltd (“Hilger”) and Dynasil Biomedical Corp (“Dynasil Biomedical”). 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 September 30, 2016, Dynasil Biomedical owned 83% of Xcede’s common stock and as a result, Xcede is included in the Company’s consolidated balance sheets, results of operations and cash flows. The remaining 17% of Xcede’s common stock is non-controlling interest and is treated as such. All significant intercompany transactions and balances have been eliminated.

**Revenue Recognition**

Revenue from sales of products is recognized at the time title and the risks and rewards of ownership pass. Revenue is recognized when the products are shipped per customers’ instructions, the contract has been executed, the contract or sales price is fixed or determinable, delivery of services or products has occurred and the Company’s ability to collect the contract price is considered reasonably assured.

Revenue from research and development activities is derived generally from the following types of contracts: reimbursement of costs plus fees, fixed price or time and material type contracts. Government funded services revenue from cost plus contracts are recognized as costs are incurred on the basis of direct costs plus allowable indirect costs and an allocable portion of the contracts’ fixed fees. Revenue from fixed-type contracts is recognized under the percentage of completion method with estimated costs and profits included in contract revenue as work is performed. Revenue from time and materials contracts are recognized as costs are incurred at amounts represented by agreed billing amounts. Recognition of losses on projects is taken as soon as the loss is reasonably determinable. The Company has an accrual for contract losses in the amount of \$110,000 as of September 30, 2016 and 2015.

The majority of the Company’s contract research revenue is derived from the United States government and government related contracts. Such contracts have certain risks which include dependence on future appropriations and administrative allotment of funds and changes in government policies. Costs incurred under United States government contracts are subject to audit. The Company believes that the results of such audits will not have a material adverse effect on its financial position or its results of operations.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Allowance for Doubtful Accounts Receivable**

The Company performs ongoing credit evaluations of its customers and adjusts credit limits based upon payment history and the customer's current credit worthiness, as determined by a review of their current credit information. The Company continuously monitors collections and payments from our customers and maintains a provision for estimated credit losses based upon historical experience and any specific customer collection issues that have been identified. While such credit losses have historically been minimal, within expectations and the provisions established, the Company cannot guarantee that it will continue to experience the same credit loss rates as in the past. A significant change in the liquidity or financial position of any significant customers could have a material adverse effect on the collectability of accounts receivable and future operating results. When all collection efforts have failed and it is deemed probable that a customer account is uncollectible, that balance is written off against the existing allowance.

**Shipping and Handling Costs**

Shipping and handling costs are included in the cost of sales. The amounts billed for shipping and included in net revenue were approximately \$49,000 in both the years ended September 30, 2016 and 2015.

**Research and Development**

The Company expenses research and development costs as incurred. Research and development costs include salaries, employee benefit costs, direct project costs, supplies and other related costs. Substantially all the Contract Research segment's cost of revenue relates to research contracts performed by RMD which are in turn billed to the contracting party. Amounts of research and development included within cost of revenue for the years ended September 30, 2016 and 2015 were \$12.2 million and \$10.5 million, respectively. Research and development for our other businesses totaled \$1.0 million in fiscal year 2016 and \$1.2 million in fiscal year 2015.

**Costs in Excess of Billings and Unbilled Receivables**

Costs in excess of billings and unbilled receivables relate to research and development contracts and consists of actual costs incurred plus fees in excess of billings at provisional contract rates.

**Patent Costs**

Costs incurred in filing, prosecuting and maintaining patents (principally legal fees) are expensed as incurred and recorded within selling, general and administrative expenses on the consolidated statements of operations. Such costs aggregated approximately \$0.2 and \$0.5 million for the years ended September 30, 2016 and 2015, respectively. Xcede capitalizes patent costs, which equaled \$0.1 million for the years ended September 30, 2016 and 2015.

**Inventories**

Inventories are stated at the lower of average cost or market. Cost is determined using the first-in, first-out (FIFO) method and includes material, labor and overhead. Inventories consist primarily of raw materials, work-in-process and finished goods.

A significant decrease in demand for the Company's products could result in a short-term increase in the cost of inventory purchases and an increase of excess inventory quantities on hand. In addition, as technologies change or new products are developed, product obsolescence could result in an increase in the amount of obsolete inventory quantities on hand. The Company records, as a charge to cost of revenue, any amounts required to reduce the carrying value to net realizable value.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Property, Plant and Equipment**

Property, plant and equipment are recorded at cost or at fair market value for acquired assets. Depreciation is provided using the straight-line method over the estimated useful lives of the respective assets. The estimated useful lives of assets for financial reporting purposes are as follows: building and improvements, 8 to 25 years; machinery and equipment, 5 to 20 years; office furniture and fixtures, 5 to 10 years; transportation equipment, 5 years. Maintenance and repairs are charged to expense as incurred; major renewals and betterments are capitalized. When items of property, plant and equipment are sold or retired, the related costs and accumulated depreciation are removed from the accounts and any gain or loss is included in income.

**Goodwill**

The Company annually assesses goodwill impairment at the end of the fourth quarter of the fiscal year by applying a fair value test. In the first step of testing for goodwill impairment, the Company estimates the fair value of each reporting unit. The reporting units have been determined as RMD, which is the Contract Research reportable segment, and Hilger, which is a component of the Optics reportable segment. The Company compares the fair value with the carrying value of the net assets assigned to each reporting unit. If the fair value is less than its carrying value, then the Company performs a second step and determines the fair value of the goodwill. In this second step, the fair value of goodwill is determined by deducting the fair value of a reporting unit's identifiable assets and liabilities from the fair value of the reporting unit as a whole, as if that reporting unit had just been acquired and the purchase price were being initially allocated. If the fair value of the goodwill is less than its carrying value for a reporting unit, an impairment charge is recorded to earnings.

To determine the fair value of each of the reporting units as a whole, the Company uses a discounted cash flow analysis, which requires significant assumptions and estimates about the future operations of each reporting unit. Significant judgments inherent in this analysis include the determination of appropriate discount rates, the amount and timing of expected future cash flows and growth rates. The cash flows employed in the discounted cash flow analyses are based on financial forecasts developed internally by management. The discount rate assumptions are based on an assessment of the Company's risk adjusted discount rate, applicable for each reporting unit. In assessing the reasonableness of the determined fair values of the reporting units, the Company evaluates its results against its current market capitalization.

In addition, the Company evaluates a reporting unit for impairment if events or circumstances change between annual tests indicating a possible impairment. Examples of such events or circumstances include the following:

- a significant adverse change in legal status or in the business climate,
- an adverse action or assessment by a regulator,
- a more likely than not expectation that a segment or a significant portion thereof will be sold, or
- the testing for recoverability of a significant asset group within the segment.

**Intangible Assets**

The Company's intangible assets consist of acquired customer relationships, trade names, acquired backlog, know-how and provisionally patented technologies. The Company amortizes its intangible assets with definitive lives over their useful lives, which range from 4 to 20 years, based on the time period the Company expects to receive the economic benefit from these assets.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

The Company has a trade name related to its subsidiary located in the United Kingdom (“U.K.”) that has been determined to have an indefinite life and is therefore not subject to amortization and is reviewed at least annually for potential impairment. The fair value of the Company’s trade name is estimated and compared to its carrying value to determine if impairment exists. The Company estimates the fair value of this intangible asset based on an income approach using the relief-from-royalty method. This methodology assumes that, in lieu of ownership, a third party would be willing to pay a royalty in order to exploit the related benefits of this asset. This approach is dependent on a number of factors, including estimates of future sales, royalty rates in the category of intellectual property, discount rates and other variables. Significant differences between these estimates and actual results could materially affect the Company’s future financial results.

**Recovery of Long-Lived Assets**

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 (other than goodwill and any indefinite lived assets) or whether the remaining balances of those assets should be evaluated for possible impairment. Long-lived assets include, for example, customer relationships, trade names, backlog, know-how and provisionally patented technologies. Events or changes in circumstances that may indicate that an asset may be impaired include the following:

- a significant decrease in the market price of an asset or asset group,
- a significant adverse change in the extent or manner in which an asset or asset group is being used or in its physical condition,
- a significant adverse change in legal factors or in the business climate that could affect the value of an asset or asset group, including an adverse action or assessment by a regulator,
- an accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset,
- a current period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group,
- a current expectation that, more likely than not, a long-lived asset or asset group will be sold or otherwise disposed of significantly before the end of its previously estimated useful life, or
- an impairment of goodwill at a reporting unit.

If an impairment indicator occurs, the Company performs a test of recoverability by comparing the carrying value of the asset or asset group to its undiscounted expected future cash flows. The Company groups its long-lived assets for this purpose at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets or asset groups. If the carrying values are in excess of undiscounted expected future cash flows, the Company measures any impairment by comparing the fair value of the asset or asset group to its carrying value.

To determine fair value the Company uses discounted cash flow analyses and estimates about the future cash flows of the asset or asset group. This analysis includes a determination of an appropriate discount rate, the amount and timing of expected future cash flows and growth rates. The cash flows employed in the discounted cash flow analyses are typically based on financial forecasts developed internally by management. The discount rate used is commensurate with the risks involved. The Company may also rely on third party valuations and or information available regarding the market value for similar assets.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

If the fair value of an asset or asset group is determined to be less than the carrying amount of the asset or asset group, impairment in the amount of the difference is recorded in the period that the impairment occurs. Estimating future cash flows requires significant judgment and projections may vary from the cash flows eventually realized.

**Advertising**

The Company expenses all advertising costs as incurred. Advertising expense for the years ended September 30, 2016 and 2015 was approximately \$105,000 and \$96,000, respectively.

**Retirement Plans**

The Company has retirement savings plans available to substantially all full time employees which are intended to qualify as deferred compensation plans under Section 401(k) of the Internal Revenue Code and similar laws in the United Kingdom. Pursuant to these plans, employees contribute amounts as required or allowed by the plans or by law. The Company also makes matching contributions in accordance with the terms of the plans.

The Company's EMF subsidiary previously had a defined benefit pension plan covering hourly employees. The plan provided defined benefits based on years of service and final average salary. As of September 30, 2006, the plan was frozen. On December 1, 2014, the Company terminated and settled its pension liability with each of the remaining participants in the plan.

**Income Taxes**

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.

The Company uses the asset and liability approach to account for deferred income taxes. Deferred tax assets and liabilities are classified as non-current. 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.

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. Based upon the Company's current losses and uncertainty of future profits, the Company has determined that the uncertainty regarding the realization of these assets is sufficient to warrant the need for a full valuation allowance against its U.S. net deferred tax assets.

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 September 30, 2016 and 2015, the Company has no unrecorded 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 September 30, 2016 and 2015, the Company had no accrued interest or penalties related to uncertain tax positions.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Earnings 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 during each period. 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 purposes of computing diluted earnings per share for the years ended September 30, 2016 and 2015, no common stock options were included in the calculation of dilutive shares as all of the 123,147 and 58,212 common stock options outstanding, respectively, had exercise prices above the current quarterly average market price per share and their inclusion would be anti-dilutive.

For the year ended September 30, 2016, 35,938 shares of common stock related to restricted stock were included in the denominator used to calculate diluted earnings per common share. If the Company had not been in a loss position for the year ended September 30, 2015, 7,924 shares of restricted stock would have been considered in the denominator used to calculate diluted earnings per common share.

The computations of the weighted shares outstanding for the years ended September 30 are as follows:

		<b>2016</b>	<b>2015</b>
Weighted average shares outstanding			
	Basic	16,657,563	16,402,893
	Effect of dilutive securities		
	Stock Options	-	-
	Restricted Stock	35,938	-
	Dilutive Average Shares Outstanding	<u>16,693,501</u>	<u>16,402,893</u>

**Stock Based Compensation**

Stock-based compensation cost is measured using the fair value recognition provisions of the FASB authoritative guidance, which requires the measurement and recognition of compensation expense for all stock-based awards made to employees and directors, including employee stock options, based on estimated fair values. Stock-based compensation cost is measured at the grant date based on the value of the award and is recognized over the requisite service period of the award.

**Foreign Currency Translation**

The operations of Hilger, the Company's foreign subsidiary, use their local currency as its functional currency. Assets and liabilities of the Company's foreign operations, denominated in their local currency, Great Britain Pounds (GBP), are translated at the rate of exchange at the balance sheet date. Revenue and expense accounts are translated at the average exchange rates during the period. Adjustments resulting from translating foreign functional currency financial statements into U.S. dollars are included in the foreign currency translation adjustment, a component of accumulated other comprehensive income in stockholders' equity. Gains and losses generated by transactions denominated in foreign currencies are recorded in the accompanying statement of operations in the period in which they occur.

**Comprehensive Income (Loss)**

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Accumulated comprehensive income (loss) represents cumulative translation adjustments related to Hilger, the Company's foreign subsidiary. The Company presents comprehensive income and losses in the consolidated statements of operations and comprehensive income (loss).

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Financial Instruments**

The carrying amount reported in the balance sheets for cash and cash equivalents, accounts receivable and accounts payable approximates fair value because of the immediate or short-term maturity of these financial instruments. The carrying amounts for fixed rate long-term debt and variable rate long-term debt approximate fair value because the underlying instruments are primarily at current market rates available to the Company for similar borrowings.

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of accounts receivable. In the normal course of business, the Company extends credit to certain customers. Management performs initial and ongoing credit evaluations of their customers and generally does not require collateral.

**Concentration of Credit Risk**

The Company maintains allowances for potential credit losses and has not experienced any significant losses related to the collection of its accounts receivable. As of September 30, 2016 and 2015, approximately \$1,159,000 and \$921,000 or 32% and 26% of the Company's accounts receivable are due from foreign sales.

The Company maintains cash and cash equivalents at various financial institutions in New Jersey, Massachusetts and New York. Accounts at each institution are insured by the Federal Deposit Insurance Corporation up to \$250,000. Hilger also maintains cash and cash equivalents at a financial institution in the U.K. Accounts at this institution are insured by the Financial Services Compensation Scheme, the U.K.'s deposit guarantee scheme, up to £75,000. At September 30, 2016 and 2015, the Company's uninsured bank balances totaled approximately \$2,031,000 and \$746,000, respectively. The Company has not experienced any significant losses on its cash and cash equivalents.

**Recent Accounting Pronouncements**

Effective October 1, 2015, the Company early adopted the guidance issued in Accounting Standards Update 2015-03, *Interest – Imputation of Interest (Topic 835)* (“ASU 2015-03”) to simplify the presentation of debt issuance costs. This standard requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The Company adopted this guidance on a retrospective basis, wherein the balance sheet of each individual period presented was adjusted to reflect the period-specific effects of applying the new guidance. As a result of the adoption of ASU 2015-03, \$12,000 of debt issuance costs at September 30, 2015 were reclassified from deferred financing costs, net to long-term debt in the consolidated balance sheets.

Effective October 1, 2015, the Company early adopted the guidance issued in Accounting Standards Update 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* (“ASU 2015-17”) which simplifies the presentation of deferred income taxes. ASU 2015-17 concludes that deferred tax liabilities and assets should be classified as noncurrent in a classified statement of financial position. The Company adopted this guidance on a retrospective basis, wherein the balance sheet of each individual period presented was adjusted to reflect the period-specific effects of applying the new guidance. The adoption of this ASU did not have a material impact on the Company's financial statements.

*Revenue from Contracts with Customers (Topic 606) Section A—Summary and Amendments That Create Revenue from Contracts with Customers (Topic 606) and Other Assets and Deferred Costs—Contracts with Customers (Subtopic 340-40).* In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers,” which supersedes the revenue recognition requirements in “Revenue Recognition (Topic 605),” and requires entities to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In March 2016, the FASB issued ASU 2016-08, “Revenue from Contracts with



**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Recent Accounting Pronouncements (continued)**

Customers - Principal versus Agent Considerations (Reporting revenue gross versus net),” which clarifies gross versus net revenue reporting when another party is involved in the transaction. In April 2016, the FASB issued ASU 2016-10, “Identifying Performance Obligations and Licensing,” which amends the revenue guidance on identifying performance obligations and accounting for licenses of intellectual property. There are two transition methods available under the new standard, either cumulative effect or retrospective. The new guidance is effective for the Company beginning in fiscal 2019. In May 2016, the FASB issued ASU 2016-12, “Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients,” which clarifies the revenue guidance. The Company is currently in the process of assessing the impact of these ASUs on its consolidated financial statements.

*Compensation—Stock Compensation (Topic 718) Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period.* In June 2014, the FASB issued ASU No. 2014-12, which clarifies the proper method of accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. Under the new guidance, a performance target that affects vesting and could be achieved after completion of the service period should be treated as a performance condition under FASB Accounting Standards Codification (ASC) 718 and, as a result, should not be included in the estimation of the grant-date fair value of the award. An entity should recognize compensation cost for the award when it becomes probable that the performance target will be achieved. In the event that an entity determines that it is probable that a performance target will be achieved before the end of the service period, the compensation cost of the award should be recognized prospectively over the remaining service period. The new guidance is effective for the Company beginning in fiscal 2017. Early adoption is permitted. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*Preparation of Financial Statements – Going Concern (Subtopic 205-40), Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern.* In August 2014, the FASB issued ASU No. 2014-15, which states that under GAAP, continuation of a reporting entity as a going concern is presumed as the basis for preparing financial statements unless and until the entity’s liquidation becomes imminent. If and when an entity’s liquidation becomes imminent, financial statements should be prepared under the liquidation basis of accounting. Even when an entity’s liquidation is not imminent, there may be conditions or events that raise substantial doubt about the entity’s ability to continue as a going concern. In those situations, financial statements should continue to be prepared under the going concern basis of accounting, but the amendments in this ASU should be followed to determine whether to disclose information about the relevant conditions and events. The new guidance is effective for the Company’s annual reporting for fiscal 2017, and for annual periods and interim periods thereafter. Early adoption is permitted. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*Income Statement - Extraordinary and Unusual Items (Subtopic 225-20): Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items.* In January 2015, the FASB issued ASU No. 2015-01, which eliminates the concept of extraordinary items in an entity’s income statement. Extraordinary classification outside of income from continuing operations was previously considered only when evidence clearly supported its classification as an extraordinary item. Extraordinary items were events and transactions that were distinguished by their unusual nature and by the infrequency of their occurrence. The ASU eliminates the need to separately classify, present and disclose extraordinary events. The disclosure of events or transactions that are unusual or infrequent in nature will be included in other guidance. This new guidance is effective for the Company beginning in fiscal 2017. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company’s financial statements.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Recent Accounting Pronouncements (continued)**

*Inventory (Topic 330), Simplifying the Measurement of Inventory.* In July 2015, the FASB issued ASU No. 2015-11, which requires that an entity should measure inventory within the scope of this ASU at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Substantial and unusual losses that result from subsequent measurement of inventory should be disclosed in the financial statements. This new guidance is effective for the Company beginning in fiscal 2018. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*Business Combinations (Topic 805), Simplifying the Accounting for Measurement-Period Adjustments.* In September 2015, the FASB issued ASU No. 2015-16, which requires that an acquirer recognize adjustment to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. The acquirer needs to record, in the same period's financial statements, the effect on earnings of changes in depreciation, amortization or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. In addition, an entity is required to present, separately on the face of the income statement or disclose in the notes, the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. This new guidance is effective for the Company beginning in fiscal 2017. The adoption of this ASU is not expected to 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 No. 2016-02, Leases (Topic 842), which requires lessees to put most leases on their balance sheets by recognizing a lessee's rights and obligations, while expenses will continue to be recognized in a similar manner to today's legacy lease accounting guidance. This ASU could also significantly affect the financial ratios used for external reporting and other purposes, such as debt covenant compliance. This new guidance is effective for the Company beginning in fiscal 2020, with early adoption permitted. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting.* In March 2016, the FASB issued ASU 2016-09 which affects entities that issue share-based payment awards to their employees. ASU 2016-09 is designed to simplify several aspects of accounting for share-based payment award transactions which include – the income tax consequences, classification of awards as either equity or liabilities, classification on the statement of cash flows and forfeiture rate calculations. This guidance is effective for annual periods beginning after December 15, 2016 (Fiscal 2018 for the Company), including interim periods within those fiscal years. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*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. This new guidance is effective for the Company beginning in fiscal 2019, with early adoption permitted. 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 adoption of this standard is not expected to have a material impact on the Company's financial statements.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 2 – Summary of Significant Accounting Policies (continued)**

**Recent Accounting Pronouncements (continued)**

*Consolidation (Topic 810): Interests Held through Related Parties That Are under Common Control.* In October 2016, the FASB issued ASU 2016-17, Consolidation (Topic 810): Interests Held through Related Parties That Are under Common Control, which amends the consolidation guidance on how a reporting entity that is the single decision maker of a VIE should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary of that VIE. This new guidance is effective for the Company beginning in fiscal 2018, with early adoption permitted. The Company is currently in the process of assessing the impact of this ASU on its consolidated financial statements.

*Statement of Cash Flows (Topic 230): Restricted Cash.* In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows: Restricted Cash, which provides guidance on the classification of restricted cash in the statement of cash flows. The amendments in this ASU are effective for the Company's annual reporting for fiscal 2018, with early adoption permitted. The amendments in the ASU should be adopted on a retrospective basis. The adoption of this standard is not expected to have a material impact on the Company's financial statements.

**Cash and Cash Equivalents**

The Company generally considers all highly liquid investments with original maturities of three months or less to be cash equivalents.

**Reclassifications**

Certain prior year balances have been reclassified to conform to the current year presentation. These reclassifications did not affect previously reported net loss or stockholders' deficit.

**Note 3 – Xcede Technologies, Inc. Joint Venture**

In October 2013, the Company formed Xcede, a joint venture with Mayo Clinic, in order to spin out and separately fund the development of its tissue sealant technology, which formerly comprised the majority of its biomedical segment.

As of September 30, 2016, Xcede had raised approximately \$3.4 million in the form of Convertible Notes (the "Notes"), of which \$2.9 million was from external funding to outside investors and to certain officers and directors of the Company and \$0.6 million was from the Company. The Notes accrued interest at 5%. The total interest accrued due to the external funding sources at September 30, 2016 was approximately \$0.3 million. On July 15, 2016, Xcede amended the Note Purchase Agreement for such Notes to extend the Notes' maturity date from June 30, 2016 to June 30, 2017 and to increase the principal amount of Notes authorized to be issued thereunder from \$3.0 million to up to \$5.2 million.

In January 2016, Xcede announced that it had signed three agreements with Cook Biotech Inc. of West Lafayette, IN including a Development Agreement, a License Agreement and a Supply Agreement in connection with the development, regulatory approval and production of Xcede's resorbable hemostatic patch.

In June 2016, Xcede issued 238,535 shares of its common stock to the Mayo Foundation for Medical Education and Research ("Mayo") as the final anti-dilution adjustment in satisfaction of the anti-dilution clause in the existing licensing agreement between Xcede and Mayo. As a result, a charge of \$0.2 million was recorded in stock compensation expense for the year ended September 30, 2016.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 3 – Xcede Technologies, Inc. Joint Venture (continued)**

In November 2016, Xcede announced Cook Biotech Inc. committed to fund the pre-clinical testing of, and subject to the receipt of applicable regulatory approvals initiate clinical trials for, its first tissue sealant product. In addition, in November 2016, the Company committed to invest \$1.2 million of cash into Xcede over the following 18 months and all \$5.1 million in existing notes and accrued interest were converted into 5,394,120 shares of preferred stock of Xcede at a 20% discount to the price per share of the investment the Company has committed to make in Xcede, in accordance with the provisions of the notes.

As of September 30, 2016, Dynasil Biomedical owned 83% of Xcede's common stock and, as a result, Xcede is included in the Company's consolidated balance sheets, results of operations and cash flows. As of December 1, 2016, approximately 59% of Xcede's outstanding equity was owned by Dynasil Biomedical as a result of the conversion of the outstanding notes described above.

**Note 4 – Inventories**

Inventories, net of reserves, at September 30, 2016 and 2015 consisted of the following:

	<b>2016</b>	<b>2015</b>
Raw Materials	\$ 1,938,000	\$ 1,828,000
Work-in-Process	834,000	768,000
Finished Goods	954,000	470,000
	<b>\$ 3,726,000</b>	<b>\$ 3,066,000</b>

**Note 5 - Property, Plant and Equipment**

Property, plant and equipment at September 30, 2016 and 2015 consist of the following:

	<b>2016</b>	<b>2015</b>
Land	\$ 157,000	\$ 176,000
Building and improvements	3,429,000	3,607,000
Machinery and equipment	11,530,000	10,270,000
Office furniture and fixtures	832,000	980,000
Transportation equipment	53,000	53,000
	16,001,000	15,086,000
Less accumulated depreciation	(8,778,000)	(8,424,000)
	<b>\$ 7,223,000</b>	<b>\$ 6,662,000</b>

Depreciation expense for the years ended September 30, 2016 and 2015 was \$1,097,000 and \$1,026,000.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 6 – Intangible Assets**

Intangible assets at September 30, 2016 and 2015 consist of the following:

	<b>Useful</b>	<b>Gross</b>	<b>Accumulated</b>	
<b>September 30, 2016</b>	<b>Life (years)</b>	<b>Amount</b>	<b>Amortization</b>	<b>Net</b>
Acquired Customer Base	5 to 15	\$ 718,000	\$ 473,000	\$ 245,000
Know How	15	512,000	282,000	230,000
Trade Name	Indefinite	272,000	-	272,000
Patents	15	326,000	6,000	320,000
Biomedical Technologies	5	260,000	260,000	-
		<u>\$ 2,088,000</u>	<u>\$ 1,021,000</u>	<u>\$ 1,067,000</u>
<b>September 30, 2015</b>	<b>Life (years)</b>	<b>Amount</b>	<b>Amortization</b>	<b>Net</b>
Acquired Customer Base	5 to 15	\$ 824,000	\$ 464,000	\$ 360,000
Know How	15	512,000	248,000	264,000
Trade Name	Indefinite	318,000	-	318,000
Patents	15	223,000	-	223,000
Biomedical Technologies	5	260,000	200,000	60,000
		<u>\$ 2,137,000</u>	<u>\$ 912,000</u>	<u>\$ 1,225,000</u>

Amortization expense for both the years ended September 30, 2016 and 2015 was \$170,000.

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

	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Thereafter</b>	<b>Total</b>
Acquired Customer Base	\$ 80,000	\$ 80,000	\$ 80,000	\$ 5,000	\$ -	\$ -	\$ 245,000
Know How	34,000	34,000	34,000	34,000	34,000	60,000	230,000
Patents	9,000	9,000	9,000	9,000	9,000	80,000	125,000
	<u>\$ 123,000</u>	<u>\$ 123,000</u>	<u>\$ 123,000</u>	<u>\$ 48,000</u>	<u>\$ 43,000</u>	<u>\$ 140,000</u>	<u>\$ 600,000</u>

As of September 30, 2016, Xcede has \$195,000 in capitalized patent costs related to patents that have not been granted, therefore, the amortization related to these patents is not included in the five-year amortization table above.

**Note 7 – Goodwill**

The changes to goodwill during the years ended September 30, 2016 and 2015 are summarized as follows:

	<b>Contract</b>		
	<b>Research</b>	<b>Optics</b>	<b>Total</b>
Goodwill at September 30, 2014	\$ 4,939,000	\$ 1,308,000	\$ 6,247,000
Currency translation on Hilger Crystals	-	(116,000)	(116,000)
Goodwill at September 30, 2015	\$ 4,939,000	\$ 1,192,000	\$ 6,131,000
Currency translation on Hilger Crystals	-	(233,000)	(233,000)
Goodwill at September 30, 2016	<u>\$ 4,939,000</u>	<u>\$ 959,000</u>	<u>\$ 5,898,000</u>

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 7 – Goodwill (continued)**

With respect to the Company's annual goodwill impairment testing performed during the fourth quarter of fiscal year 2016, step one of the testing determined the estimated fair value of RMD (included in the Contract Research segment) and Hilger (included in the Optics segment) reporting units exceeded their carrying value by more than 20%. Accordingly, the Company concluded that no impairment had occurred and no further testing was necessary.

The step one test for the RMD reporting unit and the resulting calculation of the indicated fair value was performed as described above based on certain specific assumptions. The Company relied on a weighted average cost of capital of approximately 15% for this reporting unit which takes into consideration certain industry and specific premiums. The Company utilized a long term growth rate of approximately 1.5% for this reporting unit which considers industry research and management's expectations as to the prospects for long term growth in this industry.

The step one test for the Hilger reporting unit and the resulting calculation of the indicated fair value was performed as described above based on certain specific assumptions. The Company relied on a weighted average cost of capital of 16% for this reporting unit which takes into consideration certain industry and specific premiums. The Company utilized a long term growth rate of approximately 5% for this reporting unit which considers industry research and management's expectations as to the prospects for long term growth in this industry.

Determining the fair value using a discounted cash flow method requires significant estimates and assumptions, including market conditions, discount rates, and long-term projections of cash flows. The Company's estimates are based upon historical experience, current market trends, projected future volumes and other information. The Company believes that the estimates and assumptions underlying the valuation methodology are reasonable; however, different estimates and assumptions could result in a different estimate of fair value. In estimating future cash flows, the Company relies on internally generated projections for a defined time period for revenue and operating profits, including capital expenditures, changes in net working capital, and adjustments for non-cash items to arrive at the free cash flow available to invested capital. A terminal value utilizing a constant growth rate of cash flows is used to calculate a terminal value after the explicit projection period. The future projected cash flows for the discrete projection period and the terminal value are discounted at a risk adjusted discount rate to determine the fair value of the reporting unit.

**Note 8 – Debt**

As of September 30, 2016, the Company is in compliance with the financial covenants included in its outstanding indebtedness.

**Senior Debt**

On May 1, 2014, the Company entered into a loan and security agreement (the "Bank Loan Agreement") and line of credit note (the "Note") with Middlesex Savings Bank, pursuant to which it agreed to provide up to \$4.0 million, subject to the availability restrictions described below, under a revolving line of credit loan to the Company for general corporate purposes. The Bank Loan Agreement provides that the loan expires on May 1, 2017, at which time all outstanding principal and unpaid interest shall become due and payable.

The Bank Loan Agreement and the Note are secured by (i) a security interest in substantially all of the Company's personal property and (ii) sixty-five percent (65%) of Dynasil's equity interests in its U.K. subsidiary, Hilger Crystals, Ltd. Under the Note, the borrowing base is determined monthly based on eligible billed and unbilled accounts receivable and eligible inventory. The interest rate under the Note is equal to the Prime Rate, but in no event less than 3.25%. As of September 30, 2016, there were no outstanding borrowings and the total availability under the Company's line of credit was \$4.0 million.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 8 – Debt (continued)**

**Senior Debt (continued)**

The Bank Loan Agreement also contains other terms, conditions and provisions that are customary for commercial lending transactions of this sort. The Bank Loan Agreement requires Dynasil, at the close of each fiscal quarter, to maintain a Debt Service Coverage ratio, as defined, of at least 1.20 to 1.00 on a trailing four quarter basis.

The Bank Loan Agreement provides for events of default customary for credit facilities of this type, including but not limited to non-payment, defaults on other debt, misrepresentation, breach of covenants, representations and warranties, insolvency and bankruptcy, change of management, as defined and the occurrence of a material adverse change, as defined.

The Bank Loan Agreement was amended on September 29, 2015 to permit the Company to repay up to \$3 million of the subordinated debt owed Massachusetts Capital Resources Company (“MCRC”) and also provided the Company, if it met certain conditions, to convert up to \$2.0 million of the advances under the line of credit to a fixed rate note with the principal amortizing monthly over a five year term.

On February 1, 2016, the Company entered into a \$2.0 million Term Note with Middlesex Savings Bank. The Company converted \$2.0 million of outstanding advances under the Company’s Middlesex Bank Line of Credit Note to a new five-year term note bearing interest at the fixed annual rate of 4.5%. Immediately following this conversion, the total availability under the Company’s line of credit increased by \$2.0 million to \$3.8 million. As a result of a material adverse clause in the Middlesex Term Note Agreement, all Middlesex outstanding debt is classified as short-term.

**Subordinated Debt**

On July 31, 2012, the Company entered into a Note Purchase Agreement (the “Agreement”) with Massachusetts Capital Resource Company (“MCRC”). Pursuant to the terms of the Agreement, the Company issued and sold to MCRC a \$3.0 million subordinated note (the “Subordinated Note”) for a purchase price of \$3.0 million.

The Subordinated Note initially matured on July 31, 2017, unless accelerated pursuant to an event of default. The Subordinated Note provided for interest at the rate of ten percent (10%) per annum, with interest to be payable monthly on the last day of each calendar month and principal payments of \$130,000 beginning on September 30, 2015, and on the last day of each calendar month thereafter through and including July 31, 2017.

Effective October 1, 2015, in connection with a prepayment of \$2.0 million of the Subordinated Note, MCRC agreed to adjust the interest rate to 6% per annum and to amend the principal repayment terms such that beginning on September 30, 2016, the Company will redeem monthly, without premium, \$43,478 in principal amount of Subordinated Note together with all accrued and unpaid interest then due on the amount redeemed through and including July 31, 2018.

**Other Debt**

The Company’s RMD and Optometrics subsidiaries entered into equipment financing notes payable in connection with the purchase of certain equipment. Optometrics entered into equipment financing notes payable with two government entities for up to \$0.5 million. The notes bear interest at 5% to 5.25% and are repayable in monthly installments over a five year period. RMD entered into equipment financing notes payable with a private equipment funding source. The notes bear interest at 8.7% to 14.59% and are repayable in monthly installments through July 2019.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 8 – Debt (continued)**

**Other Debt (continued)**

Since its inception in October of 2013, the Company's Xcede joint venture raised \$2.9 million through the issuance of convertible notes to external investors, including certain officers and directors of the Company, which bear interest at 5%, due on demand after June 30, 2017. In November 2016, the notes and accrued interest were converted into 5,394,120 shares of preferred stock of Xcede at a 20% discount to the price per share of the investments the Company has committed to make in Xcede, in accordance with the provisions of the notes. See Note 3 – Xcede Technologies, Inc. Joint Venture.

Debt at September 30, 2016 and 2015 is summarized as follows:



**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 8 – Debt (continued)**

	<b>2016</b>	<b>2015</b>
Note payable to Middlesex Savings Bank for revolving line of credit. The note expires May 2017 at which time any and all outstanding principal and unpaid interest shall become due and payable. The interest rate is equal to the Prime Rate, but in no event less than 3.25%. The rate at September 30, 2016 was 3.50% and the note is secured by an interest in substantially all of the Company's personal property and sixty-five percent of the Company's equity interests in its UK subsidiary, Hilger Crystals, Ltd.	\$ -	\$ 1,455,000
Term note payable to Middlesex Savings Bank. The note payable to Middlesex is in monthly installments \$37,000 for principal and interest through February 2021. The interest rate is 4.52% and the note is secured by an interest in substantially all of the Company's personal property and sixty-five percent of the Company's equity interests in its UK subsidiary, Hilger Crystals, Ltd.	1,790,000	-
Note payable to Town of Ayer Industrial Development Finance Authority (Ayer) for an equipment line of credit made with Dynasil subsidiary Optometrics. The note payable to Ayer is in monthly installments totaling \$17,000 per year and will be amortized over ten years with a balloon payment at five years from the date of the note. The interest rate is 5.00%. The note is secured by an interest in the equipment purchased with the line.	158,000	175,000
Note payable to Massachusetts Development Finance Agency (MBDC) for promissory note made with Dynasil subsidiary Optometrics. The note payable to MBDC is in monthly installments of \$6,000 for principal and interest through March, 2019. The interest rate is 5.25%. The note is secured by an interest in substantially all of Optometric's personal property.	168,000	237,000
Convertible notes issued by Xcede, a 83% owned subsidiary, payable on demand after June 30, 2017. The interest rate is 5.00%. The notes were converted into equity in Xcede in November 2016 (See Note 3 - Xcede Technologies, Inc. Joint Venture), inclusive of the convertible notes and interest.	3,085,000	2,123,000
Subordinated note payable to Massachusetts Capital Resource Corporation in monthly installments of \$5,000 through August 2016 for interest only, followed by monthly payments of \$48,000 of interest and principal through July 2018. The interest rate is fixed at 6.00%.	957,000	1,000,000
Note payable to Leaf Capital Funding, LLC (Leaf) for equipment financing with Dynasil subsidiary RMD. The note payable to Leaf is in monthly installments of \$7,000 for principal and interest through February 2018. The interest rate is 14.59%. The note is secured by an interest in the financed equipment.	100,000	-
Note payable to Leaf Capital Funding, LLC (Leaf) for equipment financing with Dynasil subsidiary RMD. The note payable to Leaf is in monthly installments of \$1,000 for principal and interest through July 2019. The interest rate is 8.70%. The note is secured by an interest in the financed equipment.	43,000	-
<b>Total Debt</b>	<b>\$ 6,301,000</b>	<b>\$ 4,990,000</b>
Less current portion	(2,477,000)	(1,568,000)
Less convertible notes	(3,085,000)	(2,123,000)
Long term portion	739,000	1,299,000
Less unamortized debt issuance costs	(3,000)	(12,000)
Long term portion less unamortized debt issuance costs	<b>\$ 736,000</b>	<b>\$ 1,287,000</b>

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 8 – Debt (continued)**

The aggregate maturities of debt based on the payment terms of the agreement are as follows:

For the years ending on September 30:	
2017	1,064,000
2018	963,000
2019	575,000
2020	429,000
2021	185,000
Thereafter	-
	<u>\$ 3,216,000</u>

The convertible notes issued by Xcede have been excluded from the aggregate maturities of debt above as they have been converted into equity in Xcede in November 2016. See Note 3 – Xcede Technologies, Inc. Joint Venture.

Unamortized debt issuance costs of \$64,000 and \$260,000 are net of accumulated amortization of \$61,000 and \$248,000 at September 30, 2016 and 2015, respectively. Amortization expense for the years ended September 30, 2016 and 2015 was \$9,000 and \$28,000, respectively, and included in interest expense. Future amortization will be \$3,000 in fiscal year 2017.

**Note 9 – Income Taxes**

Income (loss) before the provision (benefit) for income taxes consists of the following:

	<b>2016</b>	<b>2015</b>
US	\$ (503,000)	\$ (865,000)
Foreign	888,000	506,000
Total	<u>\$ 385,000</u>	<u>\$ (359,000)</u>

The provision (credit) for income taxes in the accompanying consolidated financial statements consists of the following:

	<b>2016</b>	<b>2015</b>
<b>Current</b>		
Federal	\$ -	\$ -
State	3,000	11,000
Foreign	(9,000)	(71,000)
	<u>\$ (6,000)</u>	<u>\$ (60,000)</u>
<b>Deferred</b>		
Federal	\$ -	\$ -
State	-	-
Foreign	57,000	54,000
	<u>57,000</u>	<u>54,000</u>
<b>Income tax expense (credit)</b>	<u><b>\$ 51,000</b></u>	<u><b>\$ (6,000)</b></u>

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 9 – Income Taxes (continued)**

A reconciliation of the federal statutory rate to the Company's effective tax rate is as follows:

	<b>2016</b>	<b>2015</b>
Tax due at statutory rate	34.00%	34.00%
State tax provision, net of federal	9.13%	7.91%
Valuation allowance	93.66%	-46.10%
Foreign tax credits	-77.28%	56.91%
Foreign rate differential and other	-46.39%	-51.12%
<b>Total</b>	<b>13.12%</b>	<b>1.60%</b>

Net deferred tax assets (liabilities) consisted of the following at September 30, 2016:

	<b>Domestic</b>	<b>Foreign</b>	<b>Worldwide</b>
Credits	\$ 1,466,000	\$ -	\$ 1,466,000
NOLs	3,303,000	25,000	3,328,000
Stock compensation	143,000	-	143,000
Accruals	385,000	-	385,000
Other	150,000	-	150,000
<b>Gross deferred tax assets</b>	<b>5,447,000</b>	<b>25,000</b>	<b>5,472,000</b>
Valuation allowance	(4,739,000)	-	(4,739,000)
<b>Deferred tax assets, net</b>	<b>708,000</b>	<b>25,000</b>	<b>733,000</b>
Depreciation	(696,000)	(200,000)	(896,000)
Intangibles	(12,000)	(88,000)	(100,000)
<b>Gross deferred tax liabilities</b>	<b>(708,000)</b>	<b>(288,000)</b>	<b>(996,000)</b>
<b>Net deferred tax asset (liability)</b>	<b>\$ -</b>	<b>\$ (263,000)</b>	<b>\$ (263,000)</b>

Net deferred tax assets (liabilities) consisted of the following at September 30, 2015:

	<b>Domestic</b>	<b>Foreign</b>	<b>Worldwide</b>
Credits	\$ 1,488,000	\$ -	\$ 1,488,000
NOLs	2,775,000	34,000	2,809,000
Stock compensation	82,000	-	82,000
Accruals	333,000	-	333,000
Other	138,000	-	138,000
<b>Gross deferred tax assets</b>	<b>4,816,000</b>	<b>34,000</b>	<b>4,850,000</b>
Valuation allowance	(4,377,000)	-	(4,377,000)
<b>Deferred tax assets, net</b>	<b>439,000</b>	<b>34,000</b>	<b>473,000</b>
Depreciation	(403,000)	(145,000)	(548,000)
Intangibles	(36,000)	(135,000)	(171,000)
<b>Gross deferred tax liabilities</b>	<b>(439,000)</b>	<b>(280,000)</b>	<b>(719,000)</b>
<b>Net deferred tax asset (liability)</b>	<b>\$ -</b>	<b>\$ (246,000)</b>	<b>\$ (246,000)</b>

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 9 – Income Taxes (continued)**

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. Based upon the Company's current losses and uncertainty of future profits, the Company has determined that the uncertainty regarding the realization of these assets is sufficient to warrant the need for a full valuation allowance against its U.S. net deferred tax assets. The net change in the valuation allowances for the years ending September 30, 2016 and 2015 was \$0.4 million and \$0.2 million, respectively.

As of September 30, 2016 and 2015, the Company has federal net operating losses of \$7.1 and \$6.2 million, respectively. As of September 30, 2016 and 2015, the Company has state net operating losses of \$15.2 million and \$11.7 million, respectively. The federal and state net operating losses begin expiring in 2023 and 2027, respectively. At September 30, 2016 and 2015, the Company has foreign net operating loss carryforwards of approximately \$146,000 and \$171,000, respectively which can be carried forward indefinitely.

As a result of the conversion of the Xcede convertible notes and accrued interest to preferred stock in November 2016 (See Note 3), the Company's ownership percentage in Xcede decreases to less than 80%. Based on this ownership percentage, beginning in fiscal year 2017, Xcede will no longer be included in the consolidated federal tax return and the Company will no longer be able to offset taxable income or share net operating losses with Xcede. The tax accounting impact, including the assessment on the valuation allowance against the U.S. net deferred tax assets, will be evaluated in subsequent periods. The valuation allowance will be addressed independently for the Company and Xcede, instead of on a consolidated basis.

As of both September 30, 2016 and 2015, the Company has federal research credits of \$1.5 million. The federal credits begin expiring in fiscal year 2025. As of September 30, 2016 and 2015, the Company has state research credits of \$93,000 and \$127,000, respectively. The state credits begin expiring in fiscal year 2026.

As of September 30, 2016 and 2015, the Company has no unrecorded 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 September 30, 2016 and 2015, the Company has no accrued interest or penalties related to uncertain tax positions.

The Company is subject to taxation in the United States and the United Kingdom. At September 30, 2016, domestic tax years from fiscal 2013 through fiscal 2016 remain open to examination by the taxing authorities and tax years 2014 through 2016 remain open in the United Kingdom.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 10 – Stockholders’ Equity**

**Stock Based Compensation**

The Company adopted Stock Incentive Plans in 1996, 1999 and 2010 which provide for, among other incentives, the granting to officers, directors, employees and consultants options to purchase shares of the Company’s common stock. The Plans also allow eligible persons to be issued shares of the Company’s common stock either through the purchase of such shares or as a bonus for services rendered to the Company. Shares are generally issued at the fair market value on the date of issuance. The maximum number of shares of common stock which may be issued under the 2010 Stock Incentive Plan is 6,000,000, of which 3,646,924 and 4,006,663 shares of common stock are available for future purchases under the plan at September 30, 2016 and 2015, respectively. Options are generally exercisable at the fair market value or higher on the date of grant over a three to five year period currently expiring through 2017.

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 exercises and employee terminations 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 0.0% 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 to officers, directors, employees and consultants options to purchase shares in Xcede’s common stock. The options granted generally vest over a 3 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 December 1, 2016, 458,347 options remained in this plan.

Stock compensation expense for the years ended September 30, 2016 and 2015 is presented below:

	<b>2016</b>	<b>2015</b>
Stock Grants	\$ 322,000	\$ 323,000
Restricted Stock Grants	45,000	28,000
Option Grants	42,000	17,000
Employee Stock Purchase Plan	3,000	2,000
Subsidiary Stock Grants	210,000	-
Subsidiary Option Grants	76,000	89,000
<b>Total</b>	<b>\$ 698,000</b>	<b>\$ 459,000</b>

At September 30, 2016 there was approximately \$152,000 in unrecognized stock compensation cost for Dynasil, which is expected to be recognized over a weighted average period of fourteen months. At September 30, 2016, the Company’s Xcede joint venture had \$148,000 of unrecognized stock compensation expense associated with stock options expected to be recognized over a weighted average period of seventeen months.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 10 – Stockholders’ Equity (continued)**

**Restricted Stock Grants**

A summary of restricted stock activity for the year ended September 30, 2016 and 2015 is presented below:

<b>Restricted Stock Activity for the Year ended September 30, 2016</b>	<b>Shares</b>	<b>Weighted-Average Grant-Date Fair Value</b>
Nonvested at September 30, 2015	27,000	\$ 1.04
Granted	100,000	\$ 1.73
Vested	(27,000)	\$ 1.04
Cancelled	-	-
Nonvested and expected to vest at September 30, 2016	<u>100,000</u>	\$ 1.73
<b>Restricted Stock Activity for the Year ended September 30, 2015</b>	<b>Shares</b>	<b>Weighted-Average Grant-Date Fair Value</b>
Nonvested at September 30, 2014	54,000	\$ 1.04
Granted	-	\$ -
Vested	(27,000)	\$ 1.04
Cancelled	-	\$ -
Nonvested and expected to vest at September 30, 2015	<u>27,000</u>	\$ 1.04

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 10 – Stockholders’ Equity (continued)**

**Stock Option Grants**

A summary of stock option activity for the years ended September 30, 2016 and 2015 is presented below:

	<b>Options Outstanding</b>	<b>Weighted Average Exercise Price per Share (\$)</b>	<b>Weighted Average Remaining Contractual Term (in Years)</b>
Balance at September 30, 2014	430,532	3.33	0.31
Outstanding and exercisable at September 30, 2014	430,532	3.33	0.31
Granted	36,232	1.82	
Exercised	-	-	
Cancelled	(408,552)	3.99	
Balance at September 30, 2015	58,212	2.28	1.96
Outstanding and exercisable at September 30, 2015	58,212	2.28	1.96
Granted	64,935	2.33	2.34
Exercised	-	-	
Cancelled	-	-	
Balance at September 30, 2016	123,147	2.30	1.69
Outstanding and exercisable at September 30, 2016	123,147	2.30	1.69

Stock options outstanding at September 30, 2016 are described as follows:

<b>Outstanding Stock Options at September 30, 2016</b>					
<b>Range of Exercise Prices</b>	<b>Options Outstanding</b>	<b>Weighted Average Contractual Life (years)</b>	<b>Weighted Average Exercise Price</b>	<b>Options Exercisable</b>	<b>Weighted Average Exercise Price</b>
\$ 1.82 - 1.99	36,232	1.34	\$ 1.82	36,232	\$ 1.82
2.00 - 2.99	64,935	2.34	2.33	64,935	2.33
3.00 - 3.03	21,980	0.34	3.03	21,980	3.03
<b>\$ 1.82 - 3.03</b>	<b>123,147</b>	<b>1.69</b>	<b>\$ 2.30</b>	<b>123,147</b>	<b>\$ 2.30</b>

During the years ended September 30, 2016 and 2015, 64,935 and 36,232 stock options were granted and vested, respectively, and no stock options were exercised.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 10 – Stockholders’ Equity (continued)**

**Subsidiary Stock Option Grants**

A summary of Xcede stock option activity for the years ended September 30, 2016 and 2015 is presented below:

	<b>Options Outstanding</b>	<b>Weighted Average Exercise Price per Share (\$)</b>	<b>Weighted Average Remaining Contractual Term (in Years)</b>
Balance at September 30, 2014	506,629	1.00	8.21
Outstanding and exercisable at September 30, 2014	17,500	1.00	9.24
Granted	326,129	1.00	
Exercised	-	-	
Cancelled	(52,500)	1.00	
Balance at September 30, 2015	780,258	1.00	8.85
Outstanding and exercisable at September 30, 2015	180,293	1.00	8.50
Granted	148,419	1.00	
Exercised	-	-	
Cancelled	(315,024)	1.00	
Balance at September 30, 2016	613,653	1.00	8.35
Outstanding and exercisable at September 30, 2016	320,586	1.00	8.01

**Employee Stock Purchase Plan**

On September 28, 2010, the Company adopted an Amended and Restated Employee Stock Purchase Plan. The existing plan was amended to extend the termination date to September 28, 2020. The Employee Stock Purchase Plan permits substantially all employees to purchase common stock at a purchase price of 85% of the fair market value of the shares. Under the Plan, a total of 450,000 shares have been reserved for issuance of which 131,203 and 144,945 shares have been issued as of September 30, 2016 and 2015, respectively.

On December 16, 2011, the Company amended the Amended and Restated Employee Stock Purchase Plan to change the maximum dollar amount of stock able to be purchased through the Plan by any employee per calendar year from \$5,000 to \$20,000 per calendar year. During the years ended September 30, 2016 and 2015, 13,742 shares and 9,698 shares of common stock were issued under the Plan for aggregate purchase prices of \$15,676 and \$12,762, respectively.

**Note 11– Retirement Plans**

**Defined Contribution Plans**

The Company has retirement savings plans available to substantially all full time employees which are intended to qualify as deferred compensation plans under Section 401(k) of the Internal Revenue Code (the “401k Plans”) or similar laws in the United Kingdom. The Company made contributions to these plans during both the years ended September 30, 2016 and 2015 of approximately \$179,000 and \$171,000, respectively.



**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 12 – Lease Agreements**

**Capital Leases**

The Company has entered into long-term capital lease agreements for purchases of various computer and telephone equipment at a weighted average interest rate of 8.3%. At September 30, 2016 and 2015, the remaining principal payments due under all capital leases were \$278,000 and \$119,000, respectively. Aggregate minimum annual principal obligations at September 30, 2016, under non-cancelable leases are as follows:

	2017	2018	2019	2020	2021	Total
Capital Lease Obligations	\$ 105,000	\$ 92,000	\$ 36,000	\$ 28,000	\$ 17,000	\$ 278,000

**Property Leases**

The Company has non-cancelable operating lease agreements, primarily for property, that expire through 2025. One of the Company's facilities is leased from a company controlled by the former owner of RMD, who is also a former director of the Company and the former President of the RMD subsidiary. This building is leased as a month-to-month tenancy and will continue until terminated by either the Company with not less than six months' prior written notice or the facility's owner with not less than three years' prior written notice. Rent expense for both the years ended September 30, 2016 and 2015 amounted to \$1.6 million. Future non-cancelable minimum lease payments under property leases as of September 30, 2016 are as follows:

Years ending September 30,

2017	\$ 1,038,000
2018	303,000
2019	91,000
2020	93,000
2021	95,000
thereafter	344,000

**Note 13 - Related Party Transactions**

During the years ended September 30, 2016 and 2015, building lease payments of \$1,000,000 and \$961,000, respectively were paid to Charles River Realty, dba Bachrach, Inc., which is owned by Gerald Entine and family. Dr. Entine is a former director and employee of the Company, as well as a greater than 5% beneficial owner of the Company's stock.

Dr. William Hagan, a member of the Company's Board of Directors, provides consulting services to RMD through his consulting company, Hagan & Associates LLC ("H&A"). During the year ended September 30, 2016, H&A was paid approximately \$1,000 in fees. No amounts were paid during 2015. This consulting arrangement is expected to continue into the future.

In 2014, the Company was awarded a grant from the National Institute of Heart Lung and Blood to develop new and improved monitors to detect blood loss and potentially fatal hemorrhage in trauma victims. The Company is using the Mayo Clinic in Rochester, MN as its primary subcontractor to conduct animal and human trials with respect to this grant. Dr. Michael J. Joyner of the Mayo Clinic is a co-investigator under this grant. He is also a member of the Xcede Board of Directors. In fiscal year 2016, the Mayo Clinic received approximately \$79,000 under this grant. A small fraction of Dr. Joyner's Mayo salary is charged to this grant. The subcontract awards to, and the work performed by, the Mayo Clinic are administered by the Mayo Foundation for Medical Education and Research and adheres to the approval and conflicts-of-interest policies of both the Mayo Clinic and the Company. We will continue to monitor this relationship.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 13 - Related Party Transactions (continued)**

In October 2013, the Company's subsidiary, Dynasil Biomedical, formed Xcede Technologies, Inc., a joint venture with Mayo Clinic, to spin out and separately fund the development of its tissue sealant technology. Xcede issued \$5.1 million of convertible promissory notes in order to fund its operations, including \$2.2 million to the Company, which is eliminated in the consolidated financial statements. Mr. Sulick and family members invested \$1,065,000, Mr. Lawrence Fox invested, \$150,000, Dr. Zuckerman (Xcede CEO) and family invested \$125,000, Ms. Lunardo (Optometrics COO) invested \$25,000, Dr. Hagan invested \$25,000, Kanai Shah (RMD President) invested \$25,000 and Dr. Entine's Family Trust invested \$100,000 in Xcede and were issued convertible promissory notes in those original principal amounts. In November 2016, the company converted these promissory notes into preferred stock.

As of December 1, 2016, Mr. Sulick and family own the equivalent of 12.7% of Xcede's outstanding common stock, Mr. Fox owns the equivalent of 1.9% of Xcede's outstanding common stock, Dr. Zuckerman and family own the equivalent of 1.5% of Xcede's outstanding common stock, Ms. Lunardo owns the equivalent of 0.3% 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 Dr. Entine owns the equivalent of 1.3% of Xcede's outstanding common stock.

Patricia Tuohy is the Company's Director of Business Development. During the year ended September 30, 2016, Ms. Tuohy worked a full year in this position and earned \$168,000 in compensation. During the year ended September 30, 2015, Ms. Tuohy worked a partial year and earned \$103,000. Ms. Tuohy is Peter Sulick's daughter.

**Note 14 - Vendor Concentration**

The Company purchased \$2.2 million and \$1.5 million respectively, of its raw materials from one supplier during the years ended September 30, 2016 and 2015. As of September 30, 2016 and 2015, amounts due to these suppliers included in accounts payable were \$93,000 and \$101,000, respectively.

**Note 15 – Supplemental Disclosure of Cash Flow Information**

	<b>2016</b>	<b>2015</b>
Cash Paid during the year for:		
Interest	\$ 189,000	\$ 388,000
Income taxes (refunds)	\$ (83,000)	\$ (5,000)
Non cash activities:		
Assets purchased under capital leases and equipment financing	\$ 427,000	\$ 73,000
Conversion of outstanding line of credit balance to term note	\$ 2,000,000	\$ -
Common shares issued in acquisition	\$ -	\$ (17,000)

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 16 – Segment, Customer and Geographical Reporting**

Segment Financial Information

Operating segments are based upon Dynasil's internal organizational structure, the manner in which the operations are managed, the criteria used by the Chief Operating Decision Makers (CODM) to evaluate segment performance and the availability of separate financial information. Dynasil reports three reportable segments: contract research ("Contract Research"), 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. Dynasil's Contract Research segment is one of the largest small business participants in U.S. government-funded research. The Optics segment aggregates four operating segments – Dynasil Fused Silica, Optometrics, Hilger Crystals, 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 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 the common stock of the Xcede joint venture which is developing a tissue sealant technology and currently has no other operations.

During 2016, we implemented a new procedure to allocate overhead expenses to our Xcede subsidiary in the Biomedical segment due to the time commitment invested by the corporate employees. This allocation reduced SG&A expense in the other two segments. Segment expenses in 2015 have been adjusted accordingly to reflect the proper comparison. These allocations were \$0.6 million in both 2016 and 2015. We do not expect the same time commitment to be necessary to support Xcede in 2017, based on the previously announced Cook Biomedical agreement.

**DYNASIL CORPORATION OF AMERICA**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**SEPTEMBER 30, 2016 and 2015**

**Note 16 – Segment, Customer and Geographical Reporting (continued)**

The Company's segment information is summarized below:

<b>Results of Operations for the Fiscal Year Ended September 30,</b>				
<b>2016</b>				
	<b>Optics</b>	<b>Contract Research</b>	<b>Biomedical</b>	<b>Total</b>
Revenue	\$ 23,686,000	\$ 19,756,000	\$ -	\$ 43,442,000
Gross profit	8,010,000	7,593,000	-	15,603,000
GM %	34%	38%	-	36%
SG&A	6,239,000	6,619,000	2,070,000	14,928,000
Gain on sale of assets	(4,000)	-	-	(4,000)
Operating income (loss)	1,775,000	974,000	(2,070,000)	679,000
Depreciation and amortization	949,000	249,000	69,000	1,267,000
Capital expenditures	1,503,000	432,000	109,000	2,044,000
Intangibles, net	517,000	230,000	320,000	1,067,000
Goodwill	959,000	4,939,000	-	5,898,000
Total assets	\$ 17,397,000	\$ 8,325,000	\$ 647,000	\$ 26,369,000
<b>Results of Operations for the Fiscal Year Ended September 30,</b>				
<b>2015</b>				
	<b>Optics</b>	<b>Contract Research</b>	<b>Biomedical</b>	<b>Total</b>
Revenue	\$ 21,783,000	\$ 18,753,000	\$ -	\$ 40,536,000
Gross profit	6,818,000	8,176,000	-	14,994,000
GM %	31%	44%	-	37%
SG&A	6,020,000	7,301,000	1,717,000	15,038,000
Gain on sale of assets	(178,000)	-	-	(178,000)
Operating income (loss)	976,000	875,000	(1,717,000)	134,000
Depreciation and amortization	839,000	296,000	61,000	1,196,000
Capital expenditures	1,173,000	91,000	119,000	1,383,000
Intangibles, net	678,000	264,000	283,000	1,225,000
Goodwill	1,192,000	4,939,000	-	6,131,000
Total assets	\$ 15,984,000	\$ 7,692,000	\$ 828,000	\$ 24,504,000

**DYNASIL CORPORATION OF AMERICA  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
SEPTEMBER 30, 2016 and 2015**

**Note 16 – Segment, Customer and Geographical Reporting (continued)**

**Customer Financial Information**

For the years ended September 30, 2016 and 2015, the top three customers for the Contract Research segment were each various agencies of the U.S. Government. For the years ended September 30, 2016 and 2015, these customers made up 56% and 57%, respectively, of Contract Research revenue.

For the Optics segment, there was one customer whose revenue represented 22% and 9% of the total segment revenue for the years ended September 30, 2016 and 2015.

The Biomedical segment did not have any revenue in the years ending September 30, 2016 and 2015.

**Geographic Financial Information**

Revenue by geographic location in total and as a percentage of total revenue, for the years ended September 30, 2016 and 2015 are as follows:

<b>Geographic Location</b>	<b>2016</b>		<b>2015</b>	
	<b>Revenue</b>	<b>% of Total</b>	<b>Revenue</b>	<b>% of Total</b>
United States	\$ 32,622,000	75%	\$ 30,928,000	76%
Europe	7,888,000	18%	4,902,000	12%
Other	2,932,000	7%	4,706,000	12%
	<u>\$ 43,442,000</u>	<u>100%</u>	<u>\$ 40,536,000</u>	<u>100%</u>

**Note 17 – Subsequent Events**

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

## **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

There were no disputes or disagreements of any nature between the Company or its management and its public auditors with respect to any aspect of accounting or financial disclosure.

### **ITEM 9A. 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 September 30, 2016. Based on this evaluation, our management concluded that as of September 30, 2016, these disclosure controls and procedures were effective at the reasonable assurance level.

#### **Management's Annual Report on Internal Control over Financial Reporting.**

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. Internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, or persons performing similar functions, and effected by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of inherent limitations, no matter how well designed and operated, internal control over financial reporting may not prevent or detect misstatements and can only provide reasonable assurance of achieving the desired control objectives. In addition, the design of internal control over financial reporting must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Our management performed the evaluation of our internal control over financial reporting under the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework* (2013).

Based on its assessment of the effectiveness in internal control over financial reporting as of September 30, 2016, our management concluded that our internal controls over financial reporting were effective.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Our report was not subject to attestation by our registered public accounting firm pursuant to the rules of the SEC that permit us to provide only management's report in this Annual Report on Form 10-K.

### **Changes in Internal Control Over Financial Reporting**

No change in our internal control over financial reporting occurred during the fiscal quarter ended September 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

### **ITEM 9B. OTHER INFORMATION**

None.

## **PART III**

### **ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information required by this Item 10 is hereby incorporated by reference to our definitive proxy statement to be filed by us within 120 days after the close of our fiscal year.

We have adopted a Code of Conduct that applies to all employees including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The text of our Code of Conduct is posted in the "Investor Information—Corporate Governance" section of our website, [www.dynasil.com](http://www.dynasil.com).

We intend to disclose on our website any amendments to, or waivers from, our Code of Business Conduct and Ethics that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K.

### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this Item 11 is hereby incorporated by reference to our definitive proxy statement to be filed by us within 120 days after the close of our fiscal year.

### **ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this Item 12 is hereby incorporated by reference to our definitive proxy statement to be filed by us within 120 days after the close of our fiscal year.

### **ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by this Item 13 is hereby incorporated by reference to our definitive proxy statement to be filed by us within 120 days after the close of our fiscal year.

### **ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this Item 14 is hereby incorporated by reference to our definitive proxy statement to be filed by us within 120 days after the close of our fiscal year.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) (1) The financial statements are included under Part II, Item 8 of this Report.

(2) Schedules are omitted because they are not applicable, or are not required, or because the information is included in the consolidated financial statements and the notes thereto.

(3) EXHIBITS –

The exhibits are listed below under Part IV, Item 15(b) of this Report.

(b) EXHIBITS

3.01 Certificate of Incorporation of the Company, filed as Exhibit A to the Definitive Proxy Statement filed on January 4, 2008 and incorporated herein by reference.

3.02 Certificate of Merger of Foreign Corporation into a Domestic Corporation, dated February 29, 2008, filed as Exhibit 3.02 to Form 8-A filed on December 16, 2010 and incorporated herein by reference.

3.03 Certificate of Amendment of Certificate of Incorporation, dated March 6, 2008, filed as Exhibit 3.03 to Form 8-A filed on December 16, 2010 and incorporated herein by reference.

3.04 Certificate of Amendment of Certificate of Incorporation, dated February 26, 2009, filed as Exhibit 3.1 to Form 10-Q filed on May 15, 2009 and incorporated herein by reference.

3.05 Certificate of Designation of Preferred Stock of Dynasil Corporation of America, dated March 27, 2009, filed as Exhibit 3.05 to Form 8-A filed on December 16, 2010 and incorporated herein by reference.

3.06 Bylaws of the Company, filed as Exhibit B to the Definitive Proxy Statement filed on January 4, 2008 and incorporated herein by reference.

10.01\* 2010 Stock Incentive Plan, filed as Exhibit 99 to the Definitive Proxy Statement filed on January 5, 2010 and incorporated herein by reference.

10.02 Loan and Security Agreement by and between Middlesex Savings Bank, as Lender, and the Company, as Borrower, dated as of May 1, 2014, filed as Exhibit 10.1 to Form 8-K filed on May 2, 2014 and incorporated herein by reference.

10.03 Revolving Line of Credit by and between Middlesex Savings Bank, as Lender, and the Company, as Borrower, dated as of May 1, 2014, filed as Exhibit 10.2 to Form 8-K filed on May 2, 2014 and incorporated herein by reference.

10.04 Loan Document Modification Agreement between the Company and Middlesex Savings Bank, dated September 29, 2015, filed as Exhibit 10.04 to Form 10-K filed on December 17, 2015 and incorporated herein by reference.

10.05 Note Purchase Agreement between the Company and Massachusetts Capital Resource Company, dated July 31, 2012, filed as Exhibit 10.1 to Form 8-K filed on August 6, 2012 and incorporated herein by reference.

10.06 Amendment No. 1 to Note Purchase Agreement between the Company and Massachusetts Capital Resource Company, dated September 26, 2013, filed as Exhibit 10.19 to Form 10-K filed on December 20, 2013 and incorporated herein by reference.



10.07 Amendment to Note Purchase Agreement between the Company and Massachusetts Capital Resource Company, dated October 1, 2015, filed as Exhibit 10.07 to Form 10-K filed on December 17, 2015 and incorporated herein by reference.

10.08 Lease Agreement between RMD Instruments, Inc. and Charles River Realty, dated July 1, 2008, filed as Exhibit 10.5 to Form 8-K filed on July 7, 2008 and incorporated herein by reference.

10.09 Lease Agreement between Radiation Monitoring Devices, Inc. and Charles River Realty, dated July 1, 2008, filed as Exhibit 10.6 to Form 8-K filed on July 7, 2008 and incorporated herein by reference.

10.14\* Amended and Restated Employee Stock Purchase Plan dated December 16, 2011, filed as Appendix A to Definitive Proxy Statement filed January 11, 2012 and incorporated herein by reference.

10.15 Omnibus Amendment to Leases, dated December 6, 2012, filed as Exhibit 10.1 to Form 8-K filed on December 12, 2012 and incorporated herein by reference.

10.16\* Employment Letter dated November 13, 2015 between the Company and Robert J. Bowdring, filed as Exhibit 10.1 to Form 8-K filed on November 13, 2015 and incorporated herein by reference.

10.17\* Restricted Stock Award Agreement dated June 10, 2013 between the Company and Peter Sulick, filed as Exhibit 10.1 to Form 10-Q filed on August 12, 2013 and incorporated herein by reference.

10.18 Asset Purchase Agreement by and among the Company and RMD Instruments Corp. and Protec Instrument Corporation, dated as of November 7, 2013, filed as Exhibit 10.27 to Form 10-K, filed on December 20, 2013 and incorporated herein by reference.

10.19 Asset Purchase Agreement by and among Dilon Technologies, Inc, RMD Instruments Corp. and the Company, dated December 23, 2013, filed as Exhibit 10.1 to Form 10-Q filed on February 12, 2014 and incorporated herein by reference.

10.20 Asset Purchase Agreement by and among Evaporated Metal Films Corporation, the Company, DichroTec Thin Films, LLC and Syncrolite, LLC, dated June 26, 2014, filed as Exhibit 10.01 to Form 10-Q filed on August 13, 2014 and incorporated herein by reference.

10.21 Term Note Agreement between the Company and Middlesex Savings Bank, dated February 1, 2016, filed as Exhibit 10.1 to Form 10-Q filed on February 11, 2016 and incorporated herein by reference.

21.1 Subsidiaries of the Company, filed herewith.

23.1 Consent of RSM US LLP, filed herewith.

31.1(a) Rule 13a-14(a)/15d-14(a) Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

31.1(b) Rule 13a-14(a)/15d-14(a) Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

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) furnished herewith.

99.1 Press release, dated December 21, 2016 issued by Dynasil Corporation of America announcing the filing of its Annual Report on Form 10-K, filed herewith.

101\*\* The following materials from the Company's Annual Report on Form 10-K for the year ended September 30, 2016, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of September 30, 2016 and September 30, 2015, (ii) Consolidated Statements of Operations and Comprehensive Income and Loss for the years ended September 30, 2016 and 2015, (iii) Consolidated Statements of Changes in Stockholders' Equity for the years ended September 30, 2016 and 2015; (iv) Consolidated Statements of Cash Flows for the years ended September 30, 2016 and 2015, and (v) Notes to Consolidated Financial Statements, tagged as blocks of text.

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\* Management contract or compensatory plan or arrangement.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act, 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  
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Peter Sulick, President and CEO (Principal Executive Officer)

DATED: December 21, 2016  
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Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
BY: <u>/s/ Robert J. Bowdring</u> Robert J. Bowdring	CFO (Principal Financial and Accounting Officer)	<u>December 21, 2016</u>
BY: <u>/s/ Peter Sulick</u> Peter Sulick	Chairman of the Board of Directors, President, CEO (Principal Executive Officer)	<u>December 21, 2016</u>
BY: <u>/s/ Craig Dunham</u> Craig Dunham	Director	<u>December 21, 2016</u>
BY: <u>/s/ Lawrence Fox</u> Lawrence Fox	Director	<u>December 21, 2016</u>
BY: <u>/s/ William K. Hagan</u> William K. Hagan	Director	<u>December 21, 2016</u>
BY: <u>/s/ David Kronfeld</u> David Kronfeld	Director	<u>December 21, 2016</u>
BY: <u>/s/ Thomas Leonard</u> Thomas Leonard	Director	<u>December 21, 2016</u>
BY: <u>/s/ Alan Levine</u> Alan Levine	Director	<u>December 21, 2016</u>

**EXHIBIT 21.1 Subsidiaries of the Company  
Subsidiaries of Dynasil Corporation of America**

	Jurisdiction of Incorporation
Hibshman Corporation (Inactive)	New Jersey
Optometrics Corporation	Delaware
Evaporated Metal Films Corporation	New York
Radiation Monitoring Devices, Inc.	Delaware
RMD Instruments Corporation	Delaware
Hilger Crystals, Ltd.	United Kingdom
Dynasil Biomedical Corporation	Delaware
Xcede Technologies, Inc.	Delaware

**EXHIBIT 23.1  
Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in Registration Statements on Form S-8 (No. 333-169623, 333-165651, 333-46068) of Dynasil Corporation of America and Subsidiaries (the Company) of our report dated December 21, 2016, relating to our audits of the consolidated financial statements as of and for the years ended September 30, 2016 and 2015, which appears in this Annual Report on Form 10-K of Dynasil Corporation of America for the year ended September 30, 2016.

/s/ RSM US LLP

RSM US LLP  
Boston, Massachusetts  
December 21, 2016

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-K 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 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 21, 2016

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

EXHIBIT 31.1 (b)  
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) and  
SECTION 302 OF THE SARBANES-OXLEY ACT

I, Robert J. Bowdring, certify that:

1. I have reviewed this Form 10-K 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 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 21, 2016

/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 this Annual Report of DYNASIL CORPORATION OF AMERICA (the "Company") on Form 10-K for the period ended September 30, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Peter Sulick, President and Chief Executive Officer of the Company and Robert J. Bowdring, Chief Financial Officer of the Company, 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 our 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  
President and  
Chief Executive Officer

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

December 21, 2016