

ASTROTECH Corp \WA\  
Form 40-APP  
August 21, 2015

File No. \_\_\_\_\_

UNITED STATES OF AMERICA

BEFORE THE

SECURITIES AND EXCHANGE COMMISSION

APPLICATION FOR AN ORDER PURSUANT TO SECTION 3(b)(2) OF THE INVESTMENT COMPANY ACT  
OF 1940 DECLARING THAT ASTROTECH CORPORATION IS PRIMARILY ENGAGED IN A BUSINESS  
OTHER THAN THAT OF INVESTING, REINVESTING, OWNING, HOLDING OR TRADING IN SECURITIES.

IN THE MATTER OF

ASTROTECH CORPORATION

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As filed with the Securities and Exchange Commission on August 21, 2015

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## INTRODUCTION

Astrotech Corporation (“Astrotech” or the “Applicant”), a corporation organized under the laws of the State of Washington, hereby applies for an order of the Securities and Exchange Commission (the “Commission”) under Section 3(b)(2) of the Investment Company Act of 1940, as amended (the “1940 Act”), declaring that Astrotech is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

Astrotech is an Austin, Texas-based company that is primarily engaged in the commercialization of space industry technologies. Astrotech was incorporated in 1984 under the name SPACEHAB and was based in Houston, Texas. SPACEHAB was formed with the goal of designing and building a man-rated module in the Space Shuttle’s payload bay to ferry tourists into space. The National Aeronautics and Space Administration (“NASA”) and SPACEHAB modified that original idea by agreeing to design and build a “Space Habitat” pressurized module to transport supplies and experiments into low earth orbit. SPACEHAB’s first module flew on Space Shuttle Endeavor in July, 1993, and SPACEHAB modules flew on over 20 more shuttle missions that carried numerous experiments and over 150,000 pounds of vital supplies and experiments to MIR and the International Space Station.

Astrotech also provided both the government and commercial space markets with satellite processing services through its Astrotech Space Operations (“ASO”) subsidiary located in Titusville, Florida, three miles (5 km) from the Kennedy Space Center. It had more than 150,000 square feet of clean room processing space, primarily used to service United Launch Alliance’s Atlas and Delta rocket families, Orbital Sciences’ Taurus and Pegasus, and SpaceX’s Falcon launch vehicles. Astrotech also owned and operated processing facilities located on Vandenberg Air Force Base at the Western Range in California.

On August 22, 2014, Astrotech completed the previously announced sale of substantially all of the assets used to conduct Astrotech’s ASO business for \$61.0 million, less a working capital and indemnity holdback of \$1.8 million and \$6.1 million, respectively. Notwithstanding the sale of the ASO business, Applicant submits that the sale will not change the fundamental nature of its business which is developing innovative technologies and biotechnology products from its space-based research activities for commercialization. As described below, Astrotech has never been, and will not be, engaged in the business of investing, reinvesting, owning, holding or trading in securities. However, as a result of the sale of the ASO business, Astrotech maintains a substantial amount of liquid capital as a proportion of its total assets, including various short-term investment securities, to run and grow its remaining business operations. Astrotech needs to maintain this liquid capital for research and development activities, to fund the organic growth of its business operations, and to fund potential strategic acquisitions that would complement its existing space-based businesses. Notwithstanding its cash reserves which currently equal approximately \$33.2 million, Astrotech does not hold itself out, and is not

perceived to be, as an investment company. Astrotech is filing this application pursuant to Section 3(b)(2) of the 1940 Act to provide certainty as to its legal status under the 1940 Act.

Astrotech's desire for clarification is due in large part to the fact that like similar companies engaged in extensive research and development activities, a significant portion of its assets consist of intangible assets, such as internally-generated intellectual property and other intangibles that may not appear on its balance sheet. Because Astrotech holds its internally-developed intangible assets, the value of its investment securities is (and likely will remain) below 40% of its total assets (excluding Government securities and cash items) on an unconsolidated basis. However, valuation of internally-developed intangible assets is difficult and inherently subjective. While Astrotech strongly believes that it qualifies for the Section 3(b)(1) exemption because its primary business relates to space commercialization activities and the development of technologies and products resulting from space-based research, out of an abundance of caution and the desire for legal certainty, Astrotech is seeking an order of the Commission pursuant to Section 3(b)(2) of the 1940 Act, and submits that the Commission should find it to be primarily engaged in a business other than that of an investment company.

## II. THE APPLICANT

### a. History

Astrotech Corporation, formerly SPACEHAB Inc., is a commercial space commerce company headquartered in Austin, Texas which commercializes space technologies for terrestrial use and integrating complimentary disruptive technologies. Astrotech provides products and services to NASA, the U.S. Department of Defense, international space agencies, and global commercial customers. For nearly 30 years, Astrotech has remained a crucial player in space commerce activities. Astrotech has successfully supported the launch of 23 shuttle missions and more than 300 spacecraft, and designed, operated and built space hardware and processing facilities. Astrotech currently prepares and processes scientific research in microgravity, develops and manufactures sophisticated and highly innovative chemical analytical sensor equipment, and converts film to digital using sophisticated algorithms and scanning technology that digitally repairs and enhances the film.

Before 2009, Astrotech was known as SPACEHAB and was based in Houston, Texas. SPACEHAB was incorporated in 1984 with the goal of designing and building a man-rated module in the Space Shuttle's payload bay to ferry tourists into space. NASA and SPACEHAB modified this original idea and agreed to design and build a man-rated "Space Habitat" pressurized module to transport supplies and experiments into low earth orbit. SPACEHAB's first module flew on Space Shuttle Endeavor in July, 1993, and SPACEHAB modules flew on over 20 more shuttle missions that carried numerous experiments and over 150,000 pounds of vital supplies and experiments to MIR and the International Space Station (ISS).

SPACEHAB provided all aspects of “cargo management” including developing, designing, building, validating, integrating, certifying, transporting, operating, monitoring and de-integrating pressurized and non-pressurized flight hardware and ground support equipment. Approximately 100 astronauts trained at the former SPACEHAB Space Payload Processing Facility (“SPPF”) in Cape Canaveral, Florida. At the SPPF, the astronauts worked in the modules, practiced loading and unloading protocols, and familiarized themselves with the experiments. SPACEHAB also created an educational outreach program, Space Technology and Research Students, to fly experiments in a microgravity environment designed by students from around the world.

In September 2009, Astrotech completed construction of a 23,000 square foot payload processing facility at VAFB in California which enhanced Astrotech’s capability to process five-meter class satellite payloads. Additionally, in December 2009, Astrotech completed construction of a 5,600 square foot office building used by customers for administrative and operational support of teams processing satellites in the new five-meter payload facility. Prior to December 31, 2012, Astrotech maintained a separate 58,000 square foot payload processing facility located in Cape Canaveral, Florida. Astrotech negotiated an agreement with the Canaveral Port Authority for the lease of the land for a forty-three year period, expiring 2040.

On March 18, 2015, Astrotech completed the acquisition of certain key assets and intellectual property from Image Trends, Inc. (“Image Trends”) during a bankruptcy auction held in Austin, Texas. With the acquisition of these technologies, intellectual property, and selected high performance space imaging technologies, Astrotech’s subsidiary Astral Images, Inc. will be able to revolutionize the film-to-digital conversion process for the new Ultra-High Definition 4K standards.

#### b. Business and Structure

Prior to the sale of the ASO business, Astrotech had two distinct business units: (i) ASO; and (ii) Spacetechnology, Inc. (“Spacetechnology”). Spacetechnology is itself comprised of two business units: (i) 1<sup>st</sup> Detect Corporation (“1<sup>st</sup> Detect”); and, (ii) AstroGenetix Corporation (“AstroGenetix”), a commercial biotechnology company. Since the sale of the ASO business, Astrotech operates 1<sup>st</sup> Detect, AstroGenetix and Astral Images, Inc. (“Astral Images”).

#### Description of Spacetechnology Subsidiaries

##### 1<sup>st</sup> Detect:

Astrotech formed 1<sup>st</sup> Detect to commercialize miniature mass spectrometer technology developed for the International Space Station (ISS). 1<sup>st</sup> Detect develops, manufactures and sells ultra-small mass spectrometers and related equipment. Mass spectrometers, in general, measure the mass and relative abundance of ions in a sample to create a “mass spectrum”. This resulting mass spectrum is a unique fingerprint for each chemical that can be compared to a reference library of mass spectra to verify the identity

of a sample. Mass spectrometers can identify chemicals with more accuracy and precision than competing instruments given their extreme sensitivity and specificity and they are a staple of almost all analytical laboratories. By leveraging technology initiated by an engagement with NASA to develop a mass spectrometer for the ISS, Astrotech, through 1<sup>st</sup> Detect, has developed a series of instruments that are significantly smaller, lighter, faster and less expensive than competing mass spectrometers, and significantly more sensitive and accurate than other competing chemical detectors. Astrotech's efforts have resulted in a technology that can provide mass spectrometry performance in real-time in the field.

Astrotech quickly realized the commercial utility of small mass spectrometers and began parallel development of a terrestrial unit to be deployed in the security, healthcare, and industrial markets. Leveraging Astrotech's 25 year history of developing high performance, lightweight ruggedized systems for the space program, 1<sup>st</sup> Detect has been able to revolutionize the mass spectrometer industry by offering the same performance as laboratory instruments, but at a price and in a form factor similar to today's handheld detectors.

As a result of Astrotech's efforts, 1<sup>st</sup> Detect has become a leading supplier of chemical detection and analysis instrumentation to the security, military, petrochemical, food and beverage, and semiconductor industries. Its next generation solutions based on high performance, miniaturized mass spectrometry enable unparalleled detection of critical threats, rapid & accurate monitoring of industrial processes, and high performance benchtop analysis in a small, and low cost platform.

1<sup>st</sup> Detect's ultra-small mass spectrometer is a chemical analyzer that provides laboratory quality, real-time analysis. Astrotech's proprietary technology utilizes the most advanced low power electronics and miniaturization technologies developed for the space program and it is capable of detecting a wide range of chemicals quickly with very high sensitivity, specificity and reliability. The instrument provides laboratory quality performance in a much smaller footprint than the competition at a price well below competing mass spectrometers. 1<sup>st</sup> Detect has eleven granted U.S. patents, along with seven granted foreign patents, one pending U.S. patent application, two pending foreign patent applications that will soon be granted, and numerous other patent applications now pending before the U.S. Patent & Trademark Office and foreign patent offices.

1<sup>st</sup> Detect's two leading products are the MMS-1000™ and the OEM-1000 platform technology. The MMS-1000™ is a small, low power mass spectrometer designed initially for the laboratory market. The unique design of this unit enables mass spectrometric quality chemical analysis in a small package (about the size of a shoebox) that operates off less power than a typical light bulb. This allows high quality chemical analysis to be performed in locations where mass spectrometers have not been used before, such as directly on the factory floor or in the battlefield, without compromising the quality of the analysis.

The OEM-1000 is a mass spectrometer component that was developed for applications where customers need the high quality analysis provided by a mass spectrometer but in a platform that can be integrated into customer specific packages. The OEM-1000

uses the same high performance analyzer as the MMS-1000™, but is provided as an open platform for customers and development partners to integrate with their complementary technologies, with application-specific sample preparation, inlets and software. With the introduction of the OEM-1000 platform technology, 1<sup>st</sup> Detect is integrating the mass spectrometer technology with a number of existing complementary technologies and instruments. Market development strategies are focused on product development with channel partners who will enhance the analytical capability of their own product offerings by leveraging the attributes of the OEM-1000 to provide a competitive advantage.

1<sup>st</sup> Detect instruments are based on the following key technology components:

- **Cylindrical Ion Trap (“CIT”):** The CIT is the core analyzer element of Astrotech’s mass spectrometer technology. The CIT is a series of rings that hold ions in a resonant pattern with an applied RF voltage. By carefully adjusting the RF voltage, the ions are ejected (“scanned”) onto a detector according to their mass, which results in a mass spectrum that provides highly accurate visibility into the chemical constituents within a sample. In addition, this cutting edge technology can be operated in MS/MS mode, a feature only available in instruments that are significantly more expensive, where targeted chemicals of interest can be isolated and further fragmented in the trap to provide a secondary confirmation of an analysis, improving the specificity of the instrument without the need for additional hardware, while also differentiating it from much of the competition.
- **Pre-concentrator:** To improve the sensitivity of the MMS-1000™, 1<sup>st</sup> Detect developed a novel pre-concentrator under a contract with the Defense Threat Reduction Agency and the U.S. Army Dugway Proving Ground. The pre-concentrator can improve the sensitivity of the mass spectrometer by over 1000x, enabling detection to extremely low concentrations (parts per trillion). In addition, the pre-concentrator can be operated in a “temperature ramped” mode to separate chemicals in time similar to a gas chromatograph (“GC”), a competing technology. This can improve the quality of the analysis without the need for a large, slow, power hungry and much more expensive GC. In contrast to a GC which can take 20 minutes or more to separate the sample, Astrotech’s pre-concentrator can complete the separation process in 30 seconds or less.
- **Conductor Software (“Conductor”):** 1<sup>st</sup> Detect has written a software package that allows users to control the instrument with a simple, feature rich, graphical user interface. Conductor also allows users to monitor the mass spectrum and export the data to industry standard formats. The highly customizable software also contains an advanced mode where users can write custom scripts in a simple Java based format for developing custom methods for unique analysis.

In addition to the opportunities afforded by OEM-1000™, due to the high speed performance, analytical capability and flexibility of this product, 1<sup>st</sup> Detect’s best opportunities involve government programs in aviation security and the military and in applications where real-time or in-situ monitoring is required. There are also significant

opportunities in the industrial research environment where 1<sup>st</sup> Detect's mass spectrometer technology allows customers to offer high performance analytical capabilities while reducing their bench top space requirements at a fraction of the price of other mass spectrometry solutions.

1<sup>st</sup> Detect's customers include government agencies, research organizations and universities. Customers have either purchased or leased the MMS-1000™ or OEM-1000, often to evaluate the core technology in anticipation of an OEM partnership with 1<sup>st</sup> Detect. This partnering strategy provides scalable distribution where 1<sup>st</sup> Detect leverages the brand names of reputable, high quality partners with established and robust distribution channels. In addition to OEM partnerships, 1<sup>st</sup> Detect plans on ramping up its sales team to focus on direct sales.

Competition with 1<sup>st</sup> Detect's mass spectrometer comes from traditional mass spectrometers and from other chemical sensors based on different technologies, primarily ion mobility spectrometry ("IMS"). There are several incumbent vendors that compete directly with 1<sup>st</sup> Detect's ultra-small mass spectrometer. However, 1<sup>st</sup> Detect products combine a number of attributes in a single product not currently available in other products. 1<sup>st</sup> Detect believes its competitive advantages include:

- 1<sup>st</sup> Detect's technology allows for near instantaneous results, similar to IMS technology, but with much greater sensitivity and specificity, with no need to recalibrate between analyses. This compares to traditional mass spectrometers where the analysis time can take up to several hours and require a cumbersome recalibration process between analyses.
- 1<sup>st</sup> Detect's price point is significantly less than traditional mass spectrometers, becoming the first instrument that can provide superior mass spectrometry results at a price point similar to technologically inferior ion mobility spectrometers, which can only detect a limited number of chemicals and is prone to false positives.
- 1<sup>st</sup> Detect offering is significantly smaller, lighter and much more portable than other mass spectrometers. Astrotech's mass spectrometer can also operate from a cigarette lighter in a car on 45 watts while traditional mass spectrometers are permanently situated on a table in a laboratory and require 500 watts or more.
- 1<sup>st</sup> Detect's MS/MS capability that is integrated with its standard software further improves the specificity of Astrotech's instrument without the need for additional hardware. This feature isolates specific chemicals of interest so they can be further fragmented in the trap to provide a secondary confirmation of an analysis. Such a feature is only available in instruments that are significantly more expensive.
- Developed as a platform technology, 1<sup>st</sup> Detect is able to be adapted to a wider variety of applications than competing purpose-built instruments.



With the introduction of the OEM-1000 platform technology, 1<sup>st</sup> Detect is integrating the mass spectrometer technology with a number of existing complementary technologies and instruments. Market development strategies are focused on product development with channel partners who will enhance the analytical capability of their own product offerings by exploiting the attributes of the OEM-1000 to enable their own competitive advantage. Due to the high speed performance, analytical capability and flexibility of the product, 1<sup>st</sup> Detect's best opportunities involve applications where real-time monitoring is required. There are also significant opportunities in the industrial research environment where the mass spectrometer technology allows partners to offer high performance analytical capabilities on their own sample preparation systems while improving their margins and reducing their customers' bench top space requirements.

The broadband nature of 1<sup>st</sup> Detect's technology, as well as the high performance provided by its unique ion trap architecture, makes the 1<sup>st</sup> Detect technology applicable to a variety of applications.

1<sup>st</sup> Detect increased its customer base in 2015 by receiving initial orders from a leading snack food producer for its disruptive mass spectrometry technology. The unit will be utilized by the snack food producer for quality control purposes. Additionally, it reached an agreement with Government Scientific Source to become a distributor of 1<sup>st</sup> Detect products for federal, state, and municipal government customers in the U.S. The agreement with Government Scientific Source is intended to facilitate and accelerate the procurement process for its miniaturized mass spectrometer through the General Services Administration to make it available to U.S. government agencies that are purchasing laboratory and homeland security-related instruments.

#### Astrogenetix:

Astrogenetix is a biotechnology company formed to commercialize products processed in the unique environment of microgravity. Astrogenetix's primary research mission is to discover therapeutically relevant and commercially viable biomarkers — substances used as indicators of biologic states — in the microgravity environment of space. By applying a biotechnology model to this unique discovery process, Astrogenetix discovers novel biomarkers that may not be identifiable via terrestrial experimentation. Through this method, Astrogenetix expects to shorten the drug development timeframe and guide relevant therapeutics into the clinical trial process more quickly and cost-effectively.

Biomarkers are characteristics or "markers" of the state of a biological system or process, and their discovery helps in understanding the complexities of a biological system and how to apply these discoveries to personalized medicine and drug development. These markers can be in the form of DNA, RNA, proteins, metabolites or any other measurable biologic material. Scientists can potentially use biomarkers as therapeutic targets or diagnostic markers, as well as in applications ranging from biotechnology research and development to agricultural and industrial processes. While the market for biomarkers has been active for years, Astrogenetix offers a new approach by examining biomarkers in the

microgravity environment, where, researchers believe, they will be expressed in novel ways — potentially leading to new discoveries.

Astrogenetix pursued an aggressive space access strategy to take advantage of the NASA space shuttle program prior to its retirement in 2011. This strategy gave Astrogenetix unprecedented access to research in microgravity, as it flew experiments twelve times over a three year period. In collaboration with NASA, NASA has engaged leading vaccine development experts through a premier educational institution to independently evaluate Astrogenetix's platform with specific direction to aid in the filing of an Investigational New Drug ("IND") application for Salmonella. The team is also evaluating a vaccine target for Methicillin-Resistant Staphylococcus Aureus ("MRSA") based on discoveries made in microgravity. Astrogenetix has negotiated a Space Act Agreement with NASA for a minimum of twenty eight additional space flights following the successful filing of the IND for Salmonella.

#### Description of Astral Images

Astral Images was created to commercialize identified government funded satellite image correction technologies. During the third quarter of 2015, Astral acquired certain defect correction technologies from Image Trends in a bankruptcy auction in Austin, Texas. Image Trends established a gold standard in film defect correction by expanding upon technology first developed by IBM and Kodak, and was the intellectual property of interest to Astrotech in its acquisition of assets from Image Trends. The total cost of the selected assets Astral Images acquired was \$1.6 million, which was predominately for the software. In conjunction with the asset purchase, Astrotech was able to hire several engineers who were critical in the creation of this technology. The engineers will allow Astrotech to enhance this technology for future opportunities in the digital conversion and repair of feature films and film-based television series industries to the next generation Ultra-High Definition ("UHD") 4K standards.

The development of the Astral Images Digital Ice technology began in May of 2005 at the Eastman Kodak Company. Digital image correction and enhancement ("Digital ICE") is a set of technologies related to producing an altered image in a variety of frequency spectra. The objective of these technologies is to render an image more usable by other filtering techniques. These technologies were most actively advanced in the 1960s and early 1970s in the fields of reconnaissance medical electronics. The term "Digital ICE" initially applied specifically to a proprietary technology developed by Austin Development Center, formerly Applied Science Fiction that automatically removes surface defects, such as scratches. Within the first year of Astrotech's research and development efforts, results were impressive and Astrotech believes it has a breakthrough technology in the digital image correction markets. After evaluating a number of potential applications for this technology, Astrotech believes Astral Images is well positioned to not only displace older technologies in the digital image correction market, but to also carve out a niche in the digital scanning industry by providing a laboratory quality digital scanner that is high performance, higher resolution,

significantly faster, less power hungry and more competitively priced than competing products. Furthermore, this technological breakthrough will enable Astrotech's clients to reap the benefits of scientific grade cameras with uncompromising quality.

#### Description of ASO

Prior to the ASO sale, ASO provided support to its government and commercial customers as they processed complex communication, earth observation and deep space satellites in preparation for their launch on a variety of launch vehicles. Processing activities included satellite ground transportation; pre-launch hardware integration and testing; satellite encapsulation, fueling, launch pad delivery; and communication linked launch control.

Astrotech's ASO facilities can accommodate five-meter class satellites, encompassing the majority of U.S.-based satellites. ASO's service capabilities included designing and building spacecraft processing equipment and facilities. Additionally, ASO provided propellant services including designing, building and testing propellant service equipment for servicing spacecraft. ASO accounted for 99% of Astrotech's consolidated revenues for the year ended June 30, 2014. Revenue for the ASO business unit was generated primarily from various fixed-priced contracts with launch service providers in both the government and commercial markets and the design and fabrication of space launch equipment. The services and facilities provided to ASO customers supported the final assembly, checkout, and countdown functions associated with preparing and launching spacecraft. The revenue and cash flows generated from the ASO operations are primarily related to the number of spacecraft launches.

ASO leased the 60-acre site located on VAFB in California, where Astrotech owned four buildings totaling over 50,000 square feet of space. Astrotech had extended the original land lease, which expired in September 2013. The properties and leases used in connection with the ASO business were transferred in connection with the sale of ASO.

#### c. Overview of ASO Sale

On August 22, 2014, Astrotech sold substantially all of its assets used to conduct the ASO business for \$61.0 million, less a working capital and indemnity holdback of \$1.8 million and \$6.1 million, respectively. The working capital holdback was settled in February 2015 and resulted in a \$1.6 million reduction in the price received from the sale of the ASO business. The indemnity holdback is being held in escrow under the terms of an escrow agreement until February 2016 (the 18-month anniversary of the consummation of the transaction).

Astrotech's board of directors ("Board of Directors") approved the ASO sale and submitted it to a vote of Astrotech's shareholders for a variety of reasons. First, the domestic space industry is dominated by a few very large, well-capitalized companies with decades of experience and proven track records primarily serving government customers. Over the years, Astrotech's attempts to grow the ASO business were limited given this highly

competitive landscape. Additionally, the portion of the space operations market that Astrotech served continued to be challenged by uncertainty in government funding and support for key space programs. Astrotech believed that these factors would impact the number of new opportunities for revenue growth in the ASO business.

Furthermore, the Board of Directors believed that the sale of the ASO business represented a unique opportunity to sell the ASO Business to a sophisticated space industry consolidator that made an attractive all cash offer. The Board of Directors' decision to enter into the ASO sale was also based on a careful evaluation of Astrotech's strategic alternatives through a review process conducted over several years, the potential growth opportunities for the ASO business and the potential growth opportunities for the Spacetech business. The Board of Directors also considered that the terms of the ASO sale, as compared to other proposals received in the past, in the aggregate and taking into account the assets to be acquired and the liabilities to be assumed, were more favorable than the other alternatives available to Astrotech.

At a special meeting of shareholders held on August 20, 2014, the shareholders approved the sale of the ASO business and the sale of the ASO business was completed on August 22, 2014. As a result of the sale of substantially all of its assets, Astrotech received a significant amount of cash and used a portion of the proceeds from the sale to pay off outstanding indebtedness.

Astrotech plans to utilize the remaining proceeds from the ASO sale to fund the organic growth of its operating businesses; to fund continued research and development activities; and to engage in potential strategic acquisitions of businesses that will complement the existing operating businesses. Pending the use of this money to finance capital expenditures, current operations and potential acquisitions, the money has been invested in high quality short-term investments.

#### d. Astrotech's Use of Capital Preservation Investments

Astrotech's business requires it to maintain a substantial liquid cash position. There are a number of business reasons for this, including the capital intensive nature of its research and development activities, the need to fund the growth of its existing businesses, as well as the need to maintain cash for potential strategic transactions or acquisitions that would complement its existing businesses.

Astrotech is heavily involved in research and development of new technologies and has been awarded five U.S. patents to date for 2015. Astrotech's research and development activities through the third quarter of FY2015, FY2014, and FY2013 were \$2.3 million, \$2.5 million and \$2.1 million, respectively, and accounted for roughly 29%, 22% and 23% of Astrotech's total operating expenses (excluding cost of goods sold).

Astrotech also needs to maintain substantial liquid capital for possible strategic transactions, including acquisitions that would complement its existing businesses such as its acquisition of key assets and intellectual property from Image Trends in March 2015 for

its Astral Images business. Astrotech has evaluated and will continue to pursue opportunities to use its liquid capital to support business and strategic objectives by acquiring and investing in businesses with complementary products, services, and/or technologies, and to expand its existing businesses.

Pending the use of its capital for its current and future operations, research and development activities, and potential strategic transactions such as acquisitions, Astrotech seeks to preserve its capital and maintain liquidity by investing in investments that are meant to conserve capital and liquidity until the funds are needed to be used by Astrotech in its businesses. These investments include fixed income instruments, certificates of deposits, and money market investments that are investment grade, liquid, and that earn competitive market returns and provide a low level of credit risk ("Capital Preservation Investments"). These Capital Preservation Investments constitute "investment securities," as defined in Section 3(a)(2) of the 1940 Act. Astrotech does not invest in securities for short-term speculative purposes nor does it engage in active trading of its investment securities.

e. Management of Astrotech

Astrotech's senior management, members of its Board of Directors and employee composition is described below. Astrotech devotes few employee resources to managing or investing its cash other than casual monitoring of its Capital Preservation Investments.

Senior Management:

As described below, each of the Applicant's senior executive officers has extensive experience in the space commercialization industry and/or managing the affairs of a company like Astrotech. None of the Applicant's senior executive officers devotes any of his business time to investment management, apart from management of the Applicant's cash and cash equivalents. The Applicant does not employ securities analysts and does not engage in the trading of securities for short-term speculative purposes, investment purposes or otherwise. Additionally, the Applicant does not employ any persons in the role of analyzing or managing the corporate debt of companies that the Applicant owns.

The following is a brief description of the professional experience in the space commercialization industry and the related educational backgrounds of each of the senior executive officers:

Thomas B. Pickens, III, Chief Executive Officer and Chairman of the Board, Mr. Pickens, a member of the company's Board of Directors since 2003, became president and chief executive officer in January 2007. In 1985, Mr. Pickens founded T.B. Pickens & Co., a company that provides consulting services to corporations, public institutions and start-up organizations. He is also the managing partner and founder of Tactic Advisors, Inc., a company specializing in corporate turnarounds on behalf of creditors and investors. Throughout his professional career, Mr. Pickens has founded and served as Chairman and CEO for many companies during the startup, growth and turnaround phases of a company's lifecycle, with an emphasis in the creation of value in a challenging environment.

Eric N. Stober, Chief Financial Officer, Treasurer and Secretary, Mr. Stober joined Astrotech Corporation in August of 2008 as a Senior Staff Financial Analyst. In the same year, he was promoted to Principal Financial Analyst and from 2012 to the present, Mr. Stober served as Vice President of Corporate Development. Prior to joining Astrotech Corporation, he worked at the private equity firm Virtus Financial Group, analyzing prospective middle market private equity investments. Additionally, Mr. Stober founded or co-founded several companies, including a web advertising company, a small business tax and financial advisory firm, a sports-based media and entertainment company, and a service provider sourcing company.

Raj Mellacheruvu, Vice President and Chief Operating Officer, Mr. Mellacheruvu has over 20 years of experience in start-up and large enterprise environments focused on technology innovation, maximizing P&L performance and full lifecycle product management. Prior to joining the Company, Mr. Mellacheruvu was the Managing Director of Noumenon Consulting, Inc., providing consultant services on product strategy, management and business operation to 1<sup>st</sup> Detect, a subsidiary of the Company, since 2013. In a prior position he served as the Vice President of Products & Strategy at ClearCube Technology, where he led the development and delivery of industry leading innovative products and solutions.

Board of Directors:

The Applicant's Board of Directors consists of the following members. The following is a brief description of the professional experience relating to the space commercialization industry, as well as the educational backgrounds of each of the Applicant's non-executive directors:

Mr. Thomas B. Pickens, Chairman of the Board and Chief Executive Officer, whose biography appears above under "Senior Management". Mr. Pickens brings a historical understanding of Astrotech and serves a key leadership role on the Board of Directors, providing the Board of Directors with in-depth knowledge on Astrotech's and the industry's challenges and opportunities. Mr. Pickens was intimately involved with the transformation of the Company from the legacy SPACEHAB business to its current core businesses. Currently, Mr. Pickens communicates management's perspectives on company strategy, operations and financial results to the Board of Directors. Mr. Pickens' has extensive senior management experience, as well as experience as a member of multiple corporate boards.

Mr. Michael R. Humphrey, Director, has served as Executive Vice President of Education 2020 since August 2011. He previously served as President and CEO of Education 2020 from January 2009 until August 2011. Prior to joining Education 2020, Mr. Humphrey was President and Founder of Human Performance Labs, LLC from August 2007 until December 2008. Mr. Humphrey has extensive knowledge in growth based companies.

Mr. Ronald W. Cantwell, Director, is President of VC Holdings, Inc., through which Mr. Cantwell provides advisory services in corporate and project investment structuring, mergers and acquisitions, financial restructuring and operations management. In addition,

Mr. Cantwell has served as Chairman and Chief Executive Officer of Catalyst Group, Inc. Prior to joining Catalyst Group, Inc., Mr. Cantwell spent nineteen years in public accounting, most recently as a Tax Partner in the Ernst & Young LLP Dallas office. Mr. Cantwell has a 45 year background in corporate and project investment structuring, mergers and acquisitions, financial/tax/regulatory restructuring and reporting and operational management.

Mr. William Readdy, Director, from 1974 to 2005, Mr. Readdy served the United States as a naval aviator, pilot astronaut, military officer, and civil service executive. In 2005, Mr. Readdy established Discovery Partners, International LLC, a consulting firm to provide strategic planning, risk management, safety and emerging technology solutions to aerospace and high-technology industries. Mr. Readdy served as a test pilot and instructor between carrier deployments to the North Atlantic, Caribbean and Mediterranean in the late 1970s and early 1980s. Mr. Readdy joined the National Aeronautics and Space Administration (NASA) in 1986 and in 1987 became a member of the astronaut corps, but continued his military service in the Naval Reserve, attaining the rank of captain before retiring in 2000. Mr. Readdy brings tremendous background and experience with NASA, the U.S. Department of Defense and with the aerospace industry in general, which are primary focuses of Astrotech. He also brings an extensive knowledge of public policy, program management and contracting matters involving military, civil and commercial space programs. Mr. Readdy serves on the Compensation Committee.

Ms. Sha-Chelle Manning, Director, Ms. Manning is the Director of Corporate Innovation of Pioneer Natural Resources, a large independent oil and gas exploration company. In September, 2013, Ms. Manning was appointed by the Governor to the Texas Emerging Technology Advisory Committee. From September 1, 2008 to April 30, 2010, Ms. Manning was Managing Director for Nanoholdings LLC, a company that commercializes scientific breakthroughs in nanotechnology. From January 2007 to December 31, 2008, Ms. Manning was Vice President at Authentix, a Carlyle company. From September 2005 to April 2007, Ms. Manning was a consultant to the Office of the Governor of Texas where she led the development of the Texas nanotechnology strategic plan. Prior to these assignments, Ms. Manning was Director of Alliances at Zyvex Corporation from August 2002 to September 2005, where she was responsible for the commercialization of nanotechnology products introduced and sold into the marketplace in partnership with key government agencies and industry. Ms. Manning brings a wide range of experience in management and executive strategic consulting focused on high-technology solutions or services. Additionally, her interaction with local, state and federal governments throughout her career provides significant experience with government affairs, particularly in the State of Texas. Ms. Manning serves on the Corporate Governance and Nominating Committee and the Audit Committee. The Board of Directors has determined that Ms. Manning meets the qualification guidelines as an "audit committee financial expert" as defined by the rules of the Commission.

Mark Adams, Director, Mr. Adams is the founder of Advocate, MD Financial Group, Inc., a Texas-based medical liability insurance holding company, and currently serves as its

chairman, president and chief executive officer. Mr. Adams also serves as chairman of the board of Advocate, MD Insurance of the Southwest, Inc., a wholly owned subsidiary of the company. He is also a founding partner in several other companies including the Endowment Development Group, a Houston-based life insurance company specializing in placing large multimillion dollar life insurance policies throughout the U.S. market. Mr. Adams founded Murphy Adams Restaurant Group in 2007, which owns and operates Mama Fu's Asian House restaurants throughout the southeast United States. In 2008, Mr. Adams founded Small Business United, LLC, a non-profit organization that supports small businesses. Also in 2008, Mr. Adams co-founded ETMG (Employer's Trust Management Group), LLC. Additionally, in 2008, Mr. Adams founded Sozo Global, LLC, a rapidly expanding, international network marketing functional beverage and nutritional products company. Mr. Adams is the winner of the 2008 Prestigious Ernst and Young Entrepreneur of the Year Award for Central Texas. Mr. Adams, provides the Board of Directors with expertise in management and corporate governance. Mr. Adams serves as the Chairman of the Corporate Governance and Nominating Committee.

Mr. Daniel T Russler, Director, has more than 25 years of capital markets, development, and entrepreneurial experiences, including an extensive background in sales and trading of a broad variety of equity, fixed income and private placement securities. Since 2003, Mr. Russler has been the Principal Partner of Family Asset Management, LLC, a multi-family office providing high net worth individuals and families with financial services. Mr. Russler has held portfolio and risk management positions at First Union Securities, Inc., J.C. Bradford & Co, William R. Hough & Co, New Japan Securities International and Bankers Trust Company. His background also includes experience in project and structured finance at U.S. Generating Company. Mr. Russler has extensive knowledge of finance, entrepreneurship, investment allocation and capital raising matters. Mr. Russler is Chairman of the Compensation Committee and serves on the Audit Committee. The Board of Directors has determined that Mr. Russler meets the qualification guidelines as an "audit committee financial expert" as defined by the rules of the Commission.

John A. Oliva, Director, Mr. Oliver has 30 years of experience in the private equity, investment banking, capital markets, branch management, and asset management sectors. Since 2002, Mr. Oliva has been the Managing Principal of Southeastern Capital Partners BD Inc., a FINRA registered broker/dealer and independent investment banking and advisory firm. Since 2002, Southeast Capital Partners has provided financial advisory services, including mergers/acquisitions, underwriting and raising expansion capital to select mid-tier companies. In addition, Mr. Oliva is the Managing Partner of Capital City Advisors Inc., which provides private merchant banking services to clients in Europe and Asia. Mr. Oliva has served on the Board of Directors since 2008 and provides expert advice to the Board of Directors on financial issues. Mr. Oliva plays a crucial role in risk management, providing advice and direction to management on a number of issues ranging from SEC filings, debt transactions and auditor independence. The Board of Directors has determined that Mr. Oliva meets the qualification guidelines as an "audit committee financial expert" as defined by the SEC rules. Mr. Oliva is Chairman of the Audit Committee and serves on the Compensation Committee and the Governance and Nominating Committee.



Employees:

As of June 30, 2015, the Applicant had approximately 44 employees. Of these personnel, approximately 55% work at 1<sup>st</sup> Detect, 13% work at Astral Images and approximately 32% are involved in administration. Astrotech employs no experts in investment advisory services, securities analysis, or securities trading for the management of its investments.

f. Nature of Astrotech's Business Following the Transaction

Astrotech's business following the sale of the ASO business has been focused on organically growing all of its business units – 1<sup>st</sup> Detect, Astrogenetix, and Astral Images. Additionally, Astrotech considers strategic transactions such as acquisitions that supplement and complement its businesses as such opportunities arise.

In March 2015, Astrotech successfully completed the acquisition of certain key assets and intellectual property from Image Trends. The assets and intellectual property acquired included technologies on digital image correction and enhancement. These technologies are used in producing an altered image in a variety of frequency spectra with the objective of rendering an image more usable by other filtering techniques.

After evaluating a number of potential applications, including bolt-on technologies from a classified laboratory, Astrotech believes it is perfectly positioned to not only displace antiquated technologies in the digital image correction market, but to also carve out a niche in the digital scanning industry by providing a laboratory quality digital scanner that is high performance, higher resolution, significantly faster, and more competitively priced than competing products. This technological breakthrough will enable its clients to reap the benefits of scientific grade cameras with uncompromising quality.

Astrotech is also in the process of transitioning from a research and development company to an operational production company that is engaged in manufacturing products developed from its significant research and development activities. Astrotech expects that its operational revenues will increase substantially following its transition to a production company.

III. REASON RELIEF IS REQUESTED

Astrotech strongly believes that it is not an "investment company" as defined in Section 3(a)(1) of the 1940 Act because it is predominantly engaged, through its 1<sup>st</sup> Detect, Astrogenetix and Astral Images subsidiaries, in a business other than investing, reinvesting, owning, holding or trading in securities.

Based on the five factors listed in Section IV.b. below and the accompanying analysis, Astrotech has never been, is not now, and should not be classified as an "investment company" as defined under the 1940 Act. Astrotech does not hold itself out as an "investment company" nor do its shareholders perceive it to be an "investment company". Innovative companies

engaged in capital intensive research and development activities such as Astrotech frequently dispose of assets to focus on other core businesses especially when capitalization issues hamper the full exploitation of all of its businesses. The need to undertake such activity to remain competitive and innovative indicates the potential problems that the 1940 Act presents for companies such as Astrotech. Business transactions motivated entirely by the opportunity to expand research and development activities or to maintain a competitive innovative position will be constrained by the need to avoid registration under the 1940 Act.

While Astrotech believes it could typically satisfy the requirements of Rule 3a-8 of the 1940 Act relating to research and development companies, its research and development expenses have fluctuated from year to year. Astrotech's ratio of research and development expenses to total expenses thus may be deemed a "substantial percentage" in certain years, but not in others. Astrotech currently cannot rely on Rule 3a-8 because its research and development expenses for the last four fiscal quarters ending on June 30, 2015 represented approximately 18% of its total expenses, including cost of goods sold.

While Astrotech strongly believes that it is not an "investment company" as defined under the 1940 Act, Astrotech understands that the matter is not free from legal doubt. Out of an abundance of caution and to provide legal certainty for its continued expansion of its businesses, Astrotech is requesting an order declaring that it is not an "investment company" under the 1940 Act. The requested order will allow Astrotech to expand and compete effectively and continue its core focus on the development of innovative technologies developed from its space-based research endeavors, as evidenced by the patent portfolio Astrotech has amassed in its 1<sup>st</sup> Detect business unit.

Without the relief requested hereby, Astrotech would have to forego Capital Preservation Investments which would cause significant underutilization of its cash management potential to the great detriment of Astrotech and its shareholders. Astrotech believes that, consistent with prudent investment management principles, it could more effectively utilize its liquid capital by investing in Capital Preservation Investments. Astrotech does not engage any employees to actively trade securities for its own account or to analyze securities for investment purposes. Moreover, Astrotech's investments in Capital Preservation Investments are passive and are not purchased or sold for purposes of achieving short-term speculative gains. Given Astrotech's relative small size, the inability to utilize Capital Preservation Investments would significantly harm Astrotech's ability to grow its businesses, engage in strategic transactions, or to acquire new businesses which would supplement and expand its current Spacetech business units. The inability to invest in Capital Preservation Investments would damage the business prospects of Astrotech without furthering any public policy or purpose that the 1940 Act was intended to promote.

Accordingly, the Applicant hereby requests that the Commission grant an order pursuant to Section 3(b)(2) of the 1940 Act declaring that Astrotech is engaged primarily in a business other than that of investing, reinvesting, owning, holding, or trading in securities so that it may manage its liquid capital in a manner that is not detrimental to itself and its shareholders.

#### IV. APPLICABLE LAW AND PRECEDENTS

##### a. Relevant Statutory Provisions

###### (i) Section 3(a)(1)(C)

Astrotech is not and does not hold itself out as being engaged primarily, or propose to engage primarily, in the business of investing, reinvesting, or trading in securities within the meaning of Section 3(a)(1)(A) of the 1940 Act. Astrotech is also not engaged in the business of issuing face-amount certificates of the installment type within the meaning of Section 3(a)(1)(B) of the 1940 Act. Accordingly, neither Sections 3(a)(1)(A) or 3(a)(1)(B) of the 1940 Act apply.

Section 3(a)(1)(C) of the 1940 Act defines the term “investment company” to include any issuer engaged or proposing to engage in the business of investing, reinvesting, owning, holding, or trading in securities, which owns or proposes to acquire investment securities having a value exceeding 40% of that issuer’s total unconsolidated assets.

“Investment securities” are defined under Section 3(a)(2) to include all securities except Government securities, securities issued by employees’ securities companies and securities issued by majority-owned subsidiaries of the owner which (i) are not investment companies and (ii) are not relying on the exclusions from the definition of investment company in Sections 3(c)(1) and 3(c)(7) of the 1940 Act. Capital Preservation Investments would constitute “investment securities” as defined in Section 3(a)(2).

Astrotech's notes that due to its internally-developed intangible assets and intellectual property, the value of its investment securities is (and likely will remain) below 40% of its total assets (excluding Government securities and cash items) on an unconsolidated basis. Valuation of internally-developed intangible assets, however, is problematic, challenging and potentially biased. Astrotech believes it cannot rely on the fact that it does not meet the definition of an “investment company” due to its own valuation of its intangible assets and intellectual property. Astrotech's desire for clarification is also due in part to the fact that as with similar companies, a significant portion of its assets consists of intangible assets that may not appear on its balance sheet because it is not treated as an asset under Generally Accepted Accounting Principles (“GAAP”). As a result by excluding intangible assets and intellectual property, Astrotech believes that its “investment securities” from time to time will exceed 40% of its total assets, exclusive of Government securities and cash items, on an unconsolidated basis.

###### (ii) Section 3(b)(1)

Astrotech believes that it is exempt from the 1940 Act pursuant to Section 3(b)(1), which is a self-executing provision. Its Board of Directors adopted resolutions affirming that Astrotech is not, and will not operate as, an investment company.

However, utilizing Section 3(b)(1) leaves open the possibility that, while Astrotech strongly believes that it falls within the exclusion set forth in Section 3(b)(1), the Commission, the courts, or another interested party might take a different view. Astrotech is therefore filing this application seeking a Commission order pursuant to Section 3(b)(2) declaring that it is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities, and therefore is excluded from the definition of “investment company” in Section 3(a)(1) of the 1940 Act.

(iii) Section 3(b)(2)

Section 3(b)(2) of the 1940 Act permits the Commission to find, upon application of the issuer, that the issuer is primarily engaged in a business other than that of investing, reinvesting, owning, holding, or trading in securities, either directly or through (A) majority-owned subsidiaries, or (B) controlled companies conducting similar types of business.

b. Applicability of Section 3(b)(2)

The Commission has listed the relevant criteria that it will use to determine whether an issuer is primarily engaged in a business other than that of investing in securities for purposes of Section 3(b)(2) of the 1940 Act. The five relevant factors enumerated by the Commission are: (i) the issuer’s historical development; (ii) its public representations of policy; (iii) the activity of its officers and directors; (iv) the nature of its present assets; and, (v) the sources of its present income. An examination of these factors clearly indicates that Astrotech is primarily engaged in a business other than investing, reinvesting, owning, holding, or trading in securities.

Notwithstanding its entire operating history of activity in the commercial space industry and its extensive development of new technologies resulting from its space-based research activities, as well as the determination of its Board of Directors that Astrotech is not, and will not operate as, an “investment company”, the Applicant may nevertheless be considered an investment company within the meaning of Section 3(a)(1)(C) for the reasons described above.

Out of an abundance of caution and concern, the Applicant is requesting a Section 3(b)(2) order to resolve any legal uncertainties regarding the applicability of the 1940 Act to the Applicant. In addition, Astrotech believes that the issuance of the order under Section 3(b)(2) would be in the public interest and consistent with the protection of investors and the purposes of the 1940 Act.

(i) Historical Development

As noted above, Astrotech is primarily engaged in space commercialization activities and the development of technologies and products from its space-based research activities. Throughout its history since its founding in 1984, Astrotech has been a commercial aerospace company and, since the sale of its ASO business, has remained focused on

developing new technologies from its commercial space activities. It has supported the launch of 23 shuttle missions and more than 300 spacecraft. It has designed and built space hardware and processing facilities. Astrotech has also been a prominent and crucial participant in space commerce activities since its founding.

Even after the sale of the ASO business, Astrotech has continued to be heavily focused on space commercialization activities. Astrotech received four additional patents in 2015 for its innovative commercialized miniature mass spectrometer technology. It has also developed and manufactured this sophisticated chemical sensor equipment for sale to commercial and governmental customers. This equipment is capable of detecting a wide variety of chemicals including residues and vapors from explosives, chemical warfare agents, toxic chemicals, food and beverage contaminants, and pollutants. Astrotech currently holds 18 patents for its innovative technologies developed from its extensive research in outer space.

Through its Astrogenetix business unit, it has developed new technologies from its extensive scientific research in microgravity. It is engaged in biotechnology research to develop new products which have been processed in the unique environment of microgravity. One result of this groundbreaking research in microgravity has been the discovery of a Salmonella vaccine candidate. Through its Astral Images subsidiary, it is in the process of developing groundbreaking digital conversion technology.

The sale of the ASO business unit will not detract Astrotech from its primary mission of utilizing space research to develop new and innovative technologies for use in governmental and commercial applications or of exploiting other space commercialization activities. The proceeds received from the sale of the ASO business unit will permit Astrotech to focus even more extensively on its remaining core businesses and to develop even more innovative technologies from its extensive space-based research activities. The proceeds from the sale also permit Astrotech to engage in strategic transactions such as the acquisition of certain intellectual property for its Astral Images subsidiary in March 2015.

Astrotech's historical growth supports a characterization of Astrotech as a company engaged primarily in research and development activities and developing new technologies and applications from space-based research activities as well as other space commercialization activities, and not in investing, reinvesting, owning, holding or trading in securities.

(ii) Public Representations of Policy

Astrotech has been consistently presented as a company engaged in space commercialization activities by developing new and innovative technologies for terrestrial use from space-based research, and is a well-known and crucial participant in this industry. Astrotech has never portrayed itself as anything other than a space-based commerce company. In Astrotech's annual 10-K and quarterly 10-Q filings with the Commission, Astrotech has consistently stated that its objective is to engage in space commercialization activities and to develop new and innovative technologies from its space-based research. A

copy of its most recent 10K is attached as an exhibit to this application. Similarly, a perusal of its web page at <http://www.astrotechcorp.com/> and the websites of 1<sup>st</sup> Detect and Astrogenetix at <http://1stdetect.com/> and <http://astrogenetix.com/> illustrate a clear and unwavering focus on space commercialization activities and the development of new and innovative technologies from space-based research. Through public statements, reports to shareholders, periodic filings with the Commission, public advertising and information contained on Astrotech's, 1<sup>st</sup> Detect's and Astrogenetix's websites, Astrotech has invariably represented that it is primarily engaged in the business of space commercialization activities. At a recent conference for investors in May 2015, Astrotech presented itself to the investment community as a research and development company which is in the process of transitioning to a production company as it gears up production of its innovative technologies. (A Webcast of this presentation may be found at <http://www.brileywebcast.com/viewwebcasts/profile.php?ticker=ASTC>)

Astrotech has never represented that it is involved in any business other than space commercialization activities. It has consistently stated in its annual reports, stockholder letters, and prospectuses, filings with the Commission, press releases, marketing materials, and website that it is engaged in the space commerce business and developing products and technology based on its space-based research activities. Astrotech does not generally make public representations regarding its investment securities except as required by its obligation to file periodic reports to comply with federal securities laws. Astrotech has always emphasized its operating results and has never emphasized either its investment income or the possibility of significant appreciation from its cash management investment strategies as a material factor in its business or future growth.

(iii) Activities of Officers and Directors

The Board of Directors and executive officers of Astrotech are primarily engaged in managing Astrotech's businesses. As indicated under "Management of Astrotech" above, many members of the Board of Directors have expertise in technologies and other technical areas of expertise relevant to Astrotech's businesses. Astrotech's executive officers have extensive experience in Astrotech's businesses and in transitioning a research and development company like Astrotech into a major production company for its technologies. The Board of Directors and senior executive officers leverage their expertise to improve Astrotech's infrastructure, business operations, and services. Astrotech's directors spend substantially all of their time relating to Astrotech matters overseeing Astrotech's businesses. Astrotech's senior executive officers spend substantially all of their time managing Astrotech's businesses and seeking strategic transactions that complement Astrotech's existing businesses.

Treasury functions related to the assets of Astrotech including the managing and the holding of cash, cash equivalents and Capital Preservation Investments are handled by the Chief Financial Officer of Astrotech. The CFO and the Director of Corporate Development of Astrotech spend less than 1% and 3% of their time, respectively, managing cash, cash equivalents and Capital Preservation Investments at Astrotech. Officers and members of

the Board of Directors other than the CFO and the Director of Corporate Development spend less than 3% of their time addressing such matters. Neither the Directors nor the officers otherwise dedicate any time to investing, reinvesting, owning, holding or trading in third-party investment securities.

(iv) Nature of Assets

Section 3(b)(2) of the 1940 Act provides that the Commission may find an issuer to be engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities either directly or through majority-owned subsidiaries or through controlled companies conducting similar types of business.

As of March 31, 2015, Astrotech's investment securities (as defined in Section 3(a)(2) of the 1940 Act) of approximately \$33.2 million constituted approximately 67% of Astrotech's total assets (excluding Government securities and cash items), consolidated with its wholly-owned subsidiaries – ¶ Detect, Astrogenetix and Astral Images. All of Astrotech's investment securities consist of Capital Preservation Investments. While Astrotech's investment securities are a large percentage of its total assets, the amount of investment securities held by Astrotech is relatively small in comparison to other applicants seeking relief under Section 3(b)(2) because Astrotech is a small but growing company moving from research and development activities to full scale production of its intellectual property assets.

The following tables set forth the value of the assets of the Applicant grouped into these categories and the percentage of the value of the total assets of the Applicant represented by such assets as of December 31, 2014 and March 31, 2015.

Astrotech

Value of Assets as of December 31, 2014

(in thousands)	Value	Percentage
Capital Preservation Investments	\$35,580	70%
Total Assets	\$50,672	100%

Astrotech

Value of Assets as of March 31, 2015

(in thousands)	Value	Percentage
Capital Preservation Investments	\$33,201	67%
Total Assets	\$49,486	100%

Additionally, a significant portion of Astrotech's assets consist of intangible assets such as internally-developed intellectual property that are not included in the value of Astrotech's total assets for purposes of determining Astrotech's status under the 1940 Act

because it is impermissible under GAAP. Astrotech believes that the asset tests used in connection with Sections 3(a)(1)(c) and 3(b) of the 1940 Act therefore significantly understate the relative value of Astrotech's non-investment securities assets. Accordingly, while the market recognizes the value of these intangible assets, they are not recognized as an asset for purposes of the 1940 Act. As a result, Astrotech also believes that the asset tests used in connection with Sections 3(a)(1)(C) of the 1940 Act significantly understate the relative value of Astrotech's internally-developed intellectual property assets and significantly overstate the relative value of the Capital Preservation Investments which constitute "investment securities" under the 1940 Act.

By contrast, a company that acquires intellectual property (rather than developing it internally) is permitted to treat the acquired intellectual property as an asset under GAAP. As a result, looking only at asset composition, firms with acquired intellectual property are less likely to have difficulty remaining below the asset thresholds of Section 3(a)(1)(C) of the 1940 Act than companies, such as Astrotech, with internally-developed intellectual property. This asset-skewing has the effect of penalizing a company such as Astrotech by constraining its cash management activities without similarly constraining the cash management activities of a company with acquired intellectual property that engages in a similar business.

(v) Sources of Income

The Applicant derives predominantly all of its income from its core operating businesses. As of December 31, 2014 and March 31, 2015, it derived approximately 1% and 4% of its total income from investment income. Applicant states that it may increase its Capital Preservation Investments, as well as the ratio of income from these investments to total revenues, if it conducts capital raising transactions or financings in the future although it has no current intention of doing so. In the future, Astrotech expects substantially all of its revenues to come from operations and less than 5% from investment securities. Since predominantly all of Astrotech's revenue is attributable to its operations, rather than investments, Astrotech's revenue supports a determination that Astrotech is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

While Astrotech currently derives predominantly all of its income from its core operating businesses, Astrotech believes that this income is currently understated because its 1<sup>st</sup> Detect subsidiary is unable to book revenues until it begins manufacturing its patented technologies in Fiscal Year 2016. Astrotech currently anticipates that its income from investment securities will decrease significantly as manufacturing of its existing patented technologies commences. Astrotech is in the process of transitioning from a research and development company to a production company and expects that this transition will begin in earnest in Fiscal Year 2016.

Additionally, all of Astrotech's cash management investments are Capital Preservation Investments which are designed to preserve Astrotech's cash capital and maintain liquidity. Astrotech's Capital Preservation Investments are currently limited to



certificates of deposits; high quality fixed income instruments and money market mutual funds.

Astrotech does not engage in short-term speculative trading. Further, it does not actively trade its Capital Preservation Investments. Such Investments are liquidated when cash is required for research and development activities, strategic transactions, or other business operating requirements. However, these Capital Preservation Investments would never be liquidated for short-term speculative gain.

Accordingly, Applicant submits that the sources of revenue, by themselves, fully support the conclusion that Astrotech is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

<sup>c</sup> An Order under Section 3(b)(2) Would Better Serve the Public Policies Underlying the 1940 Act and Avoid Harm to Astrotech's Existing Shareholders

If the Commission declines to grant the relief requested in this Application, Astrotech would be faced with two courses of action: (1) manage the investment of its liquid capital in Capital Preservation Investments under the constraints imposed by Section 3(a)(1)(C); or, (2) comply with the registration and regulatory requirements of the 1940 Act. Either alternative would disadvantage Astrotech's shareholders without serving any of the public policies underlying the 1940 Act.

(i) Management of Investments In Compliance With Section 3(a)(1)(C)

Astrotech's management of its liquid capital in Capital Preservation Investments under the constraints of Section 3(a)(1)(C) will adversely affect Astrotech's ability to fund its organic growth, complete its transition from a research and development company to a production company and impede its research and development activities. Astrotech's experience is that net after tax yield on Government securities is significantly less than the average return available on other high quality fixed income instruments. Such lower returns would be wasteful of corporate assets and not in the best interest of Astrotech's shareholders especially for a small but growing company such as Astrotech.

(ii) Registration under the 1940 Act

Registration and compliance with the 1940 Act and the rules and regulations thereunder would advance no clear public purpose and potentially entail greater costs and harm to Astrotech and its shareholders. Additionally, while the investment securities held by Astrotech are a significant portion of its total assets, the actual dollar amount of investment securities held by Astrotech is relatively small. Even if registration as an investment company were feasible for a company like Astrotech, its portfolio of investment securities would make it a very small registered investment company with limited appeal to mutual fund investors because of the advantages of economies of scale inherent in the mutual fund industry. The small dollar amount of investment securities owned by Astrotech is due to

being a small company focused on research and development activities to one that is progressing to a production-based company. Accordingly, registration as an investment company would be wasteful and time consuming for Astrotech without promoting any of the public policies underpinning the 1940 Act given the small dollar amount of its investment securities portfolio.

(iii) No Meaningful Protection to Shareholders

Astrotech is already subject to the reporting requirements under the Securities Exchange Act of 1934, as amended. As a result, shareholders of, and potential investors in, Astrotech have regular access to current information concerning Astrotech's operations. Accordingly, requiring Astrotech to register under the 1940 Act would not materially improve the nature, quality, or quantity of the information about Astrotech currently received by or available to its shareholders or potential investors.

(iv) Misleading Presentation of Financial Information

The manner of presentation required for investment company financial reports differs materially from the methodology employed by Astrotech and prescribed by GAAP. Investment company financial statements report assets at their current fair market values. Astrotech would incur costly changes in its financial reporting if it were required to register under the 1940 Act. The required changes to Astrotech's financial reporting would include a change in the format of existing financial statements and the preparation of additional statements required for investment companies. If Astrotech were required to file financial reports under the 1940 Act, its directors would be required to evaluate substantial quantities of tangible and intangible assets on a quarterly or semiannual basis and make a good-faith attempt to establish the current fair market value for each such tangible and intangible asset. This would be extremely difficult and unreliable and, more importantly, could well be misleading to Astrotech's shareholders. In addition, preparation of unconsolidated financial information in accordance with investment company practice would make Astrotech's financial information incompatible with other entities within the industry.

(v) Expensive and Cumbersome Regulation

To require Astrotech, a company not primarily in the business of investing in securities, to comply with the regulatory provisions of the 1940 Act would be expensive, cumbersome and contrary to the best interests of its shareholders – who invested in Astrotech as an innovative company devoted to the exploitation of space-based research and not as an investment company. Assuming that Astrotech were able to comply with the 1940 Act, it would need to devote considerable financial, administrative and legal resources to the preparation of registration statements that meet the requirements of the 1940 Act, and to the creation of internal administrative mechanisms that comply with the significant additional recordkeeping and reporting requirements of the 1940 Act. This would create a significant burden on Astrotech's limited financial and personnel resources, which would in turn have a negative impact on its management and profitability. This requirement also would

significantly detract from Astrotech's efforts toward exploiting, developing and producing new technologies developed from space-based research activities -- technologies that could help promote important societal goals such as medical advances, food safety, and national defense.

(vi) Significant Change in Astrotech's Business

Astrotech's compliance with the 1940 Act's regulatory scheme would certainly cause material and significant changes in its operating strategies. Astrotech would be restricted as to all future borrowings by the asset-coverage requirements in Section 18(a) of the Act. Additionally, Sections 17 and 18 would restrict the range of incentive compensation arrangements that may be offered to officers, directors and employees, and specifically prohibit the issuance of any stock options to these groups. Especially among technology companies such as Astrotech, stock options are an effective form of incentive and means for aligning employees' interests with those of shareholders in general.

Astrotech believes that a prohibition on the issuance of stock options in particular would lead potentially to the loss of key employees and other adverse consequences, negatively affecting shareholder returns.

The aggregate effect of these types of significant changes on Astrotech's business strategy would materially change the character of Astrotech in ways its shareholders never contemplated when making their investments -- causing considerable harm to its shareholders. Astrotech's shareholders would no longer own interests in an innovative technology company exploiting space-based research to develop new technologies for terrestrial use, but instead in a company forced to operate like an investment company. Moreover, as demonstrated above, Astrotech would experience substantially higher costs in complying with the 1940 Act and would experience material disruption of its existing business.

d. Relevant Precedents

(i) RealNetworks, Inc.

On June 28, 2007, the Commission granted an order pursuant to Section 3(b)(2) to RealNetworks, Inc.

("RealNetworks"), based on facts and circumstances substantially similar to those of Astrotech.

At the time of its application to the Commission, RealNetworks was also a developer of innovative new technology but in the digital media services and digital distribution industry. Like Astrotech, RealNetworks invested in Capital Preservation Investments for the purpose of maintaining substantial liquid capital to fund operations, research and development, and potential strategic acquisitions. Similarly to Astrotech, RealNetworks also had a significant portion of its assets consisting of intangible assets, such as intellectual property, which, with limited exceptions, did not appear on its balance sheet and were not included in the value of RealNetworks total assets for purposes of determining its status under the 1940 Act. As with Astrotech, RealNetworks believed that the asset tests

used in connection with Sections 3(a)(1)(C) of the 1940 Act therefore significantly understated the relative value of RealNetworks' non-investment security assets.

The Commission granted RealNetwork's request for an order because, like Astrotech, RealNetworks was engaged in operating an innovative technology company and was not primarily engaged in the business of investing, reinvesting, or trading in securities.

(ii) Applied Materials, Inc.

On September 13, 2005, the Commission granted an order under Section 3(b)(2) of the 1940 Act to Applied Materials, Inc. ("AMI") based on facts and circumstances similar to those of Astrotech.

At the time of its application AMI was also engaged in developing innovative new technologies but in the global semiconductor industry. Approximately 48% of AMI's total assets (excluding cash and Government securities) consisted of "investment securities" as defined under the 1940 Act. More than 99% of AMI's investment securities consisted of Capital Preservation Investments.

Additionally, as with Astrotech, a significant portion of AMI's assets consisted of intangible assets such as internally-developed intellectual property that were not included in the value of AMI's total assets for purposes of determining AMI's status under the 1940 Act. AMI, like Astrotech, also required substantial liquid capital to fund its operations, continue its research and development activities, and fund potential acquisitions to complement its existing business line.

The Commission granted AMI's request for an order because, like Astrotech, AMI was engaged in operating an innovative technology company and was not primarily engaged in the business of investing, reinvesting, or trading in securities.

(iii) Other Relevant Precedents

The Commission has granted 3(b)(2) relief in several other situations with parallels to Astrotech such as Dolby Laboratories, Inc., Hutchinson Technology Incorporated and Corvis Corporation. The foregoing review of the relevant precedents demonstrates that Astrotech's situation can be compared favorably to many instances in which the Commission granted orders under Section 3(b)(2). Astrotech therefore respectfully requests to benefit from the same relief.

V. PROCEDURAL MATTERS

Pursuant to Rule 0-2(f) under the 1940 Act, the Applicant states the following:

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#### VI. REQUEST FOR ORDER

On the basis of the foregoing, the Applicant submits that it qualifies for an order under Section 3(b)(2) of the 1940 Act, and respectfully requests that the Commission enter an order pursuant to Section 3(b)(2) of the 1940 Act declaring that the Applicant is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

In witness whereof, Astrotech Corporation has caused this application to be duly executed this 21st day of August, 2015.

ASTROTECH CORPORATION

/s/ Eric Stober

By: Name: Eric Stober

Title: Chief Financial Officer

#### VII. VERIFICATION OF APPLICATION AND STATEMENT OF FACT

In accordance with Rule 0-2(d) under the Act, the undersigned, states that he has duly executed the attached Application for an Order, dated August 21, 2015, for and on behalf of Astrotech Corporation; that he is the Chief Financial Officer of Astrotech Corporation; and that all action by stockholders, directors, and other bodies necessary to authorize the undersigned to execute and file such instrument has been taken. The undersigned further states that he is familiar with such instrument, and the contents thereof, and that the facts therein set forth are true to the best of his knowledge, information and belief.

/s/ Eric Stober

INDEX OF EXHIBITS

A. Board Resolutions Authorizing Filing of Section 3(b)(2) Exemptive Order.

B. Astrotech Corporation, Form 10-K filed with the Commission on September 30, 2014.

Exhibit Index

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