

ASTROTECH Corp

Form 40-APP/A

March 17, 2017

File No. 812-14539

UNITED STATES OF AMERICA

BEFORE THE

SECURITIES AND EXCHANGE COMMISSION

AMENDMENT NO. 2 TO 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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I. INTRODUCTION

Astrotech Corporation (“Astrotech” or the “Applicant”) corporation organized under the laws of the State of Washington, and based in Austin, Texas, 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 a publicly-held company listed on NASDAQ under the ticker symbol “ASTC”.

Astrotech is an Austin, Texas-based company that is an innovative science and technology development and commercialization company that invents, acquires, and commercializes technological innovations sourced from internal research, universities, laboratories, and research institutions, and then funds, manages, and builds start-up companies for profitable divestiture to market leaders to maximize shareholder value.

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. Following the announcement that the space shuttle program would be discontinued, SPACEHAB needed to reinvent itself. Starting in 2007, the current management team was put in place to recapitalize Astrotech and to initiate a new corporate strategy from which two of Astrotech’s current primary subsidiaries, 1st Detect Corporation (“1st Detect”) and Astrogenetix Corporation (“Astrogenetix”), were launched. 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 rockets, 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.

¹ All of Astrotech’s subsidiaries are wholly-owned by Astrotech other than Astral Images Inc. which is 92% owned by Astrotech. As required by Generally Accepted Accounting Principles (“GAAP”), all of Astrotech’s subsidiaries are consolidated on Astrotech’s balance sheet. Unless otherwise noted, references to “Astrotech” and to the “Applicant” include all of these subsidiary entities.

To complete Astrotech's realignment, 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 and commercializing innovative technologies. 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 businesses. Notwithstanding its cash and investment securities which in total equaled approximately \$19.4 million as of December 31, 2016, Astrotech does not hold itself out as, and is not perceived to be, an investment company. Astrotech is filing this application pursuant to Section 3(b)(2) of the 1940 Act to provide more legal certainty as to its legal status under the 1940 Act.

Following the sale of ASO, which represented substantially all of the assets of Astrotech, Applicant decided to engage in extensive research and development activities and a strategic acquisition to maximize shareholder value. In fact, the acquisition, of Astral Images Corporation ("Astral Images" or "Astral") fit squarely within the Company's criteria in that it was a scalable technology company with a leading position in the marketplace with technology that was superior to any of the competition. Acquired out of bankruptcy, Astrotech was able to take a control position while leveraging management's expertise in leading turnaround situations. Astrotech operates as a holding company for its various subsidiaries while each subsidiary individually specializes in a unique industry segment. Management of the holding company is actively involved in the day-to-day operations of each of its subsidiary companies while the corporate office provides the administrative functions (accounting, finance, treasury, marketing, information technology) for all subsidiary companies. All of its subsidiaries, other than Astral Images, are wholly-owned subsidiaries. Astral Images is 92% owned by Astrotech. Astrotech does not intend to own non-majority-owned subsidiaries.

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. Given that Astrotech has chosen to not classify its internally-developed intangible assets as assets on its balance sheet, the value of its investment securities is (and likely will remain) above 40% of its total assets (excluding Government securities and cash items) on an unconsolidated basis.² However,

² Since the 40% test set forth in section 3(a)(1)(C) is on an unconsolidated basis, the numerical information set forth in this exemptive order request is also stated on an unconsolidated basis. Astrotech's 10Q and 10K filings set forth this information on a consolidated basis.

valuation of internally-developed intangible assets is difficult and inherently subjective. Given that these intangible assets are not included in the value of Astrotech's unconsolidated total assets under section 3(a)(1)(C) of the 1940 Act, Astrotech believes that the value of its investment securities is overemphasized when performing this 40% test. While Astrotech strongly believes that it qualifies for the Section 3(b)(1) exclusion because its primary business relates to technology development and commercialization activities, out of an abundance of caution and the desire for more 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 headquartered in Austin, Texas. Astrotech is an innovative science and technology development and commercialization company. For over 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 detection and analysis equipment, and restores, enhances and digitizes film using sophisticated scanning technology and software.

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.

In September 2009, Astrotech completed construction of an additional payload processing facility at VAFB in California, a state-of-the-art 23,000 square foot facility, 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.

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 and intellectual property, Astrotech's 92%-owned subsidiary, Astral Images, sells film-to-digital conversion high-dynamic range conversion, image enhancement, and defect removal and color correction services, providing economically feasible conversion of television and feature 35mm and 16mm films to the new 4K UHD/HDR format, the standard for the next generation of digital film distribution to the home.

b. Business and Structure

Prior to the sale of the ASO business, Astrotech had two distinct business units: (i) ASO; and (ii) Astro Scientific, formerly Spacetech, Inc. ("Astro Scientific"). Astro Scientific is itself comprised of two business units: (i) 1st Detect; and, (ii) Astrogenetix, a commercial biotechnology company. Since the sale of the ASO business, Astrotech operates wholly-owned subsidiaries 1st Detect and Astrogenetix as well as majority-owned Astral Images.

Description of Astro Scientific Subsidiaries

1st Detect:

Astrotech formed 1st Detect to commercialize miniature mass spectrometer technology developed for the International Space Station ("ISS"). 1st Detect develops, manufactures and sells chemical analyzers for use in the airport security, military, food and beverage, environmental and breath analysis markets. 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 a concept from Oak Ridge National Laboratory and a preliminary design initiated by an engagement with NASA to develop a mass spectrometer for the ISS, the Company developed a chemical analyzer that enables real-time analytics that is believed to be significantly smaller, lighter, faster, and less expensive than competing analyzers.

While working on the program for NASA, Astrotech quickly realized the commercial utility of small mass spectrometers and began parallel development of a terrestrial unit to be deployed in a number of applications. Leveraging Astrotech's 30+ year history of developing high performance, lightweight ruggedized systems for the space program, 1st Detect has been able to revolutionize the mass spectrometer industry by offering the same performance as laboratory instruments, but at a much lower price and in a much smaller form factor.

As a result of Astrotech's efforts, 1st Detect has become a leading supplier of chemical detection and analysis instrumentation to the security, military, food and beverage, environmental and breath analysis 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.

1st Detect's ultra-small mass spectrometer is a chemical analyzer that provides laboratory quality, real-time analysis. 1st Detect'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. As of December 31, 2016, 1st Detect has eighteen (18) granted U.S. patents, along with eight (8) granted foreign patents. 1st Detect also has seven (7) pending U.S. patent applications pending before the U.S. Patent & Trademark Office and eight (8) international pending patents in foreign patent offices.

1st Detect's efforts have resulted in a technology that has been or may be deployed in the following areas:

- Explosive device detection in airports – mass spectrometers, like 1st Detect's, function at a level of specificity significantly exceeding the current generation of screening devices in airports, meaning significantly fewer false alarms and a higher probability of threat detection. 1st Detect's solution also has better resolution, translating into the detection of a broader range of compounds, whereas the current technology is only able to detect a small number of traditional explosives. It was recently announced that 1st Detect has partnered with an incumbent provider of ion mobility spectrometer instrumentation of the explosive trace detection ("ETD") systems for the Department of Homeland Security Science and Technology Directorate ("DHS S&T") using 1st Detect's breakthrough chemical analyzer technology.

•Military –st1Detect's technology is extremely sensitive, enabling the detection of chemical warfare agents in much lower concentrations compared to incumbent technologies. The high level of specificity of 1st Detect's instrumentation not only improves detection of traditional threats, but also detects next-generation chemical agents not easily detectable by current instrumentation. 1st Detect has partnered with and was awarded a competitive prototype contract for the Next Generation Chemical Detector ("NGCD") program of the Department of Defense's Joint Program Executive Office for Chemical and Biological Defense ("JPEO-CBD") to developst1Detect's technology for use with the military. 1st Detect's product was developed to be used for the following purposes:

- o Evaluating the presence of chemicals after suspected chemical release incidents.
- o Continuously evaluating surface contamination following a chemical release to characterize contamination levels.
- oEvaluating the presence of contamination at a sample site, and
- o Confirming decontamination of potentially contaminated personnel and equipment.

1st Detect's portion of the contract was successfully completed; however, 1st Detect's partner has indicated that they do not plan to pursue the next phase of the program.

•Food and beverage –st1Detect is also enabling cost-effective real-time, in-situ analysis with mass spectrometry for what it believes to be the first time in food and beverage manufacturing. Not only does 1st Detect's instrumentation provide a full set of information to more thoroughly analyze results when there is a deviation in quality, but it provides objectivity that is not possible with the status quo – human taste testers.

•Environmental –st1Detect's mass spectrometers are built to continuously operate, monitor, detect, and record any unexpected excursions in the environment, while offering performance comparable to lab-quality instruments. 1st Detect's solutions offer autonomous monitoring of the environment along the perimeter of manufacturing plants and air quality monitoring at critical infrastructure sites, such as mass transit stations.

•Breath analysis –st1Detect has partnered with the University of Texas Health Science Center ("UTHSC") in the development of a bedside mass spectrometer to analyze human breath in real time and to detect volatiles emanating from bacteria. 1st Detect's robust, fast, and sensitive instrument will enable medical professionals to quickly screen with precision that is usually not possible with other slower and sometimes inaccurate alternative solutions that are in use today. Early results of 1st Detect's collaboration with UTHSC are encouraging as 1st Detect continues to develop and refine its product offering for the breath analysis market segment.

1st Detect's two leading products are the MMS-1000TM and the OEM-1000 platform technology. The MMS-1000TM is a small, low power mass spectrometer designed initially for the laboratory market. The unique design of this unit enables fast, quality chemical analysis and requires minimal bench top space (about the size of a shoebox), requires less power than a typical light bulb, and, unlike traditional instruments, requires no consumables or special infrastructure.

The OEM-1000 is a mass spectrometer component that is designed to be integrated into a customer's specific packaging and enclosures, and is well-suited to be integrated with application-specific sampling or separation technology. Variants of the OEM-1000 have been selected by 1st Detect's partners for integration into the NGCD and DHS S&T solutions.

1st Detect's customers include government agencies, research organizations, and industrial companies. Customers have either purchased or leased instrumentation to evaluate the core technology in connection with exploring joint development of a customized solution or an original equipment manufacturer ("OEM") distribution relationship with 1st Detect. Efforts continue to be focused on delivering on 1st Detect's primary government programs and on acquiring additional joint development partners.

Competition with 1st 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 1st Detect's ultra-small mass spectrometer. However, 1st Detect products combine a number of attributes in a single product not currently available in other products. 1st Detect believes its competitive advantages include:

- 1st 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.
- 1st 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.
- 1st Detect's 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 to operate.

- ¹ Detect's tandem mass spectrometry capability that is integrated with ¹ Detect's standard software further improves the specificity of ¹ Detect'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 usually only available in very expensive laboratory instruments.
- Sinusoidal Multiplexed Array in Real Time ("SMART") is a feature that eliminates dominant chemicals that may be masking weaker chemicals of interest.
- Separating ¹ Detect from the competition is ¹ Detect's ability to provide "all of the data, all of the time." This attribute allows customers to review the historical results of their manufacturing process, enabling them to quickly identify sources of contamination, unexpected reduced quality of product, and unusual excursions that are often unanticipated. Competitive offerings generally lack this important ability.
- Developed as a platform technology, ¹ Detect is able to be adapted to a wider variety of applications than competing purpose-built instruments.

Astrogenetix:

Astrogenetix is a biotechnology company formed to commercialize products processed in the unique environment of microgravity. Astrogenetix's mission is to discover therapeutically relevant and commercially viable biomarkers —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 biological 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 the Center for Vaccine

Development at the University of Maryland (“UMD”), one of the leading vaccinology institutions in the world, to research the application of a vaccine for Salmonella.

Description of Astral Images

Astral Images was created to commercialize decades of image enhancement research. Astral sells film-to-digital conversion, image enhancement, and defect removal and color correction services, providing economically feasible conversion of television and feature 35mm and 16mm films to the new 4K resolution (“4K”) Ultra-High Definition/High-Dynamic Range (“UHD/HDR”) format, the standard for the next generation of digital film distribution to the home. 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 \$1.8 million, which was predominately for the internally developed software. At the time, Astrotech paid \$1.4 million for its 72% interest in Astral Images and through future capital contributions has increased its interest to 92%. 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 film scanning industry. Most film assets will need to go through an upgrade to 4K UHD/HDR to remain relevant for over-the-top distribution (Netflix, Amazon, Hulu, etc.) as television manufacturers sell more 4K UHD/HDR televisions and consumer demand for such content accelerates.

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 \$1.7 million reduction in the price received from the sale of the ASO business. The indemnity holdback was being held in escrow under the terms of an escrow agreement until it was received in 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 Astro Scientific 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 businesses³.

1. Research and Development Activities

Astrotech is heavily involved in research and development of new technologies and has been awarded twenty (20) U.S. patents and eight (8) international patents through December 31, 2016 with all but two (2) awarded to 1st Detect. As a result, Astrotech needs to maintain a substantial cash position that is available on short notice regardless of its business cycle. One of the key factors causing Astrotech's expenditures for research and development to be so significant is the need to fully staff its research and development functions with a highly skilled workforce. Moreover, Astrotech's business focus is on technology development and commercialization which naturally results in the need for significant research and development expenses.

Astrotech's research and development expenses are significant as a percentage of its total operating expenses.

Astrotech's research and development activities through December 31, 2016, FY2016, FY2015, and FY2014 were \$3.5 million, \$6.5 million, \$3.2 million and \$2.5 million, respectively, and accounted for roughly 33%, 39%, 19% and 11% of Astrotech's total operating expenses (inclusive of cost of goods sold). Based on these results, Astrotech could easily qualify as a research and development company under Rule 3a-8 of the 1940 Act. However, given its potential need for cash for strategic acquisitions and to fund current operations, it cannot be assured of continuously meeting this requirement or the other conditions set forth in Rule 3a-8 and is therefore seeking exemptive relief under Section 3(b)(2) of the 1940 Act.

³ It is noted that Rule 3a-8 under the 1940 Act provides relief similar to that herein requested to certain companies whose research and development expenses are a substantial percentage of its total expenses. In Cooley Godward Kronish, SEC Staff No-Action Letter (July 12, 2007), the staff of the Commission interpreted the term "substantial" to require a company's research and development expenses to account for at least 20 percent of its total expenses. While Astrotech believes it could typically satisfy the requirements of Rule 3a-8 under the 1940 Act, 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 others. For example, while Astrotech's current research and development expenses for the past four quarters would meet this test, in 2015, it would not have because those expenses, as of June 30, 2015, were 18% of its total expenses (inclusive of the cost of goods).

2. Funding Internal Operations

Astrotech also needs to maintain significant cash reserves to fund its internal operations. Technology development and commercialization is quite capital intensive and often requires long lead times to develop and sell viable commercial products. Furthermore, given the nature of its business, Astrotech experiences quarterly and annual fluctuations in its revenue stream.

An example of how fluctuations in Astrotech's revenue stream are impacted by conditions unique to Astrotech relates to its wholly-owned subsidiary, 1st Detect. Currently 1st Detect is involved in government research and development projects that typically require certain milestones to be completed prior to being able to bill its customers. Given the uncertainty inherent in research and development projects such as those in which 1st Detect is involved, the timing of cash receipts is quite uncertain and highly unpredictable. Astrotech's uncertain revenue cash flow requires that it maintain liquid assets to fund its operations during periods when there are little or no cash receipts.

3. Strategic Acquisitions

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 securities that are meant to conserve capital and liquidity until the funds are needed to be used by Astrotech in its businesses.

4. Capital Preservation Investments

Astrotech's investments include fixed income instruments, certificates of deposits, and other 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. Astrotech's investment securities which are not Capital Preservation Investments will not constitute more than 1% of Astrotech's total assets (excluding cash, Government securities and money market funds) on an unconsolidated basis. To preserve its capital and maintain liquidity, Astrotech also invests in instruments excluded from the definition of "investment securities," as defined in section 3(a)(2) of the 1940 Act, including "Government securities," as defined in section

2(a)(16) of the 1940 Act, certain securities issued by money market mutual funds, and other cash items (collectively, “Government securities and cash items”⁴) The term “Capital Preservation Investments” does not include these Government securities and cash items. Currently, none of Astrotech’s Capital Preservation Investments constitute money market funds.

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, which is primarily managed by an outside investment advisor.

Senior Management:

As described below, each of the Applicant’s senior executive officers has extensive experience in commercializing and operating technology companies 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 of each of the senior executive officers:

Thomas B. Pickens, III, Chief Executive Officer and Chairman of the Board, Mr. Pickens was named Astrotech’s Chief Executive Officer in January 2007 and Chairman in February 2008. Mr. Pickens is Managing Partner and Founder of Tactic Advisors, Inc., a company specializing in corporate turnarounds on behalf of creditors and investors. Since 1985, Mr. Pickens has served as President of T.B. Pickens & Co. from 1991 to 2002. Mr. Pickens was the Chairman of multiple companies, including U.S. Utilities Inc., Code Corporation, Catalyst Energy Corporation and United Thermal Corporation. Mr. Pickens was also the President of Golden Bear Corporation, Slate Creek Corporation, Eury Dam Corporation, Century Power Corporation and Vidilia Hydroelectric Corporation. Mr. Pickens has served as a Director since 2004 and become CEO in 2007.

Eric N. Stober, Chief Financial Officer, Treasurer and Secretary, Mr. Stober has been the Chief Financial Officer, Treasurer and Secretary of Astrotech Corporation since November 2013. Mr. Stober joined Astrotech Corporation in August of 2008 as a Senior Staff Financial

⁴ Pursuant to Willkie Farr & Gallagher, SEC Staff No-Action Letter (Oct. 23, 2000), Astrotech does not consider its holdings in money market mutual funds that meet the requirements set forth in the Willkie letter to be “investment securities.”

Analyst. In the same year, he was promoted to Principal Financial Analyst and from 2012 to 2013, Mr. Stober served as Vice President of Corporate Development. Mr. Stober brings significant experience in private equity, finance and business start-ups. 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. He has helped numerous companies prepare business plans and raise start-up or growth capital. Mr. Stober began his professional career working for both The Ayco Company, a Goldman Sachs Company, and Lehman Brothers, where he helped wealthy individuals and families manage their investments, taxes, insurance, estate plans, and compensation and benefits. Raj Mellacheruvu, Vice President and Chief Operating Officer, Mr. Mellacheruvu has been Vice president and Chief Operating Officer of the Company since February 2015. 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 1st Detect Corporation, a subsidiary of the Company, since 2013. Mr. Mellacheruvu was previously employed by ClearCube Technology, Inc. as Vice President of Products Development and Strategy, Omega Band as an Engineer, and Advance Micro Devices as a Product Development Engineer.

Board of Directors:

The Applicant's Board of Directors consists of the following members. The following is a brief description of the professional experience of each of the Applicant's 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 Edgenuity (previously Education 2020) since August 2011 and previously as its President and CEO from 2009 until August 2011. Mr. Humphrey helped to establish Edgenuity as a leader in the virtual education industry. Edgenuity was sold in July 2011 to the private equity firm Weld North. Prior to joining Education 2020, Mr. Humphrey served as the Co-Founder and former CEO of Austin-based Human Performance Labs, makers of PureSport performance drinks. Prior to Human Performance Labs, Mr. Humphrey served as Executive Vice President for Compass Learning, driving strategy and development of the company's curriculum software solutions and assessment tools.

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., and spent nineteen years in public accounting, most recently as a Tax Partner in the Ernst & Young LLP Dallas office.

Ms. Sha-Chelle Manning, Director, Ms. Manning is the Director of Corporate Innovation of Pioneer Natural Resources, a large independent oil and gas production and exploration company. Ms. Manning was co-founder of Malibu IQ, an investment partnership consisting of HRL Laboratories (owned by General Motors Company and Boeing Company) to commercialize inventions and technology. Ms. Manning was appointed by Gov. Rick Perry to the Texas Emerging Technology Fund in 2013 and 2015. Ms. Manning also held a Managing Director position for Nanoholdings, LLC, a Vice President position at Authentix, and a Director of Alliances position at Zyvex Ms. Manning has served as a Consultant for Lockheed Martin, HRL Labs, and Texas A&M University System. Currently, Ms. Manning volunteers on the Tech Titans Executive Committee as the Innovation Chair.

Mark Adams, Director, Mr. Adams is the co-founder and Chief Executive Officer of Waterloo Medical Solution, LLC which began operations in 2016. Prior to this in 2009, he co-founded SOZO Global, Inc., a specialty based nutritional products company and served as the company's Chairman and Chief Executive Officer from 2011 until it was sold in 2016. Prior to that in 2003, Mr. Adams founded and ran as Chairman and Chief Executive officer, Advocate, MD Financial Group, Inc., a leading Texas-based medical liability insurance holding company, which he sold in 2009 and continued to run as Chief Executive Officer through 2011. Mr. Adam is also a founding partner in several other companies. Some of the companies he founded and currently owns include Murphy Adams Restaurant Group, Inc. which he co-founded in 2007, and which owns and is rapidly expanding Mama Fu's Asian House restaurants throughout the United States, and the Middle East. In 2008, Mr. Adams co-founded Kind Health, LLC which is a unique online application driven health insurance curator. Also in 2008, Mr. Adams co-founded Small Business United, LLC, a non-profit organization that supports small businesses. In the last three years, Mr. Adams co-founded Olympic Capital Partners, LLC, a focused real estate investment fund, Direct Sales Forge, LLC a specialty software development company, and Direct Mobile, LLC a mobile application development company

Mr. Daniel T Russler, Director, has more than 25 years of capital markets, development, and entrepreneurial experience, 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.

Employees:

As of December 31, 2016, the Applicant had approximately 46 employees. Of these personnel, approximately 48% work at 1st Detect, 20% work at Astral Images and approximately 32% are involved in administration. Twenty-seven employees are involved in research and development activities. Astrotech employs no experts in investment advisory services, securities analysis, or securities trading for the management of its investments and no employee, including senior management, spends greater than 3% of their time on investment matters. See “Section IV(b)(iii) -- Applicability of Section 3(b)(2) -- Activities of Officers and Directors” below.

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 – 1st 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 that enable film restoration, enhancement, and digitization using an automated process that algorithmically removes dust, scratches, and defects to restore it to its original condition.

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 facilitating the shift from 2K resolution to UHD/HDR 4K resolution, the format in which the next generation of digital video content will be distributed to the home.

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 1st 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” and it has no plans to become an “investment company” in the future. 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 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 more 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 technology development and commercialization.

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 Astro Scientific 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)

Under section 3(a)(1) of the Act, an issuer meeting one or more of the following provisions is considered an “investment company”:

(A) is or holds itself out as being engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, or trading in securities;

(B) is engaged or proposes to engage in the business of issuing face-amount certificates of the installment type, or has been engaged in such business and has any such certificate outstanding; or

(C) is engaged or proposes to engage in the business of investing, reinvesting, owning, holding, or trading in securities, and owns or proposes to acquire investment securities having a value exceeding 40 per centum of the value of such issuer's total assets (exclusive of Government securities and cash items) on an unconsolidated basis (the "40% test"). Section 3(a)(2) of the Act defines "investment securities" to include "all securities except: (A) Government securities, (B) securities issued by employees' securities companies, and (C) securities issued by majority-owned subsidiaries of the owner which: (i) are not investment companies, and (ii) are not relying on the exception from the definition of investment company in [section 3(c)(1) or 3(c)(7) of the Act]." "Government securities" are defined in section 2(a)(16) of the Act generally as those securities issued or guaranteed by the United States or its authorized instrumentality.

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 (exclusive of Government securities and cash items). Section 3(a)(2) of the 1940 Act defines "investment securities" to include all securities except Government securities, securities issued by employees' securities companies, and securities issued by majority-owned subsidiaries of the owner which (a) are not investment companies, and (b) are not relying on the exclusions from the definition of investment company in section 3(c)(1) or 3(c)(7) of the 1940 Act. Astrotech states that as of December 31, 2016, the value of its total assets on an unconsolidated basis (exclusive of Government securities and cash items) was approximately \$15.0 million, the value of Astrotech's investment securities (as defined in section 3(a)(2) of the 1940 Act) on an unconsolidated basis was approximately \$14.4 million and constituted approximately 96% of Astrotech's total assets (exclusive of Government securities and cash items) on an unconsolidated basis. The value of Astrotech's total assets and investment securities on a consolidated basis are set forth in Astrotech's 10K filings, the most recent of which is attached as an exhibit hereto. All assets have been valued for purposes of these determinations in accordance with section 2(a)(41) of the 1940 Act. For the purposes of section 3 of the 1940 Act, section 2(a)(41) of the 1940 Act, defines "value" to mean (i) with respect to securities owned at the end of the last preceding fiscal quarter for which market quotations are available,

the market value at the end of the last precedent fiscal quarter; (ii) with respect to other securities and assets owned at the end of the last preceding fiscal quarter, fair value at the end of such quarter, as determined in good faith by the board of directors; and (iii) with respect to securities and other assets acquired after the end of the last preceding fiscal quarter, the cost of the securities and other assets.

Rule 3a-1 under the 1940 Act provides an exemption from the definition of investment company if no more than 45% of a company's total assets consist of, and not more than 45% of its net income over the last four quarters is derived from, securities other than Government securities, securities of majority-owned subsidiaries and primarily controlled companies. These percentages are determined on a consolidated basis with the company's wholly-owned subsidiaries. Astrotech is unable to rely on Rule 3a-1 because the value of its investment securities exceeds the 45% threshold due to the inability to value the intellectual property held by its subsidiaries. Astrotech believes that limiting its Capital Preservation Investments to meet the constraints of Rule 3a-1 greatly underutilizes Astrotech's cash management potential to the detriment of Astrotech and its shareholders especially given the extremely limited cash reserves available to Astrotech.

Following the ASO sale, Astrotech relied on Rule 3a-2 under the 1940 Act but determined that it would not be able to complete significant strategic acquisitions at the end of the one-year period under Rule 3a-2 to avoid potential classification as an "investment company" even though it strongly believes that it is not an "investment company". Astrotech examined other exemptions such as the Rule 3a-8 exemption. However, in 2015 when it filed its initial exemptive application, Astrotech did not meet the conditions of this exemption. While it believes it is currently in compliance with Rule 3a-8, Astrotech is concerned that its small size, potential strategic acquisitions, and the funding of its internal operations may cause it to fall out of compliance with Rule 3a-8 in the future. It is thus seeking more legal certainty as to its status under the 1940 Act.

Astrotech further notes that because it has chosen not to classify its internally-developed intangible assets as assets on its balance sheet, due to such 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 Act⁵. 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 and current publicly stated objectives, 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

⁵ See Certain Prima Facie Investment Companies, Investment Company Act Release No. IC-10937 (Nov. 13, 1979); In the Matter of the Tonopah Mining Company of Nevada, 26 SEC 426 (1947).

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 an innovative science and technology development and commercialization company that invents, acquires, and commercializes technological innovations sourced from internal research, universities, laboratories, and research institutions, and then funds, manages, and builds start-up companies for profitable divestiture to market leaders to maximize shareholder value. In contrast to investment companies, Astrotech's management is an integral part of the team of each of the start-up companies and actively manages the day-to-day operations of all aspects of its companies. Throughout its history since its founding in 1984 and up to the sale of its ASO business, Astrotech was primarily a commercial aerospace company. Since the sale of its ASO business, its focus has remained on developing new technologies, but such activities have expanded beyond just the space industry. However, it has supported the launch of 23 shuttle missions and more than 300 spacecraft. It has designed and built space hardware and processing facilities. This rich heritage formed the foundation for both 1st Detect and Astrogenetix, as both companies were conceived through Astrotech's involvement in the commercial aerospace business. With the acquisition of Astral Images, however, Astrotech has begun to expand its reach beyond the space industry.

(ii) Public Representations of Policy

Astrotech continues to hold itself out as an innovative science and technology development and commercialization company that invents, acquires, and commercializes technological innovations sourced from internal research, universities, laboratories, and research institutions, and then funds, manages, and builds start-up companies for profitable divestiture to market leaders to maximize shareholder value. Unlike investment companies, Astrotech's management is an integral and critical part of the management team of each of the start-up companies and actively manages the day-to-day operations of all aspects of its companies. While Astrotech's mission changed slightly following the sale of ASO and the subsequent acquisition of Astral, Astrotech has never portrayed itself as anything other than an operating company with complementary research and development activities. In Astrotech's annual 10-K and quarterly 10-Q filings with the Commission, Astrotech has consistently stated that its objective is to develop and commercialize technology. A copy of its most recent 10K is attached as an Exhibit. Similarly, a perusal of its web page at <http://www.astrotechcorp.com/> and the websites of 1st Detect, Astral Images and Astrogenetix at <http://1stdetect.com>, <http://astral-images.com/> and <http://astrogenetix.com/> illustrate a clear and unwavering focus on commercialization activities and the development of new and innovative technologies. Through public statements, reports to shareholders, periodic filings with the Commission, public advertising and information contained on Astrotech's, 1st Detect's, Astral Images's and Astrogenetix's websites, Astrotech has invariably represented that it is primarily engaged in the business of commercialization activities and related research.

and development activities. At a conference for investors in May 2016, Astrotech presented itself to the investment community as a research and development and commercialization company (a copy of this presentation may be found at <http://www.astrotechcorp.com/presentations>). In none of its marketing materials, websites, public filings, or investor presentations does Astrotech discuss or highlight its investment securities except as required 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 technology and other areas of expertise relevant to Astrotech's businesses. Astrotech's executive officers have extensive experience in technology development and commercialization. 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 operating and 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 with assistance from a third party investment advisor, who is primarily responsible for managing the portfolio and recommending investment options. The CFO and the Director of Corporate Development of Astrotech spend less than 1% and 3% of their time, respectively, working with the investment advisor on 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 December 31, 2016, Astrotech's investment securities (as defined in Section 3(a)(2) of the 1940 Act) of approximately \$14.4 million constituted approximately 96% of Astrotech's total unconsolidated assets (excluding Government securities and cash items). As of December 31, 2016, less than \$1 or 0.0% of Astrotech's investment securities

was cash and none of its Capital Preservation Investments consisted of money market funds. As of December 31, 2016, 100% 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 that requires capital in order to continue to fund its technology development and commercialization activities. None of Astrotech's wholly-owned subsidiaries or majority-owned subsidiaries are investment companies or companies that rely on the exclusions from the definition of "investment company" in sections 3(c)(1) or 3(c)(7) of the 1940 Act..

The following tables set forth the value of the investment securities of the Applicant grouped into these categories and the percentage of the value of the total unconsolidated assets of the Applicant represented by such assets as of June 30, 2016 and December 31, 2016.

Astrotech⁶

Statement of Investment Securities as of June 30, 2016

(in thousands)

	Carrying Value	Percentage
Mutual Funds	\$12,807	60%
Investment Grade Fixed Income Securities	\$3,513	17%
Time Deposits – CDs	\$4,990	23%

Astrotech

Statement of Investment Securities as of December 31 2016

(in thousands)

	Carrying Value	Percentage
Mutual Funds	\$9,025	62%
Investment Grade Fixed Income Securities	\$3,404	24%
Time Deposits – CDs	\$2,000	14%

⁶ For a Statement of Assets on a consolidated basis for Astrotech, see its most recent Form 10K which is attached as an exhibit hereto

Astrotech
Summary of Operations
(in thousands)

NET REVENUE:	Thru Q2 2017	2016	2015
Grant Revenue	464	182	77
Scanning Revenue	-	1	12
Handrails Revenue	-12	157	-
Total Net Revenue	476	340	89
EXPENSES			
Operating Expenses			
Selling, General & Administrative	,3,229	7,157	7,938
Research & Development	,2,547	6,469	3,234
Equity Compensation	953	551	5,028
Total Operating Expenses	6,729	14,177	16,200
Other Income (Expense)			
Interest and Invest. Income	133	379	224
Income from Discontinued Ops*	-	-	20,601
Other Income (Expense)	133	379	20,825
* ASO Transaction			
NET INCOME (LOSS)			
Income Tax Expense (Benefit)	0	(25)	(5,941)
Net Income (Loss)	(6,121)	(13,434)	10,655
Minority Interest	103	339	123
NET INCOME (LOSS) ATTRIBUTABLE TO ASTC	(6,018)	(13,095)	10,778

Astrotech notes that for the quarter ended December 31, 2016, it had a year to date net loss of \$6.0 million, of which net investment income was \$0.13 million. Astrotech further notes that for the year ended June 30, 2016, it had a net loss of \$13.4 million, of which net investment income was \$0.38 million. Finally, Astrotech notes that its net investment income was 12% and 8% of its total income for fiscal year ended June 30, 2016 and quarter ended December 31, 2016, respectively. In the future, Astrotech expects substantially all of its income to come from operations. Astrotech believes that since substantially all of its income is attributable to its operations, rather than investments, Astrotech's income supports a determination that Astrotech is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

Additionally, a portion of Astrotech's consolidated assets consist of intangible assets such as internally-developed intellectual property that are not included in the value of Astrotech's total consolidated and unconsolidated assets for purposes of determining Astrotech's status under the 1940 Act. The value of Astrotech's internally-developed intellectual property is 7.2% of total assets as of December 31, 2016 on a consolidated basis. This value has been determined in accordance with Financial Accounting Standards Board guidance (specifically Intangibles—Goodwill and Other (Topic 350)) in consultation with Astrotech's outside auditors. 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), 3(b)(1) and 3(b)(2) of the 1940 Act and Rule 3a-1 thereunder may significantly overstate the relative value of investment securities.

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 or Rule 3a-1 thereunder 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.

If granted an order under Section 3(b)(2), Astrotech anticipates that, as is currently the case, in the future its investments in "investment securities" that are not Capital Preservation Investments will be no more than 10 percent of Astrotech's total assets (other than Government securities and cash items) on an unconsolidated basis.

(v) Sources of Income

The Applicant derives predominantly all of its income from its core operating businesses. As of the year ended June 30, 2016 and quarter ended December 31, 2016, it derived approximately 12% and 8% of its total income from investment income. The fluctuations in the percentage of investment income as a percentage of total income is due to Astrotech's continued use of their Capital Preservation Investments to fund on-going operations resulting in less dollars being maintained in the investment securities portfolio. Given Astrotech's early stage companies the percentage of total income from investment income can significantly vary from time period to time period. Applicant states that it may increase its Capital Preservation Investments, as well as the ratio of income from these investments to total income, 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 income to come from operations. Since predominantly all of Astrotech's income is attributable to its operations, rather than investments, Astrotech's income supports a determination that Astrotech is primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities.

Additionally, all of Astrotech's cash management investments are either in Government securities, cash, money market funds, or Capital Preservation Investments which are collectively designed to preserve Astrotech's cash and maintain liquidity. Astrotech's Capital Preservation Investments are currently limited to certificates of deposits, investment grade fixed income instruments, and high quality fixed income mutual funds. Astrotech does not engage in short-term speculative trading. Further, it does not actively trade its Capital Preservation Investments. Such Capital Preservation 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.

An Order under Section 3(b)(2) Would Better Serve the Public Policies Underlying the 1940 Act and Avoid Harm^c 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 be a disadvantage to 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, and impede its research and development and commercialization 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 technology and development and commercialization activities. 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.

A. 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.

B. 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.

C. 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 technology development and commercialization 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 commercializing new technologies -- technologies that could help promote important societal goals such as medical advances, food safety, and national defense.

D. 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 1940 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 development and commercialization company, 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.⁷

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

⁷ See RealNetworks, Inc., Notice of Application under Section 3(b)(2) of the 1940 Act, File No. 812-13399 (June 28, 2007).

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 RealNetworks 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.

⁸ See Applied Materials, Inc., Notice of Application under Section 3(b)(2) of the 1940 Act, File No. 812-126868 (Sept. 13, 2005).

(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.⁹, Hutchinson Technology Incorporated¹⁰ and Corvis Corporation¹¹. 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:

Applicant Address:

Astrotech Corporation

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Austin, Texas 78701

Please direct questions to:

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New York, New York 10166

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⁹ See Dolby Laboratories, Inc., Notice of Application under Section 3(b)(2) of the 1940 Act, File No. 812-13582 (October 1, 2010). Dolby is a leading technology company that needs to maintain liquid capital for its capital intensive business and for potential acquisitions. Additionally, it has intangible assets that could not be counted on its balance sheet under GAAP. It maintained highly liquid investment securities, consisting of Capital Preservation Investments, equal to 39.2% of its total assets on a consolidated basis.

¹⁰ See Hutchinson Technology Incorporated, Notice of Application under Section 3(b)(2) of the 1940 Act, File No. 812-13008 (January 25, 2006). HTI was a leading manufacturer of hard disc drives and needed to maintain substantial liquid capital to fund its operations, research and development activities and capital expenditures. Investment securities comprised approximately 15.8% of its total assets and reinvestment income was between 9.5% and 35.8% of its total net income after taxes. It also invested solely in Capital Preservation Investments.

¹¹ See Corvis Corporation, Notice of Application under Section 3(b)(2) of the 1940 Act, File No. 812-12598 (October 21, 2002). Corvis was a manufacturer of high performance optical networking products. Corvis needed to maintain highly liquid capital for research and development activities and to fund its existing businesses. Corvis also invested its cash mainly in Capital Preservation Investments and such Investments comprised 82% of its total assets.

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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 Amendment No. 2 to the application to be duly executed this 9th day of March, 2017.

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 1940 Act, the undersigned, states that he has duly executed the attached Application for an Order, dated March 9, 2017, 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

Name: Eric Stober

Title: Secretary

INDEX OF EXHIBITS

1. Certificate of Secretary of Astrotech Corporation.
2. Astrotech Corporation Form 10K dated June 30, 2016.

Exhibit Index