SUREBEAM CORP
Form 10-K
March 31, 2003

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

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

For the fiscal year ended December 31, 2002

or

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

For the transition period from to

Commission file number 0-31807

SureBeam Corporation

(Exact name of registrant as specified in its charter)

Delaware	**33-0921003**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
9276 Scranton Road, Suite 600 San Diego, California	**92121**
(Address of principal executive offices)	*(Zip code)*

Registrant s telephone number, including area code
(858) 795-6300

Securities registered pursuant to Section 12(b) of the Act: None

Title of each class	**Name of exchange on which registered**
None	None

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

Class A Common Stock, $.001 par value

(Title of class)

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes o No þ

Aggregate market value of the voting stock held by non-affiliates of the registrant as of June 28, 2002: $66,402,200.

Number of Registrant s shares of Class A Common Stock, $.001 par value outstanding as of March 21, 2003 was 74,202,392

Documents Incorporated By Reference:

Portions of the Definitive Proxy Statement for the 2003 Annual Meeting of Stockholders on May 23, 2003. (The Company will file a definitive proxy statement with the Commission within 120 days after the close of the fiscal year pursuant to Regulation 14A). With the exception of those portions which are specifically incorporated by reference in this Form 10-K Annual Report, the Proxy Statement for the 2003 Annual Meeting of Stockholders is not deemed to be filed as part of this Report.

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For the Fiscal Year Ended December 31, 2002

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PART I

Item 1. *Business*

The statements made in this report which are not historical facts are forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those set forth in or implied by such forward-looking statements. See our note regarding forward-looking statements on page 31. Information regarding certain of the risks and uncertainties that could cause or contribute to such differences can be found in this report in Part I, Item I under the caption Factors Which May Affect Future Performance Part II, Item 7 entitled Management s Discussion and Analysis of Financial Condition and Results of Operations and elsewhere throughout this report. We recommend that you review all of the Company s filings made with the Securities and Exchange Commission for a complete description of factors which may affect our future performance. Our internet address is www.surebeam.com. As required, as of November 15, 2002, we make available free of charge on or through our Internet website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission.

Overview

We trace our corporate history to Titan Purification, Inc., a wholly owned subsidiary of The Titan Corporation, or Titan, formed in December 1997. Titan Purification subsequently changed its name to SureBeam Corporation. We were formed in August 2000 to facilitate a reorganization of Titan s food irradiation and medical sterilization division. At that time, Titan contributed to us its electronic food irradiation business and we, in turn, contributed the business to SB Operating Co. (previously named SureBeam Corporation and originally named Titan Purification, Inc.) in exchange for all of the common stock of SB Operating Co. held by Titan and its affiliates. We completed our initial public offering on March 16, 2001, and our spin-off from Titan was completed on August 5, 2002, when Titan distributed all of its shares of common stock of SureBeam to the stockholders of Titan.

We are a leading provider of electronic irradiation systems and services for the food industry. Our SureBeam electronic food irradiation process significantly improves food safety, prolongs shelf life and provides disinfestation. Our SureBeam® process is based on proven electron beam technology that destroys harmful food-borne bacteria such as E-coli, salmonella and listeria, eliminates or renders harmless fruit flies and other pests and reduces bacteria driven food spoilage. Heightened awareness of food safety issues has prompted food growers, packers, processors and retailers to find new, safe and efficient ways to eliminate bacteria and insects from their products and to reduce food spoilage. Unlike older irradiation technologies, our SureBeam process does not use radioactive isotopes as a means of irradiation. Instead, our SureBeam system uses ordinary electricity and operates in an efficient and environmentally friendly manner. As a result, we believe we have an opportunity to establish electronic irradiation as a new standard for food safety and SureBeam as the leading brand for food safety solutions.

Our electronic food irradiation system integrates our patented material handling, controls, shielding sub-systems with our proprietary software, electron beam and x-ray technology. Under our business model, we intend to generate revenue using our electronic food irradiation systems in primarily three types of installations:

Service centers owned by us, at which we will charge customers for processing services;

Service centers owned by third parties, using equipment they have purchased from us, at which we will charge a continuing royalty fee for the use of our technology on an ongoing basis; and

Systems owned by us and installed as part of a customer s production line, for which customers will be charged for processing services.

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We built, own and operate three service centers including a facility in Sioux City, Iowa that is the first dedicated commercial electronic food irradiation service center in the United States, and similar facilities in Chicago, Illinois and Los Angeles, California. We use these service centers both for commercial processing of food products, including ground beef and spices, for customers and for testing the processing of other food products for our customers. We are in the process of completing a fourth company-owned service center in Rio de Janeiro, Brazil, which we anticipate to be operational by the end of the second quarter of 2003.

To date, we have sold a SureBeam system to Hawaii Pride LLC, or Hawaii Pride, for operation of a service center in Hilo, Hawaii for the disinfestation of fruits and vegetables. We also are pursuing global opportunities to sell our systems through strategic alliances with local entities in international markets. In 2001, we entered into a purchase order contract with RESAL Saudi Corp., or RESAL, to build electronic food irradiation systems for the operation of multiple service centers in the Saudi Arabia region for irradiating poultry and disinfesting dates and we have begun construction on these systems. In 2002, we sold systems to customers in Vietnam and Texas.

We generally structure these sale transactions so that we can participate in the potential future value created through the use of the systems we have sold. Typically, we obtain a right to acquire a minority equity interest in the entity that owns and operates the system and/or charge a royalty fee for the use of our technology on an ongoing basis. We recognize revenue from the sale of the systems and expect to recognize income from profits generated from processing services commensurate with our equity ownership and/or a royalty fee to be paid by these entities. We have provided and may in the future provide working capital or project financing in connection with these third party service centers. Substantially all of our revenues to date have been derived from long-term contracts using the percentage-of-completion method of accounting. For example, we have commenced construction of the systems for RESAL under our $53.0 million purchase order contract for ten systems and have recognized total revenues of $21.3 million through December 31, 2002 under the percentage-of-completion method of accounting for these systems.

We have executed agreements with many of the major meat and poultry providers and processors in the United States, including American Food Service, Cargill, Huisken Meats, IBP, Omaha Steaks, Tyson Foods, United Food Group and WW Johnson, and spice producers Saratoga Specialties, Spice Tec and Swift & Company. In addition, we have signed agreements with Anchor Foods, Del Monte Foods, Square-H Brands, Inc. and Kraft Foods for applying the SureBeam technology to processed foods, with the expectation that the United States Food and Drug Administration, or FDA, will approve irradiation of processed foods. If the FDA does not approve irradiation of processed foods, it is unlikely we will receive revenue under these agreements. Our customer agreements generally provide that we will be the exclusive provider of any food irradiation services required by the customer. Revenues we receive under these agreements, if any, are dependent upon the amount of processing, if any, required by the customers. We are currently electronically irradiating fresh and frozen ground beef and spices for commercial sale by some of our customers. Those customers and others are currently testing products processed by our SureBeam system.

During 2002, we made significant advances in implementing our strategy. The volume of food products processed in 2002 increased by 33% from 2001, increasing from 11.1 million pounds to 14.8 million pounds. In addition, we have experienced a significant increase in the number of customers testing products at our Sioux City, Chicago, and Los Angeles service centers and in the number of potential customers, which are in discussions with us regarding the use of our technology. Many of these discussions are preliminary and no assurance can be made that we will enter into agreements with these potential customers, or that any agreements we enter into with these customers will prove to be profitable to us. We have expanded the types of packaging configurations that we can process using our technology and our customers have increased the kinds of products we are processing for them. We believe the increased level of processing by our customers indicates an increasing level of consumer acceptance of electronically irradiated food products. This acceptance is further evidenced by the recent introduction of electronically irradiated food products by several restaurants, as well as major retail grocery stores, in the United States. For 2002, food processing services represented a small portion, or 3%, of our total revenues versus system sales. The volume of food processing services we are providing has not increased as rapidly as we have expected.

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We have identified several global markets for our SureBeam process, including over 19 billion pounds of ground beef and over one trillion pounds of fruits and vegetables. We also plan to target the poultry, cut beef, seafood and processed food markets. Each of these markets is substantial and represents a significant opportunity since our long-term objective is to derive the majority of our revenue by charging a per pound fee for food processed with our electronic irradiation systems.

During 2002, in addition to performing activities that are part of our core strategy, we were also involved in the sale of SureBeam equipment to the United States Postal Service (subcontracted through Titan) for treatment of mail to eliminate the threat of anthrax. Titan entered into a contract with the United States Postal Service to sell it electronic irradiation equipment and we sold the equipment to Titan to enable it to fulfill the contract. In addition, we are also involved in the sale of SureBeam equipment to Titan for various applications including medical sterilization, material cross-linking, and other research and development applications.

Industry Background

Food Safety

There is growing concern about the safety of the world s food supply. The Centers for Disease Control and Prevention reported in 2002 that food-borne bacteria cause more than 5,200 deaths, 325,000 hospitalizations, and 76 million cases of illness annually in the United States alone. In 2001, the United States Department of Agriculture, or USDA, recalled nearly 17 million pounds of food in over 45 reported product recalls relating to food-borne bacteria. In 2002, the USDA recalled over 54 million pounds of food in over 79 reported product recalls, including a recall in June 2002 of approximately 19 million pounds of ground beef and beef trimmings thought to be contaminated with E-coli, and a recall in October 2002 of approximately 28 million pounds of turkey and chicken products thought to be contaminated with listeria monocytogenes. The October 2002 recall was the largest recall of food in the United States ever, and it resulted in the food supplier voluntarily suspending operations. In addition to the increasing volume of recalls, zero tolerance liability laws on E-coli and listeria and increasing litigation related to other food-borne illnesses are exerting further pressure on food processors to meet stricter food safety standards. As a result, food processors spend substantial amounts of capital to minimize the risk of food contamination.

The FDA has stated that the only effective methods of safeguarding against E-coli and other food-borne bacteria in raw ground beef are cooking it to 160F or irradiating it. Relying solely on cooking as a safeguard against food-borne illnesses is not satisfactory, since bacteria can be spread when contaminated food is handled prior to cooking and can remain if food is undercooked. Irradiation offers food producers and processors a method to safeguard against food-borne bacteria after their products are packaged and before their products reach consumers. Although the FDA approved the irradiation of a number of foods in the early 1960 s, we believe food processors and consumers reacted unfavorably towards the concept of irradiation because older food irradiation methods involve exposing food to radioactive isotopes. Furthermore, we believe that older food irradiation methods can negatively affect the taste and texture of some types of food.

Food Infestation and Spoilage

In addition to food safety, our SureBeam system can be used to eliminate infestation of food by fruit flies and other pests and to reduce food spoilage and prolong shelf life. In October 2002, the USDA issued its final rule authorizing the use of irradiation as a phytosanitary treatment for fruits and vegetables imported into the United States. For instance, Hawaii Pride s facility disinfests produce, and it is expected that RESAL s Saudi Arabia facilities also will disinfest dates, while our facility in Brazil is intended to use our SureBeam process to both eliminate insect pests and to increase the shelf life of fruits and vegetables.

Hawaii and countries such as Brazil and Australia that produce fruits and vegetables with known insect infestations are prohibited from shipping those fruits and vegetables into the United States and other countries unless they comply with disinfestation regulations. These regulations are becoming more difficult to meet, as traditional methods of disinfestation are being banned or reevaluated due to environmental concerns and negative effects on food taste, texture and nutritional value. Our SureBeam systems and related technology

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allow compliance with the disinfestation regulations in an environmentally friendly manner and with minimal effects on food taste, texture and nutritional value.

Traditional methods of disinfesting food products such as fruits and vegetables include the use of vapor heat, fumigation and gamma ray irradiation. Using heat to disinfest fruit can compromise taste, texture and nutritional value. The use of fumigation, such as methyl bromide, is being phased out worldwide beginning in January 2005 due to its negative environmental impact. Regarding gamma irradiation, we believe the use of radioactive isotopes to disinfest food products elicits the same negative reaction from food processors and consumers that is associated with using radioactive isotopes to eliminate food-borne bacteria.

Food spoilage is a major concern for food growers, processors and retailers because it limits both shelf life and the distance food products may be shipped, thereby limiting market access. Food spoilage in developing countries is estimated to be 30% in fresh fruits and vegetables. In addition, transportation distances in an increasingly global food industry contribute to the food spoilage problem.

The SureBeam Solution

Our electronic food irradiation system offers a newer method of irradiation that utilizes ordinary electricity to accelerate electrons. Consumers have demonstrated acceptance of food safety methods, as in the case of pasteurized milk, when the method is environmentally safe and maintains the product s characteristics. We believe health officials currently view irradiation positively and that consumers and industry officials are beginning to view irradiation positively. Many prominent health and medical organizations support the use of irradiation technology, including the American Dietetic Association, the American Medical Association, the Centers for Disease Control, the FDA, the USDA and the World Health Organization. The World Health Organization has specifically approved the irradiation of all foods and its standards may serve as uniform standards for some other countries.

Utilizing our patented technology, we have developed an electronic irradiation system that we believe addresses food safety, disinfestation and spoilage concerns and provides many benefits including:

Destroying dangerous bacteria. Our SureBeam system can effectively kill dangerous bacteria such as E-coli, listeria monocytogenes, salmonella and campylobacter in food products, including meats, poultry, vegetables, and seafood. We provide food processors with a solution that improves their ability to comply with food safety laws and may reduce costly product recalls or damaging liability lawsuits.

Killing fruit flies and other pests. Our SureBeam system can kill fruit flies and other pests or prevent them from reproducing, thereby rendering them harmless. This benefit may enable food producers and processors to gain access to new markets that have previously been denied or limited due to fruit fly and other pest quarantines.

Reducing food spoilage and prolonging shelf life. Our SureBeam system can increase the shelf life of foods such as meats, poultry, fruits and vegetables, by decreasing microbial levels that cause food spoilage. This benefit may enable shelf life to be extended by two to three times in foods such as raspberries, strawberries, raw beef and chicken. As a result, food processors have the ability to ship product less frequently and over further distances while food retailers and food service companies have the ability to stock and store product longer, thereby realizing supply chain efficiencies.

Utilizing ordinary electricity. Unlike older irradiation methods that use radioactive isotopes as their energy source, our SureBeam system uses ordinary electricity and has received greater acceptance from food processors and consumers because of its environmentally responsible features.

Maintaining food taste, texture and nutritional value. Because of the rapid rate at which food is processed by our SureBeam system and the small increase in food product temperature during processing, the oxidation effects on food products are minimized. As a result, when properly applied, our SureBeam process has been shown to have minimal effect on taste, texture or nutritional value of most foods.

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Integrating fully into production lines. We believe our SureBeam system is the only food irradiation system available that can be fully integrated into customers production lines, avoiding additional product transportation costs. Food irradiation systems that use radioactive isotopes require extensive space and we believe have been proven to be impractical in existing production lines. We believe food processors will be unwilling to build new processing facilities to accommodate radioactive isotope based systems. Our SureBeam system s footprint and ability to accommodate different products make it efficient to integrate into an existing production line. Attributes that enable our SureBeam system to be incorporated into production lines include:

Scalable system. Our SureBeam system is scalable and can be designed to meet a wide range of production volume requirements

Fast processing time. Our SureBeam system irradiates dangerous food-borne bacteria in food products in a matter of seconds, maintaining the speed of a production line.

Precise dosing. Our SureBeam system uses electron beam or x-ray processing that delivers a measurable and consistent dose to products based upon pre-set parameters. All processing parameters are under constant measurement to maintain dosage within a predetermined range.

Flexible dosing. Our SureBeam system can switch from one targeted dose to another in a matter of minutes. In addition, our system can be designed to utilize either electron beam or x-ray technology depending on the density and thickness of the product, with x-ray technology allowing us to process thicker products. Product changeovers are easy, can be accomplished in a few minutes and are designed to accommodate various products, packaged or unpackaged.

Environmentally responsible. Our SureBeam system uses ordinary electricity as its power source. There are no radioactive isotopes used in our SureBeam process, and as a result, the licensing and operation of facilities using our SureBeam system do not require any review by the Nuclear Regulatory Commission.

Our Strategy

Our goal is to leverage our proprietary technology to be the premier global provider of electronic irradiation systems and services to the food industry. To meet this goal, we plan to:

Expand our customer base. We have already entered into relationships with leading food processors and other customers in the United States and abroad. We intend to continue to develop relationships with food processors, food retailers, foodservice operators and distributors both domestically and internationally and to sign exclusive agreements with food processors when possible. We believe food industry leaders will provide us with a growing stream of per pound processing fees as consumer acceptance of electronically irradiated food continues to expand.

Pursue global opportunities through strategic alliances. We intend to continue to enter into strategic alliances with local partners in international markets to build and operate service centers in these countries. We believe these strategic alliances allow us to address global markets in the most efficient way without requiring us to commit excessive amounts of our financial resources to building consumer acceptance in these international markets. While we have provided and may in the future provide working capital or project financing in connection with these third party service centers, we believe these alliances are an efficient means of giving us a competitive advantage in establishing our SureBeam technology as a global leader for food irradiation. We have entered into a strategic alliance with RESAL with respect to the systems being sold for use in Saudi Arabia and will continue to target other key food and export markets, such as Australia, South America and Asia.

Build, own and operate additional electronic food irradiation service centers. We may continue to build service centers which are owned by us and which provide electronic irradiation services in strategic locations near major producers and processors of meat, poultry, fruits or vegetables. For example, our company-owned service centers in Sioux City, Iowa, Chicago, Illinois and Los Angeles,

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California are located in proximity to several leading meat producers processing plants, including IBP, United Foods and Cargill. We anticipate our Brazilian service center in Rio de Janeiro will be operational in the second quarter of 2003. This service center has also been strategically located near food processing plants. In addition, we share a service center in College Station, Texas with Texas A&M University, which is owned by the university. We believe building service centers in strategic locations will accelerate the development of a market for food irradiation services. These service centers also serve as test centers for food processors evaluating our process and as commercial irradiation centers for processors that have lower volume requirements or are otherwise situated such that installation of their own dedicated SureBeam system may not be cost effective.

Install and operate in-line electronic irradiation systems. We intend to offer in-line electronic irradiation systems that are directly integrated into customer production lines. We will generally retain ownership of the systems and customers will pay a per pound processing fee.

Build the SureBeam brand. Our goal is to establish SureBeam as the leading electronic irradiation brand with both food processors and consumers in the retail and foodservice markets. We believe establishing a leading brand with consumers will prompt food processors to purchase our products and services so that their products can carry our SureBeam seal, thereby creating pull-through demand for our process in the distribution chain. We expect to allocate significant additional resources to establish our brand in the retail and foodservice businesses. We will utilize a wide range of communication media to build awareness of the SureBeam brand. Our SureBeam logo currently appears on some of the products of thirteen food processors that currently sell food processed with our SureBeam system. In June 2001, we started marketing the SureBeam brand in the Minneapolis-Saint Paul area. A survey of several hundred adults conducted at the Minnesota State Fair concluded that over 40% of the people surveyed recognized the SureBeam brand and over 78% said they would be willing to pay more for ground beef that had been treated by SureBeam.

Establish a new industry standard for food safety. We intend to promote the widespread use of electronic irradiation by food processors to establish a new industry standard for food safety and quality. We believe the need for such a standard is driven by food processors desires to meet retail and foodservice demand for safe food products.

Promote consumer awareness of electron beam technology. We plan to utilize a variety of media to educate consumers on our SureBeam system s ability to increase food safety and provide other produce benefits and to highlight major endorsements of food irradiation technology by health and industry officials. In addition, we will leverage our contracts and alliances with major food producers and processors as validation of our SureBeam system.

Protect our technology. Our electronic food irradiation system combines our patented conveyor and shielding systems and proprietary software, electron beam and x-ray technology. We protect our SureBeam technology through a combination of patents, patent applications, know-how, copyright and trade secrets. We have not granted any rights to our SureBeam technology, other than those granted to Texas A&M University and the Texas Agricultural Experiment Station solely for research and development purposes, and those granted to Titan for non-food applications, such as mail. We will continue to protect our technology aggressively by enforcing our current patents and filing additional patent applications in the United States and other countries.

Develop new opportunities for SureBeam. We will continue to develop new applications of our technology, including through acquisitions of complementary businesses or technologies. These opportunities may include the irradiation and disinfestation of additional products such as hides, flowers, grains, seeds, coffee beans and pet food.

The SureBeam System

Our SureBeam system is based principally on publicly available electron beam accelerator technology initially developed in the 1980 s. We, together with our former parent, Titan, worked for approximately

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20 years to create and refine an electronic processing system capable of meeting the functionality, reliability and 24 hour-per-day cycles required in medical equipment sterilization and electronic food irradiation applications. The reliability of our SureBeam system has been demonstrated with over 200,000 operating hours logged on our systems for both medical equipment sterilization and food irradiation applications.

We believe our patented SureBeam process is the most efficient electronic food irradiation solution currently on the market. Our SureBeam process combines proven linear accelerator technology with a patented material handling system and a real-time control-monitoring platform to provide the highest degree of process integrity. The energy generated from the acceleration of electrons is sufficient for processing pre-packaged or post-packaged USDA fresh or frozen products in seconds. The rapid speed of our SureBeam system makes it well suited for integration into customer production lines.

Our SureBeam system is comprised of a linear accelerator that produces a beam of electrons using ordinary electricity. A series of resonant microwave cavities are then used to accelerate the electrons to nearly the speed of light. A magnetic deflection system is then used to scan the beam across the product. The electrons disrupt the DNA chain of the scanned organisms and either destroy them or prevent their reproduction, thereby rendering them harmless. Our process utilizes ordinary electricity to generate electrons to administer a direct electron or x-ray treatment that is suitable for a wide range of products of various sizes, shapes and densities. X-rays are produced when electrons exit the accelerator and make contact with a metal target. The x-rays are directed at the product being processed and have the same ability as electron beams to kill bacteria or pests, or inhibit their reproduction. X-rays are generally used to penetrate larger and denser products than electron beams. Electron beams can generally penetrate food products of up to a thickness of approximately four inches, while x-rays can penetrate thicker products. Generally, the processing time using x-rays is slightly longer than the processing time required when using electron beams.

Our SureBeam system is designed to contain the irradiation process inside a protective shield to ensure the operator s safety. The operator and maintenance staff are not exposed to a hazardous environment when they need to enter the protective shield because the system is shut off and no electrons are generated when the power supply is cut off. We believe this ability to immediately terminate production of ionizing energy at will provides our system with a greater level of safety and security than other systems which use radioactive isotopes, toxic gases or high temperatures. In addition to the protective shield, a safety control system monitors the operation of the system to detect abnormal operating conditions, such as smoke and fire, intrusion into a restricted area, loss of utilities or equipment failures (power, compressed air or cooling) and the system is designed to shut down automatically if any abnormal conditions are detected.

Our SureBeam system can provide doses in one or more directions, and can handle food products in individual packages or cases. Our proprietary SureTrack® information and control system guides both the operator and material loaders through the overall process, checking for the completion of each task, and verifying the integrity of the process. The dose, or the amount of energy deposited, is controlled by our proprietary software, the SureTrack® system. The dose varies depending on the thickness and density of the product and on whether the objective is to irradiate harmful bacteria, disinfest or extend shelf life. Our SureTrack® system provides dose verification and validation, and continuously archives all the processing information required to substantiate the successful completion of the SureBeam process.

The FDA has approved all forms of food irradiation technology, including the use of an electron beam and x-ray as utilized by our SureBeam process. The FDA rigorously evaluated the safety and efficacy of irradiation as part of its standard approval process and established standards for the use of irradiation based on this evaluation. The FDA reviewed results from over 40 years of testing and research of the impact of irradiation on food and concluded that irradiated food is safe to eat, does not put consumers at risk and does not adversely affect the nutritional value of food. If the FDA were to reverse or limit its approval of irradiation, such a change could have a material adverse effect upon our operating results and financial condition. Each facility in the United States that utilizes our SureBeam process must be validated prior to opening by the U.S. regulatory agencies to ensure compliance with standards of the USDA, Food Safety and Inspection Service, or FSIS, and Animal Plant Health Inspection Service, or APHIS.

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Our Services

We offer services for the electronic irradiation of food through in-line systems and centrally located company-owned service centers allowing food growers, packers and processors to choose the most convenient and cost effective way to utilize our SureBeam system for electronically irradiating their products. We offer services directly and through third parties with which we have strategic relationships. While no in-line systems have as yet been installed in our customers production facilities, three company-owned service centers are currently in operation with the fourth currently under construction and expected to be operational in the second quarter of 2003.

Company-owned Service Centers. In 1999, we began operating the nation s first electronic food irradiation service center in Sioux City, Iowa and now also operate service centers in Chicago, Illinois and Los Angeles, California. In addition, we share a service center in College Station, Texas with Texas A&M University where we are allowed to use the service center ten hours per day while the university may use the balance of the hours for research and development purposes. Each of these facilities currently has the capacity to process up to approximately 40,000 pounds of meat per hour. To date, all service centers have been operating at a very small percent of their maximum processing capacity. The service centers have the capability of irradiating large cases of products, as well as products that are not uniform in shape or size. Our service centers generate revenue by charging a per pound processing fee. We are currently in the process of building an additional company-owned service center in Rio de Janeiro, Brazil. We expect the Brazil service center to be operational by the second quarter of 2003.

In-line Systems. We offer systems that can be integrated directly into a customer s production facility. We expect to generally retain ownership of the systems and charge our customers a per pound processing fee. In limited circumstances, we may sell in-line systems directly to our customers, recognize revenue for the sale and charge a royalty fee for the use of our technology. There have been no in-line systems installed or sold to date.

Strategic Relationships

We have maintained a strategy of establishing strategic relationships with third parties to own and operate service centers to provide food irradiation and disinfestation services. In the past, we have generally structured these relationships so that we receive an option to acquire a minority equity interest in a company to be formed by the third party and/or receive a royalty fee for the technology on an ongoing basis to ensure our participation in the potential future value created through the use of our systems. We intend to generate revenue and recognize earnings from the sale of our systems to the third parties, to recognize earnings from processing revenue as allocated through our equity ownership of the companies created to provide irradiation services, and in some cases, to charge a royalty fee for the use of our systems and technology.

In May 2000, Tech Ion Industrial Brasil S.A., or Tech Ion, placed purchase orders with us for eleven electronic food irradiation systems, which we expected to result in approximately $55.0 million in revenue over the next three years, including $22.4 million that was recognized through September 30, 2001. SureBeam Brasil Ltda., or SureBeam Brasil, which was jointly established by Tech Ion, and Titan SureBeam Brazil Inc., our wholly owned subsidiary, was to provide, among other things, food irradiation services through four planned service centers. In October 2001, in order to ensure the completion of the project with Tech Ion to build service centers in Brazil that were under construction, we entered into a stock purchase agreement with Tech Ion to purchase an additional 60.1% of SureBeam Brasil, bringing our total equity ownership in SureBeam Brasil to 80.0%. In connection with the additional equity interest, we paid Tech Ion $750,000 upon the execution of the agreement and will pay an additional $250,000 upon the nationalization of the linear accelerators and material handling systems for the Rio de Janeiro service center from Tech Ion to SureBeam Brasil. We also exchanged our trade receivables of $22.4 million due from Tech Ion and forgave $3.5 million of a loan we had previously made to Tech Ion for building improvements and equipment. We have recorded an intangible asset of $2.5 million that represents the total consideration amount of the agreement that exceeds the fair value of the assets purchased. The intangible asset represents a favorable land lease and location next to the Rio de Janeiro CEASA, the depot for fresh food distribution in Rio de Janeiro, and the license granted

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by CNEN, Brazil s Nuclear Regulatory Commission, for the use of our technology in Brazil, the only electronic food irradiation license granted to date by CNEN. Tech Ion obtained these items for SureBeam Brasil and they are being amortized on a straight-line basis over five years, the free rent period of the ten-year lease. On April 1, 2002, the remaining $1.5 million owed us by Tech Ion was exchanged for its remaining 20.0% interest in SureBeam Brasil. The $1.5 million was included in prepaid expense and other current assets in the accompanying balance sheet at December 31, 2001. Due to the exchange we recorded an additional $700,000 as an intangible asset that will be amortized over the remaining 54-month life of the existing intangible asset. The remaining $800,000 was recorded as part of the service center building cost. We estimate that the first service center in Brazil will become operational in the second quarter of 2003 and we will be obligated to provide additional working capital to fund its operations through its startup phase and until it can generate its own cash needs.

Internationally, we intend to establish strategic relationships with businesses that have expertise in their local food markets and recognize an opportunity to utilize our SureBeam system. In June 2001, we received a purchase order contract in the aggregate of $50.0 million from RESAL for ten electronic food irradiation systems to operate in multiple service centers in the Saudi Arabia region for irradiating poultry or disinfesting dates. In 2002, the order for these system was modified to $53.0 million to construct systems for three large service centers with a combination of high power x-ray and electron beam technology. We commenced construction on these systems and have recognized, under the percentage-of-completion method of accounting, $21.3 million of revenue through December 31, 2002. See Critical Accounting Policies Revenue Recognition for further discussion. During the second quarter of 2002, we successfully negotiated a joint venture agreement with RESAL and established SureBeam Middle East Company, LLC, which we own a 19.9% interest. The joint venture agreement governs our strategic relationship with the operator of these systems, including royalty fees and the management structure and equity ownership of the operator that will operate the service centers.

Customers

We currently have agreements with over 60 customers regarding food irradiation services at our service centers. Thirteen customers use our service centers for processing products for production purposes, while the balance is conducting testing at our service centers. Our customer agreements vary in some respects from customer to customer. The following discussion is intended only to describe some of the more common terms. The agreements to provide food irradiation services are generally for an initial term of three to five years with automatic annual renewals. Although our customers can generally terminate these agreements upon 30 days notice, such agreements typically provide that we will be the exclusive provider of food irradiation services, including radioactive isotope irradiation services we do not currently provide, for a multi-year period, even if the customer terminates the agreement before the end of the multi-year period. The exclusivity periods of our customer contracts generally will terminate unless they are renewed each year. We generally must release a customer from the exclusive provider arrangement if the customer can find a comparable service at a lower price, if we cannot fully meet the customer s demand or if we cannot demonstrate compatibility with the customer s products.

The agreements provide for both testing and commercial production. We charge a per pound processing fee, which generally decreases as monthly production volume increases. A customer may elect to convert to the commercial production period at any time during the test period, at which time the per pound processing fee decreases and the customer is required to commit to processing a minimum number of pounds of food for each 12-month period. The customer agrees to pay us for such minimum amount, even if the food is not processed. Those customers operating in the test period are not required to convert to the commercial production schedule in order to sell irradiated food commercially. Revenues we receive under these agreements, if any, are dependent upon the amount of processing, if any, required by the customers.

Sales and Marketing

We focus our sales and marketing initiatives on establishing SureBeam as the leading consumer brand in providing solutions to food safety issues, such as the incidence of bacteria and pests in food, as well as food

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spoilage. We promote our brand in order to build revenues, gain worldwide market share, and promote consumer and industry awareness and acceptance. We target the growing public demand for safer food by helping food processors meet heightened standards of quality and safety through our technology. Our sales and marketing personnel, who possess technical expertise regarding our SureBeam system, market and sell our systems and services to food processors, as well as educate food industry constituents, food processors and consumers on the uses and benefits of our technology. In order to enhance our commercialization efforts, we expect to continue to expand our sales and marketing capabilities.

We conduct a number of sales and marketing programs, including the use of media and in-store advertising and promotional events, to support the promotion and sale of our SureBeam processed products and to reinforce brand awareness. Our consumer programs are designed to educate the public that our SureBeam process is safe and environmentally responsible, and to explain that the taste, texture and nutritional value of food products remain essentially unaffected by this process. In addition, we promote the placement of our SureBeam seal on packages of food products processed with our patented SureBeam system. Our goal is for consumers to easily identify SureBeam processed products and associate our seal with food safety, thereby increasing brand awareness and further developing brand loyalty. We will seek to create consumer demand that will serve to encourage food processors to co-brand with us and to use our electronic irradiation system.

Our trade programs are designed to educate food processors about the advantages of using our technology and to encourage processors to market their SureBeam processed products using our brand. We also work cooperatively with our service center partners to reinforce the SureBeam brand and extend our sales effort in international markets.

Manufacturing

Our manufacturing operation involves engineering, assembly and testing of SureBeam systems. We obtain many of our components under long-term supply contracts. While we currently procure the accelerating section of the linear accelerator from one supplier, we will seek to secure multiple sources for substantially all of our components. No assurance can be made that we will be able to secure such multiple sources. Delays from our suppliers could have a material adverse effect upon our ability to fulfill our contractual obligations and our financial results. Our manufacturing operation allows us to build systems to the size requested by our customers. We have an option to manufacture Titan s requirements of any SureBeam systems for applications other than irradiation of food (excluding water), animal hides and flowers through December 2003. We also have agreed to supply Ion Beam Applications S.A., or IBA, its requirements for systems for processing food and sanitizing mail until January 2006. We believe our manufacturing capability is sufficient to meet our currently anticipated commercial requirements for food processing systems as well as the requirements of Titan and IBA. Our sole manufacturing facility is located in Dublin, California.

Research and Development

Our current research and development activities are focused on increasing the capability and efficiency of our existing technology, minimizing the space occupied by our SureBeam systems, and developing new food product applications. We have assembled a team of experts in our industry to enhance and drive our research and development efforts. Our research and development experts have many years of experience in the area of enhancing food safety and extending shelf life using irradiation in addition to their broad experience with linear accelerators and charged particle beams. In addition, we have an agreement with Texas A&M University and the Texas Agricultural Experiment Station for the purpose of researching and developing product applications for our technology. We are currently working with Texas A&M on several research projects which include studies on flavor profiles, viral destruction, food product applications and consumers willingness to pay more for irradiated foods. In addition, we often benefit from the research and development efforts of our component suppliers. Research and development expenditures for 2000, 2001 and 2002 were $524,000, $2.2 million, and $817,000, respectively.

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Patents and Proprietary Rights

We have 57 United States, or U.S., and foreign patents and patent applications, consisting of 29 U.S. and foreign issued patents and 28 patent applications pending in the U.S. and foreign countries. The U.S. and foreign issued patents relating to our SureBeam technology have claims relating to methods of transporting products through the electron beam process, means of increasing the efficiency and reliability of the process, and ways of shielding the process that decreases the size of the system. Our pending patent applications include claims relating to improvements in the operation, efficiency, and reliability of our SureBeam technology, shielding, multiple pass x-ray system and in-line processing systems. While electron beam, x-ray and linear accelerator machines and technology are considered to be part of the public domain and not patentable, we believe our patents cover the most efficient method of utilizing electron beam, x-ray and linear accelerator technology for food and other applications.

In 2001, Titan purchased a perpetual and exclusive, non-royalty bearing license to use our intellectual property for all applications and fields other than the food (excluding water), animal hide and flower market in consideration of the following: 1) to make available to us a $50.0 million senior secured line of credit, with customary financial and affirmative and negative covenants, 2) to exchange the outstanding $75.0 million debt owed by us to Titan for additional shares of our common stock, and 3) a cash payment of $8.0 million, with a $4.0 million payment on September 30, 2001 and four installments of $1.0 million payable on each of March 31, 2002, June 30, 2002, September 30, 2002 and December 31, 2002. We received the $8.0 million in 2001 and 2002. We recognized $1.0 million and $4.0 million of the cash payments related to the license agreement as other income in 2001 and 2002, respectively. We will recognize $1.0 million as other income each quarter, over the first three quarters of 2003. The license agreement with Titan was negotiated between related parties, without the benefit of receiving an independent, third party opinion as to the fairness of the terms and conditions of the agreement. The terms of the agreement may be different, and may be less favorable to us, than terms which may have been negotiated between wholly independent parties.

Our U.S. and foreign patents have been assigned to us and include patents related to electron beam or x-ray systems issued to Thomas Allen, our Vice President, Systems Engineering, Integration and Field Operations, that Mr. Allen assigned to us. The initial patent was granted on March 7, 1995. These issued patents will expire over the period from 2009 to 2021. These patents have been issued or are pending in those markets that are key targets for our expansion such as Brazil, Korea and Japan. Protection of our proprietary rights is vital to our business. In addition to our policy of seeking patents on our inventions, we rely on trade secrets and know-how that is not patented, and continuing technological innovation to develop and maintain our competitive position. In addition, we maintain a policy of entering into confidential information and invention assignment agreements with our employees, consultants and other third parties. We believe that we have a strong patent position on the application of electron beam technology in a conveyor-based irradiation process.

On January 6, 2000, Ion Beam Applications S.A., a Belgian corporation, and some of its U.S. subsidiaries, or IBA, filed an action for declaratory judgment in a federal court in Virginia against Titan and us relating to our patents for our SureBeam systems. On January 25, 2002, we announced that we settled the litigation with IBA. Under the settlement, IBA dropped all the claims it made against Titan and us in the litigation, including IBA s challenge to the validity and enforceability of our core patent. Titan and we agreed that IBA and its customers might continue to operate or use IBA s electronic irradiation facility in Bridgeport, New Jersey. The settlement terms include, among other things, that IBA will purchase its requirements in the United States for e-beam and x-ray systems (non-pallet based systems) for use for processing food and sanitizing mail from Titan and us during the next four years, provided Titan and we offer competitive terms. Titan and we also agreed to purchase our requirements of accelerators with power above 150 kilowatts from IBA during the same four-year period, provided IBA offers competitive terms. Other terms of the settlement agreement were not disclosed.

We periodically assess the strength of our patent and intellectual property protection for our technologies and products. Despite our assessments and our belief in the strength of our patent protection for particular technologies or products, our patents may not provide effective barriers to entry against competitors because

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our competitors may develop competing technologies and products that do not infringe upon our patents. In addition, we may incur significant expense in protecting our intellectual property and defending or assessing claims with respect to intellectual property owned by others. We also could choose to modify or abandon one or more planned or current products because of these assessments or actual or threatened claims by other companies. Our patents or pending patent applications may be challenged, narrowed or invalidated. In addition, we can make no assurances that our pending patent applications will be issued, or that if issued, they will provide us with significant competitive protection.

To date we have not been notified that our products infringe the proprietary rights of any third parties, but third parties may, in the future, claim that our current or future products infringe upon their proprietary rights. In addition, third parties have, and may in the future, challenge the validity or enforceability of our proprietary rights. Any such claim, whether meritorious or not, could be time consuming, result in costly litigation, cause product installation delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements may not be available on terms acceptable to us, or at all. Any claims, meritorious or not, can harm our business and prospects.

SureBeam is a registered trademark in the United States. Applications to register this trademark are pending in other key foreign jurisdictions.

Government Regulation

Domestically, our technology is subject to significant regulation as a food additive under the Federal Food, Drug and Cosmetic Act, which is administered by the FDA. Use of our SureBeam system, including product labeling, is also subject to regulation by the USDA s Food Safety and Inspection Service and by health and environmental safety departments within various states.

Food irradiation first gained regulatory approval in the United States in 1963 for use in the control of insects in wheat and wheat flour, followed by approval in 1964 for the prevention of sprouting in potatoes. In February 1984, the FDA granted approval for irradiation to inhibit the maturation of fresh fruits and vegetables, to disinfest food of insects, and to disinfect spices of microorganisms. In 1990, the FDA approved the irradiation of poultry. In December 1997, the FDA approved the irradiation of meat. In December 1999, the USDA issued regulations setting forth the guidelines for irradiation of beef and other fresh meats, leading to the approval of commercial sales in February 2000. Our SureBeam technology complies with these regulations. FDA approvals for the use of irradiation to treat processed foods and seafood are currently pending. The USDA has approved the use of irradiation for the purposes of reducing food-borne pathogens and extending shelf life in meat and poultry in accordance with the requirements established by the FDA. While the FDA has approved the use of irradiation for reducing food-borne pathogens in meat and poultry, it has not approved the use of irradiation to extend shelf life of poultry.

Internationally, each country either sets its own irradiation regulations or, will adopt the, soon to be published, CODEX Standards. According to the International Consultative Group for Food Irradiation (ICGFI), 58 countries have approved the use of irradiation to destroy bacteria and pests on specified foods. We are required to obtain regulatory approval from a number of foreign regulatory authorities before we can offer our services in those jurisdictions. We believe that currently, we either comply with all applicable regulations in countries where we intend to provide services or, are working aggressively with our customers and the appropriate host country ministerial contacts to develop and enact the required policy framework. USDA s Animal Plant Health Inspection Services, or APHIS, published on October 23, 2002, its rule approving the use of irradiation as a phytosanitary treatment alternative for fresh produce imported into the United States. As a result of that rule there are several additional bilateral framework agreements that must be in place between APHIS and the exporting country. These include pest risk assessments where absent, an equivalency agreement and a country work plan.

In the United States and other countries that follow World Health Organization guidelines, all electronically irradiated food, whether processed with our electron beam or x-rays, must be labeled with the symbol for irradiation, known as the Radura symbol, and the phrase Treated with Radiation or Treated by Irradiation. In the United States, this label does not have to be any larger than the ingredients font size. If

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the irradiated product is to be used as an ingredient in a further processed product, the Radura symbol is not required and the only label required is in the ingredients section (e.g. potatoes, irradiated ground beef, natural flavors). Bulk or wholesale items processed with irradiation require labeling only on the case of irradiated items and not the individual contents. For items not in packages but processed in their entirety (e.g. fruit and vegetables) the label may either be placed on each individual item, on the bulk container, or on a counter sign as long as it is next to the product and plainly in view. U.S. federal regulations do not require retail food service providers, such as fast food restaurants, to disclose that their food products have been irradiated. Many of our food service customers have used the SureBeam brand, as well as a description of electronic irradiation on their menus. Since irradiation is regulated as a food additive, our customers also are subject to packaging and labeling requirements. Additionally, states like Vermont have adopted, and others may adopt similar labeling requirements.

Our service centers also are subject to various other federal, state and municipal regulations with regards to health, safety and environmental issues. Our service centers are subject to supervision or periodic inspection by other regulators. All SureBeam locations in the United States that process meat are required to have a USDA inspector on the premises when processing.

Competition

We compete against several companies seeking to address the food safety market. Our electronic food irradiation technology competes with gamma ray irradiation, as well as alternatives to irradiation such as thermal sterilization, gas fumigation, chemical washes, lactoferrin and high-pressure sterilization techniques. We believe that none of our competitors currently is using electron beam technology to irradiate food for commercial sale. However, certain of our competitors claim that they can provide electronic food irradiation systems and services. Our irradiation competitors include Ion Beam Applications, S.A., MDS/ Nordion Food Technologies Service, Inc. and STERIS Corporation. We are aware of other companies that are attempting to develop in-line electronic food irradiation systems. While we believe that our patents with respect to our conveyor and shielding systems provide us with an advantage in processing products through the electron beam, competitors may develop their own different methods of processing that would not fall within the scope of our patents and would adversely affect our competitive position.

Some or all of our competitors may have significantly more capital, research and development, regulatory, manufacturing, marketing, human and other resources than we do. We believe that our system has advantages over gamma ray irradiation in that our system uses ordinary electricity, can be integrated into a customer s production line and irradiates harmful bacteria in food faster than gamma ray irradiation. We believe the cost of overall operation of our SureBeam system is comparable to that of other irradiation technologies. We believe irradiation using electron beam or x-ray, including our system, also has advantages over alternatives to irradiation. Thermal and high-pressure sterilization can alter the flavor and quality of most food products. Gas fumigation is not approved for food use in the United States and chemical washes kill surface bacteria but have little effect on pathogens beneath the surface of food. However, to the extent a customer is concerned with killing surface pathogens only or is not concerned with alteration of food flavor or quality, these alternative methods may be sufficient and less expensive.

Employees

As of December 31, 2002, we employed 130 full-time employees. None of our employees is represented by a collective bargaining agreement and we have never experienced a strike or similar work stoppage. We consider our relations with our employees to be good.

Factors Which May Affect Future Performance

Risks Related to Our Business

An investment in shares of our common stock is very risky. We encourage you to carefully consider the following factors as well as the other information contained and incorporated by reference in this report.

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We are likely to require significant additional capital to fund operations, which may not be available on acceptable terms or at all.

We are likely to require additional funds to execute our current business plan which includes building new SureBeam in-line systems and service centers, funding working capital, including in relation to our international and domestic strategic alliances, and funding our ongoing operations, including our corporate infrastructure. Our future capital requirements will depend on many factors, including:

Fluctuations in our working capital requirements, including the continued or increased demand to build our systems in advance of payment;

Unexpected delays in collecting accounts receivable from sales of our systems;

The volume of food processed at our service centers and the fixed costs of operating these facilities at substantially less than current capacity;

The costs of components for our systems, and the production cost of assembling our systems;

The adequacy of our manufacturing and other facilities to meet demand for our products and services;

The size and complexity of, and the progress in, our research and development programs;

The costs of filing and prosecuting patent applications, and maintaining, defending and enforcing our patents; and

The timing, scope and results of market testing by food processors.

If our revenues from operations do not meet our expectations, we may have a heightened need for additional capital from a source other than our current credit facility.

Titan has extended to us a $50.0 million senior secured credit facility secured by substantially all of our assets. It allows us to borrow up to a maximum of $12.5 million per quarter beginning in the fourth quarter of 2002 through the fourth quarter of 2003, subject to the $50.0 million aggregate limitation on borrowing. The amount available for borrowing in each of the second, third and fourth quarters of 2003 is based upon our earnings before interest, taxes, depreciation and amortization (EBITDA) for the prior quarter as a percentage of the EBITDA target in our annual operating plan. Additionally, we are subject to certain limitations on our capital expenditures and our operating expenses, based in part upon our actual revenues as compared to our revenue targets. If our operating revenues do not meet our expectations, it is likely that (i) our EBITDA will not meet our EBITDA targets, which will limit the amount which we can borrow under the Titan credit facility; and (ii) because of the shortfall in revenues, we will have a greater need to borrow funds to fulfill our current business plan. Therefore, failure to meet our expected operating revenues could have a compounded effect, which could require us to obtain additional financing sooner than currently anticipated in order to fulfill our current business plan. In such circumstance, no assurance can be made that we would be able to obtain additional financing on terms reasonable to us, or at all, which could have a material adverse effect upon our results of operations and financial condition.

Our current credit facility may not be sufficient for our capital requirements.

In the past, Titan financed a significant portion of our working capital and other capital requirements and Titan has extended to us a $50.0 million senior secured credit facility secured by substantially all of our assets. This facility is subject to limits in the amounts that can be drawn each quarter, and subject to certain financial covenants and affirmative and negative covenants. As of March 28, 2003, we have borrowed $25.0 million under this senior secured credit facility. We do not anticipate any additional borrowings. We cannot give assurance that we will be able to obtain any additional credit on as favorable terms or at all. We believe our current liquidity will allow us to continue our operations through 2003, however, if our capital requirements vary from our current plans, we may require additional financing sooner than we anticipate. We expect we will need to obtain additional debt or equity financing in order to execute our business strategy. Future equity financings would likely be dilutive to the existing holders of our common stock. Future debt financings would

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most likely involve restrictive covenants and would need to be approved by Titan. Additional financing from Titan or from third parties may be unavailable to us when needed. If we are unable to obtain future equity financing or debt financing or obtain additional funding from Titan or other financing sources on terms acceptable to us or at all or if we are unable to generate sufficient cash flow from operations, we believe we would have sufficient funds to continue our operations through 2003, but we would have to significantly reduce our current business plan and delay, curtail or eliminate some of our operations or capital expenditures in 2004 and beyond, which could have a material adverse effect on our results of operations and financial condition.

We may not achieve our financial goals in a timely manner, or at all, due to variability of timing and amounts of revenues obtained from sales of our systems.

Historically, a majority of our revenues have been obtained through sales of our SureBeam electronic food irradiation systems. We recognize the revenues from these sales using the percentage-of-completion method of accounting, which allows us to recognize revenue as our fulfillment of the contract progresses. Under this method, delays in finalizing anticipated sales contracts or even in construction of systems we have sold can significantly reduce the amount of revenues, which we recognize during any given quarter. Because many of our expenses are relatively fixed, it is unlikely that a reduction in revenues recognized in a particular quarter would result in a corresponding reduction in our expenditure levels for the quarter. Therefore, delays may have a material adverse effect on our operating results for the quarter in which the delay occurs, causing us to be unable to achieve our financial goals for the quarter. If we do not meet our financial goals for a quarter, or if our operating results for a quarter are below the expectations of public market analysts and investors, the price of our common stock may decrease significantly.

Our business is at an early stage of development. We are subject to the risks of new enterprises and the commercialization of a technology that requires consumer acceptance.

Our early stage of development makes it difficult to assess our prospects or predict our future operating results. We are subject to risks and uncertainties frequently encountered by early stage companies that involve the new application of an existing technology. These risks include our inability to:

Build consumer confidence in the benefits of food irradiation and establish the acceptance of our SureBeam electronic irradiation technology;

Establish and maintain a sufficient number of food industry customers and strategic relationships; and

Obtain substantial capital to support the further development of our technology and the commercialization of our systems and services.

If we do not successfully address these risks, we may not be able to increase revenues or commercialize our SureBeam system.

If we are unable to successfully achieve broad market acceptance of our SureBeam system, we may not be able to generate enough revenues in the future to achieve or sustain profitability.

We are dependent on the successful commercialization of our SureBeam system. The market for electronically irradiated food is at an early stage of development and has developed slower than we have expected. As of December 31, 2002, thirteen food processors were selling food electronically irradiated by us and the volume of food being processed is still a very small percentage of the market of ground beef. To date, no market has developed for chicken. The FDA still has not approved the irradiation of processed food and seafood, which represents two substantial potential markets. We processed 14.8 million pounds of food products in 2002, up from 11.1 million pounds processed in 2001. We are projecting significant increases in the pounds to be processed in 2003; however, no assurance can be made that we will meet our projections. To date, the volume of food processing services has not increased as rapidly as we have expected. Other food processors are testing our technology and it is uncertain whether or when they will begin commercial production, which in some cases depends on obtaining regulatory approval. We also do not know whether or when more fast food or other national chain restaurants or food retailers will decide to offer irradiated meat

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and create demand for our electronic irradiation systems. We expect that some food processors will not irradiate food unless industry leaders first commit to distribute irradiated food.

We have a history of significant losses and we may not achieve or sustain profitability.

We have incurred operating losses in each quarter since we commenced operations. As of December 31, 2002, we had an accumulated deficit of approximately $127.5 million, and our net loss for the year ended December 31, 2002 was $35.1 million. Our net loss for the year ended December 31, 2001 was approximately $74.4 million, including approximately $54.3 million of non-cash stock-based compensation. At the time of our initial public offering, March 16, 2001, we recorded deferred stock-based compensation of approximately $78.6 million, of which $53.5 million and $15.8 million was recognized as stock-based compensation during the years ended December 31, 2001 and 2002, respectively. We will recognize this charge in accordance with the vesting provisions of the related options through 2004. This charge will have a significant adverse impact on our earnings in 2003 and 2004. We expect to derive our future revenues from sales of our SureBeam systems and related food processing services. However, these revenues are highly uncertain. We expect to devote substantial resources to continue our sales and marketing activities, including our consumer branding efforts, further develop our administrative infrastructure and expand our research and development activities. As a result, we expect that our operating losses will increase and that we will incur operating losses through at least 2003. In addition, if we continue to incur operating losses we may need to record impairment charges on some of our long-lived and other assets.

Revenues from system sales may decline in the future if we fail to make new system sales or the timing of expected contract execution is delayed.

Our system sales revenues are dependent on a few large contracts and the recognition of revenues under these long-term contracts is based upon work performed. Consequently, the timing of the execution of these contracts and the timing of work performed under them, which is partially outside of our control, could cause us to generate lower than expected revenues. To date, our revenues have been primarily attributable to the design and construction of systems for a limited number of customers, for which revenues are recognized under the percentage-of-completion method of accounting. For example, for the year ended December 31, 2000 revenue from three customers represented approximately 79% of our total revenues, for the year ended December 31, 2001 revenue from three customers represented approximately 89% of our total revenues, and for the year ended December 31, 2002 revenue from two customers represented approximately 78% of our total revenues. Most of these systems are not yet fully constructed, installed or integrated and we expect to continue to derive system sales revenue as we complete construction, installation and integration of these systems. A reduction or delay of system sales to one or more significant customers could significantly reduce our revenues. Once the food irradiation systems become operational, we will no longer derive revenue from these system sales, but expect to derive income from food processing revenues commensurate with our existing or potential equity ownership in the entities that own and operate the third party service centers. In addition, we expect to derive revenue from processing by company-owned service centers and in-line systems. There are no assurances that we will continue to derive revenues from these customers, that revenues from these customers will continue at current or historical levels, that we will be able to derive revenue from new customers or that we will be able to derive income from significant food processing revenues in the future at anticipated levels.

We may be required to take impairment charges for receivables if a customer defaults on its payment obligations.

We account for our revenues derived from sales of electronic food irradiation systems under fixed-price contracts using the percentage-of-completion method of accounting. These systems currently take a total of approximately 12 to 18 months to design, construct, install, integrate and deliver. Our unbilled receivables from our contracts for systems have increased over the past twelve months. If a customer defaults on its payment obligations under a contract accounted for using the percentage-of-completion method of accounting or if we determine that the contract is otherwise impaired, we would take an impairment charge to earnings for

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the receivable arising from previously recorded revenues in respect of such contract at that time. We cannot assure you that one or more of our customers will not default on its payment obligations. For example, in December 1999, we agreed to sell a SureBeam system to a new entity, Zero Mountain SureBeam, to be formed by Zero Mountain Cold Storage. Under the agreement, a facility was to be constructed and the entity would operate an electronic food irradiation service center in Arkansas. Management of Zero Mountain Cold Storage had not moved forward with its obligation under the contract. Accordingly, in December 2001, we recorded an allowance for doubtful accounts of $1.2 million against our receivable from Zero Mountain Cold Storage.

Because a majority of our accounts receivable are related to only two customers, a default by either, or both, of these customers would have a severe impact on our operating results and financial condition.

As of December 31, 2002, we had total accounts receivable of approximately $28.3 million, of which approximately $17.3 million was related to RESAL which was unbilled and approximately $10.1 million was related to Titan. In January 2003, Titan paid approximately $7.2 million related to its receivable, bringing our total accounts receivable to approximately $21.1 million, of which approximately 82% is related to RESAL and approximately 14% is related to Titan. Due to the concentration of our accounts receivable in two customers, the default by either or both of these customers would have a severe impact on our operating results and financial condition.

We have not generated positive cash flow from operations and our cash flow from operations may be insufficient to meet operating requirements for the foreseeable future.

We used net cash from operations of $45.0 million in 2001 and $11.0 million in 2002. Also, in connection with our agreements with our customers, we have advanced funds aggregating $5.8 million to a strategic alliance entity in Hawaii to be used primarily for land acquisition, building construction, and for working capital purposes. During the fourth quarter of 2002, Hawaii Pride s primary customer declared bankruptcy, which resulted in an interruption in their normal business operations. As a result of this deterioration of their business, we determined that it was prudent to record a reserve of $4.4 million for the entire receivable. The RESAL contract requires us to expend significant cash to construct equipment prior to the receipt of the progress payments. Through December 31, 2002 we have cost of goods sold on the RESAL contract of approximately $13.0 million and an unbilled receivable of $17.3 million. We received progress payments of $5.3 million through March 28, 2003. We will continue to receive payments based on the payment schedule in the contract. In addition, we have entered into a number of commitments to lease land and facilities in connection with construction of our four company-owned service centers, of which three are operational and the fourth to be operational in the second quarter of 2003. Based on our customer requirements, we may expend funds to construct and install in-line systems that we will own and operate. We have limited sources of committed liquidity including our cash resources. Titan has extended to us a new $50.0 million senior credit facility secured by substantially all of our assets. As of March 28, 2003, we have obtained $25.0 million under this credit facility. This facility will be subject to limits in the amounts that can be drawn each quarter, subject to financial covenants and affirmative and negative covenants. We do not anticipate making any additional borrowings. No assurance can be given that we will be able to generate sufficient positive cash flow from operations to meet operating requirements for the foreseeable future.

International expansion will subject us to risks associated with international operations that could increase our costs and decrease our profit margins in both our domestic and our international operations.

Our success will depend in part on our ability to expand internationally as we obtain regulatory approvals to market and sell our SureBeam systems in other countries. We have received orders to install systems in Saudi Arabia and in Southeast Asia and we are building a service center in Brazil for extending the shelf life of fruits and vegetables. Expansion of our international operations could impose substantial burdens on our resources, divert management s attention from domestic operations and otherwise adversely affect our

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business. Furthermore, international operations are subject to several inherent risks that could increase our costs and decrease our profit margins including:

Reduced protection of intellectual property rights;

Changes in foreign currency exchange rates;

Changes in a specific country s or region s political or economic conditions, including military action or war in or near countries containing our international operations;

Trade protective measures and import or export licensing requirements or other restrictive actions by foreign governments;

Laws affecting the enforceability of our contracts and our ability to collect accounts receivable; and

Changes in tax laws.

Public concerns over the irradiation of food could negatively impact market acceptance of our SureBeam process and SureBeam branded food products.

Irradiation of food by any technology, whether using an electron beam or radioactive isotopes, is opposed by several organized and vocal consumer groups who claim that irradiated food products are unsafe for consumption or pose a danger to the environment. These groups attempt to influence public policy and promote consumer opposition to irradiated food through activities such as picketing stores that offer irradiated food and by lobbying politicians. Because irradiation of foods by electron beam technology is a new process, consumers need to be informed about the benefits and safety of food irradiation. Since irradiation of food by any method, whether using electron beam or radioactive isotopes, must be disclosed under the same label Treated with Radiation or Treated by Irradiation, consumers may fear that our process makes food unsafe for consumption, has unknown future health effects or poses a danger to the environment. We risk not being able to overcome these fears through our educational efforts or to distinguish our process from gamma irradiation. If the public or our potential customers perceive our systems and services as unsafe or undesirable, our systems and services may not gain market acceptance, which would severely limit our ability to market and sell our products. In addition, negative public attitudes may prompt state legislatures to prohibit the sale of irradiated food. Further, consumers may be unwilling to pay for the higher cost of food products processed by our SureBeam system, which could negatively impact the market acceptance of our process.

Our customer contracts for processing can be cancelled on short notice with little penalty and these contracts allow the customers to use other electronic irradiation providers in limited circumstances.

While our customer contracts for processing generally provide for a term of more than one year, the customers may terminate such contracts with a nominal termination fee and upon short notice, typically one month. If one or more customers that are processing a significant volume of products decide to terminate their contracts, our results of operations would be adversely affected. While a termination of a contract by a customer would not generally release a customer from the exclusive provider arrangement in the customer s contract, we generally must release a customer from the exclusive provider arrangement if they can find an alternative food irradiation source that can provide a comparable service at a lower price, or if we cannot fully meet the customer s demand.

Our customer contracts for processing do not obligate our customers to use a minimum amount of irradiation services; only to use us for their irradiation needs, if any.

Our customer contracts for processing generally provide that the customer is obligated to use our irradiation services for their food irradiation needs, if any. No assurance can be made, however, that our customers will require a significant amount, or any food irradiation services during the term of their respective contracts.

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If we cannot establish and maintain relationships with food processors, distributors, retailers and food service operators, we may not be able to increase revenues or commercialize our SureBeam system.

In order to increase our revenues and successfully commercialize our SureBeam system, we must establish and maintain relationships with our existing and potential customers and strategic partners. A reduction, delay or cancellation of orders from one or more significant customers or the loss of one or more key customers could significantly reduce our revenues and could damage our reputation among our current and potential customers as well as with consumers. We cannot assure you that our current customers will continue to place orders with us, that our current customers evaluating the technology will elect to enter into commercial production, that orders by existing commercial customers will increase, or that we will be able to obtain orders from new customers or continue to secure additional strategic relationships.

If we experience quality control problems or supply shortages from component suppliers, our revenues and profit margins may suffer.

Our dependence on third party suppliers for components of our systems involves several risks, including limited control over pricing, availability of materials, quality and delivery schedules. These components include the microwave cavities of our linear accelerators, which we currently obtain from a single source. We may experience quality control problems or supply shortages with respect to these components in the future. Any quality control problems or interruptions in supply with respect to one or more components or increases in component costs could materially adversely affect our customer relationships, revenues and profit margins.

The use of our systems to irradiate food is subject to significant government regulation that could prohibit the sale of irradiated food in various jurisdictions, increase the cost of using our products and delay or prevent the use of our systems and services by our customers.

Food irradiation is subject to significant regulation as a food additive by the FDA. Use of our SureBeam system, including product labeling, is also subject to regulation by the U.S. Department of Agriculture s Food Safety and Inspection Service and by health and environmental safety departments within various states. The FDA has approved the use of irradiation for beef, poultry, pork, fruits and vegetables. The FDA has not yet approved the use of irradiation for two of the primary food markets we expect to target: processed foods and seafood. The failure of the FDA to approve irradiation of processed foods and seafood would prevent us from generating revenues from the application of our technology in these significant markets. Furthermore, the FDA could remove or restrict its approval of the use of irradiation for currently approved food products, which would severely limit our ability to provide services and systems.

In addition, FDA regulations require that all food that has been irradiated must carry the Radura symbol, an international symbol for irradiation, and state that the product has been Treated with Radiation or Treated by Irradiation on the label or packaging. States such as Vermont have similar labeling requirements. These labeling regulations may increase the risk that consumers will not purchase goods that have been treated by our products or services, which could negatively impact our revenues.

FDA regulations also require approval for packaging materials used by our customers. While the FDA has approved a number of packaging materials, many other materials commonly used for packaging food have not been approved. Failure or delay in receiving such approvals could have a material adverse effect on our customer relationships and revenues.

We also are required to obtain regulatory approval from foreign regulatory authorities before we can offer our systems and services in those jurisdictions. These jurisdictions may apply different criteria than the U.S. regulatory agencies in connection with their approval processes. Monitoring changes in, and our compliance with, diverse and numerous foreign regulatory requirements may increase our costs. Regulatory approvals in foreign countries that regulate irradiation are subject to similar risks and uncertainties as are regulatory approvals in the United States. If we are unable to obtain approval to sell our products and services in these markets, our ability to generate revenues from these markets would be adversely affected.

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Our service centers also are subject to various other federal, state and municipal regulations regarding health, safety and environmental issues. Our service centers are subject to continuous supervision, in the case of the USDA, or periodic inspection by other regulators.

If we cannot effectively manage our anticipated growth, our business prospects, revenues and profit margins may suffer.

If we fail to effectively manage our anticipated growth in a manner that minimizes strains on our resources, we could experience disruptions in our operations and ultimately be unable to generate revenues or profits. We expect that we will need to significantly expand our operations to successfully implement our business strategy. As we add manufacturing, marketing, sales, and other personnel, both domestically and internationally, and expand our manufacturing, irradiation processing and research and development capabilities, we expect that our operating expenses and capital requirements will increase. To effectively manage our anticipated growth, we must continue to expend funds to improve our operational, financial and management controls, and our reporting systems and procedures. In addition, we must effectively expand, train and manage our employee base. If we fail in our efforts to manage our internal growth, our business prospects, revenues and profit margins may suffer.

We intend to continue to pursue strategic transactions, which could disrupt our operations, increase our costs and negatively impact our earnings.

We intend to continue to pursue strategic transactions that provide access to new technologies, products or markets. These transactions could include acquisitions, partnerships, joint ventures, business combinations and investments. Any transaction may require us to incur non-recurring or ongoing charges and may pose significant integration challenges and/or management and business disruptions, any of which could increase our costs and negatively impact our earnings. In addition, we may not succeed in retaining key employees of any business that we acquire. We may not consummate these transactions on favorable terms or obtain the benefits we anticipate from a transaction.

Our technology competes against other food irradiation technologies. Competition in our market may result in pricing pressures, reduced margins or the inability of our products and services to achieve market acceptance.

We compete against several companies seeking to address the food safety market. Our electronic food irradiation technology competes against gamma ray technology and alternatives to irradiation, such as thermal sterilization, fumigation, lactoferrin and chemical washes. We may be unable to compete successfully against our current and potential competitors, which may result in price reductions, reduced margins and the inability to achieve market acceptance for our products.

The current level of market penetration for food irradiation products is relatively low when compared to the overall size of the food markets to which we are targeting our food irradiation services and products. If food irradiation gains consumer acceptance and the market increases, we expect competition to grow significantly. Our competitors include Flow International Corporation, Ion Beam Applications, S.A., MDS/Nordion Food Technologies Service, Inc. and STERIS Corporation. These organizations may have significantly more capital, research and development, regulatory, manufacturing, marketing, human and other resources than we do. As a result, they may be able to devote greater resources to the manufacture, promotion and sale of their products, initiate or withstand substantial price competition, or take advantage of acquisition or other opportunities more readily.

Our inability to protect our patents and proprietary rights in the United States and foreign countries could materially adversely affect our business prospects and competitive position.

Our success depends on our ability to obtain and maintain patent and other proprietary-right protection for our technology and systems and services in the United States and other countries. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many

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companies have encountered significant problems and costs in protecting their proprietary rights in these foreign countries. If we are unable to obtain or maintain these protections, we may not be able to prevent third parties from using our proprietary rights. In addition, we may incur significant expense in protecting our intellectual property and defending or assessing claims with respect to intellectual property owned by others.

We periodically assess the strength of our patent and intellectual property protection for our technologies and products. Our electronic food irradiation system combines our patented conveyor and shielding systems and proprietary software with publicly available electron beam, x-ray and linear accelerator technology. Despite our assessments and our belief in the strength of our patent protection for particular technologies or products, our patents may not provide effective barriers to entry against competitors because our competitors may develop competing technologies and products that do not infringe upon our patents. Further, our patents do not cover electron beam, x-ray or linear accelerator technology, which are publicly available. We also could choose to modify or abandon one or more planned or current products because of these assessments or actual or threatened claims by other companies. Our patents or pending patent applications may be challenged, narrowed or invalidated. In addition, we are not certain that our pending patent applications will be issued.

We also rely on trade secrets, proprietary know-how and continuing technological innovation to remain competitive. We have taken measures to protect our trade secrets and know-how, including the use of confidentiality agreements with our employees, consultants and advisors. It is possible that these agreements may be breached and that any remedies for a breach will not be sufficient to compensate us for damages incurred. We generally control and limit access to, and the distribution of, our product documentation and other proprietary information. Despite our efforts to protect these proprietary rights, unauthorized parties may copy aspects of our products and obtain and use information that we regard as proprietary. We also cannot guarantee that other parties will not independently develop our know-how or otherwise obtain access to our technology.

Companies may claim that we infringe their intellectual property or proprietary rights, which could cause us to incur significant expenses or prevent us from selling our products.

Our success depends on our ability to operate without infringing the patents and proprietary rights of third parties. Product development is inherently uncertain in a rapidly evolving technological environment in which there may be numerous patent applications pending, many of which are confidential when filed, with regard to similar technologies. Future patents issued to third parties may contain claims that conflict with our patents. Although we believe that our current product does not infringe the proprietary rights of any third parties, third parties could assert infringement claims against us in the future. Any litigation or interference proceedings, regardless of their outcome, would probably be costly and require significant time and attention of our key management and technical personnel. Litigation or interference proceedings could also force us to:

Stop or delay selling, manufacturing or using products that incorporate the challenged intellectual property;

Pay damages; or

Enter into licensing or royalty agreements that may be unavailable on acceptable terms.

Product liability claims could materially adversely affect our customer relationships and costs.

Our involvement in the processing of food results in a significant risk that we will be subject to product liability claims resulting from the consumption of contaminated food. We may be held liable or incur costs to settle or defend liability claims if any of our systems cause, or are claimed to cause, injury or are found unsuitable during product testing, manufacturing, marketing, sale or use. These risks exist even with respect to products that have received, or may in the future receive, regulatory approval, registration or clearance for commercial use. Also, we may be liable to our customers for the costs they incur from product recalls. We cannot guarantee that we will be able to avoid product liability exposure.

While we currently maintain product liability insurance at levels that we believe are sufficient and consistent with industry standards for companies at our stage of development, we cannot guarantee that our

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product liability insurance is adequate. It is also possible that at any time our insurance coverage may become unavailable on commercially reasonable terms or at all. A product liability claim or product recall could result in liability to us greater than our assets and/or insurance coverage. Moreover, product liability claims, recalls and expenses associated with defending against claims or recalls could have an adverse impact on us even if we have adequate insurance coverage. Further, a product liability claim against us, whether merited or not, or a product recall claim against us would damage our reputation and severely undermine our branding campaign and our efforts to gain consumer acceptance.

If we cannot retain key personnel or attract qualified personnel, our customer relationships, competitive position and revenues could suffer.

Our success depends to a significant extent upon the efforts of our key management, sales and marketing, technical support and research and development personnel, none of whom have entered into agreements not to compete with us. The loss of any key personnel could adversely affect us. We believe that our future success will depend in large part upon our continuing ability to attract and retain highly skilled managerial, sales and marketing, technical support and research and development personnel. Like other emerging growth companies, we face intense competition for our personnel needs, and we have at times experienced and continue to experience difficulty in recruiting qualified personnel. We face the additional challenge of carefully balancing the growth of our employees commensurate with our anticipated revenue growth. If our revenue growth or attrition levels vary significantly, our results of operations or financial condition could be adversely affected. Further, our common stock price has been, and may continue to be extremely volatile. When our common stock price is less than the exercise price of stock options granted to employees, turnover is likely to increase, which could adversely affect our results of operations or financial condition. Additionally, there are several proposals in the United States Congress and in the accounting industry to require corporations to include a compensation expense in their statement of operations relating to the issuance of employee stock options. If such a measure is approved, we may decide to issue fewer stock options. As a result, we may be impaired in our efforts to attract and retain necessary personnel. We cannot assure you that we will be successful in attracting, assimilating and retaining additional qualified personnel in the future. If we were to lose the services of one or more of our key personnel, or if we failed to attract and retain additional qualified personnel, it could materially and adversely affect our customer relationships, competitive position and revenues.

Delays in the construction and installation of our systems could negatively affect our revenues.

Our business model depends on the successful deployment of our systems, whether the systems are constructed and installed in our company-owned service centers or in a customer s production line. A number of factors beyond our control can slow or delay the deployment of our systems such as site preparation, zoning and permitting requirements, the availability of skilled construction personnel and construction equipment, and adverse weather conditions. For example, due to these factors, our service center in Brazil opening has been delayed approximately one year from our original estimates.

Recently enacted and proposed changes in securities laws and regulations are likely to increase our costs.

The Sarbanes-Oxley Act of 2002 that became law in July 2002 requires changes in some of our corporate governance, public disclosure and compliance practices. The Act also requires the SEC to promulgate new rules on a variety of subjects. In addition to final rules and rule proposals already made, the NASDAQ has proposed revisions to its requirements for companies, such as us, that are listed on the NASDAQ. We expect these developments to increase our legal and financial compliance costs, and to make some activities more difficult, such as stockholder approval of new option plans. We expect these developments to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These developments could make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee, and qualified executive officers. We are presently evaluating and monitoring regulatory developments and cannot estimate the timing or magnitude of additional costs we may incur as a result.

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The war with Iraq and other events of global instability are likely to have a continuing negative impact on our international operations.

We have various facilities and projects in countries other than the United States, including Saudi Arabia. Due to the war with Iraq, certain shipments of equipment to Saudi Arabia have been delayed. Continuing war with Iraq or other global instability could cause further delays in Saudi Arabia or otherwise have a negative impact upon our international operations. While the war and other political unrest has not yet posed a direct security risk to our international facilities in Saudi Arabia, or elsewhere, it may cause unforeseen delays in the construction or development of our facilities and may in the future pose such a direct security risk. Our business plan also requires us to enter into new contracts for construction and integration of systems in facilities in other international countries. War and other global instability may cause delays or failures in signing these contracts.

The spread of Severe Acute Respiratory Syndrome may have a continuing negative impact on our operations in Vietnam.

We have current and anticipated projects in countries in Asia, including Vietnam. Due to the outbreak of Severe Acute Respiratory Syndrome (SARS) in Asia, the U.S. State Department has warned U.S. citizens not to travel to Vietnam because of the lack of adequate medical facilities for proper treatment of SARS. Therefore, our personnel who are constructing the system in Vietnam have departed from Vietnam pending resolution of this medical crisis. The departure of our personnel is delaying construction of the systems in Vietnam and we anticipate that these delays will continue until such personnel return to Vietnam to complete the system construction. We can provide no assurance as to when the medical crisis in Vietnam will be resolved or when our personnel will be able to return to Vietnam to complete the system installations. Failure to complete the construction of the systems in Vietnam as scheduled will result in a delay in our receipt of approximately $1.5 million to be paid following such completion. A delay could have a material affect upon our operating results and financial condition.

If our stock price becomes less than $1.00 per share for an extended period, we could be delisted from the NASDAQ.

Maintaining the listing of our common stock on the NASDAQ National Market is important to us. The delisting of our common stock from the NASDAQ would have a material adverse effect upon the marketability of our common stock and could, among other things, materially and adversely affect our ability to raise additional equity capital or to obtain financing through other sources. The NASDAQ has numerous requirements which must be complied with for a company to maintain its security s listing on the NASDAQ, one of which is that the minimum bid price of the security must be $1.00 or greater per share. If the price of our common stock were below $1.00 per share for a period of 30 or more consecutive business days, the NASDAQ could take action to delist our common stock from the NASDAQ. While the price of our common stock on the NASDAQ has not traded below $1.00 since our initial public offering, we cannot assure you that the price of our common stock will not fall below $1.00 in the future. On March 20, 2003, the closing price per share of our common stock was $4.01.

If our common stock were delisted from the NASDAQ, trading would thereafter be reported in the National Association of Securities Dealers Over the Counter Bulletin Board or in the pink sheets. The investing in securities traded in the Bulletin Board or in the pink sheets is generally considered to be subject to more risk than comparable investing in securities, which are traded on one of the major national securities exchanges such as the NASDAQ or the New York Stock Exchange. In the event of delisting from the NASDAQ, our common stock may be classified as a penny stock by the SEC and would become subject to rules adopted by the SEC regulating broker-dealer practices in connection with transactions in penny stocks. Broker-dealers recommending a penny stock must, among other things, document the suitability of the investment for the specific customer, obtain a written agreement of the customer to purchase the penny stock, identify such broker-dealer s role, if any, as a market maker in the particular stock, and provide information with respect to market prices of the common stock and the amount of compensation that the broker-dealer will earn in the proposed transaction. These disclosure requirements may have the effect of

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reducing the level of trading activity in the market for our common stock. If our common stock became subject to the penny stock rules, many broker-dealers may be unwilling to engage in transactions in our securities because of the added disclosure requirements, thereby making it more difficult for purchasers of our common stock to dispose of their shares of our common stock. The ownership of penny stock is generally considered to subject the owner to greater risks than the ownership of common stock as a whole due, among other things, to the smaller trading volume in such stocks and to the substantial impact upon the stock s overall value which results from small stock price variations.

Risks Related to our Past Relationship with Titan

Our business may suffer because we entered into affiliate agreements with Titan that may not have been based on arms length negotiations.

We have entered into various agreements with Titan including a tax allocation agreement, tax sharing and disaffiliation agreement, license agreement, and credit agreement. Because we were a majority-owned subsidiary of Titan at the time these agreements were entered into, these agreements were negotiated between related parties, and the results may differ from results obtained from arms-length negotiations. Under the license agreement, Titan purchased a perpetual and exclusive, non-royalty bearing license to use our intellectual property on all applications other than the food (excluding water), animal hide and flower markets in return for the following: 1) to make available to us a $50.0 million line of credit, 2) to convert the then current $75.0 million debt owed by us to Titan into equity via an exchange for our stock, and 3) a cash payment of $8.0 million.

Under the tax allocation agreement, Titan will determine the amount of separate taxable income and tax liability that we would realize if we filed a separate tax return. In addition, because we have filed a consolidated tax return with Titan, we may be obligated to pay taxes for the entire group of Titan companies if those companies defaulted in the payment of their taxes. If Titan offsets taxable gains with our losses, Titan will have to compensate us in cash for the benefit it receives for its use of our losses when we demonstrate we are able to utilize those losses or they would have otherwise expired. In addition, any benefit from our losses used to offset Titan profits resulting in a tax savings, is subject to Titan s position at that time.

We entered into a license agreement with Titan that prevents us from capitalizing on newly discovered uses of our technology in applications that are not related to food (excluding water), animal hides and flowers except through a manufacturing contract.

Titan purchased from us a perpetual and exclusive non-royalty bearing license to use our intellectual property in all applications and fields other than in the fields of food (excluding water), animal hides and flowers. Because Titan s license is an exclusive license, we cannot use our intellectual property in applications other than food (excluding water), animal hides and flowers. Applications which we believe are reserved for Titan s use include medical equipment sterilization and sterilization of mail to eliminate the threat of anthrax contamination.

Under the terms of the license agreement with Titan, future sales of electronic irradiation equipment to Titan, if any, will be sold on a cost-plus 20% markup basis, unless otherwise negotiated. Titan is obligated to purchase electronic irradiation equipment it requires, if any, from SureBeam until December 31, 2003, after which it may purchase equipment from any source. Therefore, we anticipate we will receive no further revenue from any commercialization of our licensed technology by Titan or any new applications for our licensed technology developed by Titan, unless Titan chooses to purchase equipment from us or enter into other arrangements with us under which we would receive revenue. Titan is not obligated to purchase any electronic irradiation equipment from us in the future, and should Titan not purchase any electronic irradiation equipment from us, it could have a material adverse effect upon our financial condition and results of operations.

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Maintaining the tax-free status of the distribution of our common stock by Titan to its stockholders restricts certain of our activities.

For the distribution of our stock by Titan to continue to qualify as tax-free, there must not be a change in ownership of 50% or more in either the voting power or value of either our stock or Titan s stock that is considered to be part of a plan or a series of related transactions related to Titan s distribution of our stock to its stockholders. Accordingly, we may be significantly limited in our ability to raise additional equity financing, use our stock for acquisitions and other similar strategic transactions or for compensation of employees and others. Further, in connection with our spin-off from Titan, we have entered into a tax sharing and disaffiliation agreement that provides for, among other things, an agreement with Titan that if we take any action that causes Titan s representations with respect to the letter ruling to be untrue or engage in transactions after the distribution that cause the spin-off to be taxable to Titan, we would be required to indemnify Titan for any and all taxes resulting from the failure of the spin-off to continue to qualify as a tax-free transaction. In addition, we may be required to indemnify Titan for half of any taxes incurred as a result of the spin-off if the spin-off is taxable for reasons that were not caused by actions taken by either Titan or us and to share proportionately with Titan such taxes if they are caused by actions by both us and Titan, in proportion to our relative contribution to the imposition of these taxes. Any indemnification payments by us would most likely be material.

Our sales through Titan generally produce lower profit margins than our sales to other parties. A higher percentage of sales through Titan could reduce our overall profit margins.

Historically, Titan has purchased a substantial amount of equipment from us as a subcontractor, in order to allow Titan to fulfill various contracts. These sales have typically been structured on a fixed price basis or cost-plus basis. Therefore, sales to or through Titan have historically, and likely will in the future, carry a lower profit margin than comparable sales to other parties. A higher percentage of sales through Titan could reduce our overall profit margins.

Risks related to the securities markets and ownership of our common stock

Our securities have not been publicly traded very long and our stock price may be subject to significant fluctuations and volatility.

The market price of our common stock has been subject to significant fluctuations since the date of our initial public offering on March 16, 2001. Our common stock market price has ranged from a high of approximately $19.45 to a low of approximately $1.46 since such time. These fluctuations could continue. Among the factors that could affect our stock price are:

Quarterly variations in our operating results;

Changes in revenue or earnings estimates or publication of research reports by analysts;

Speculation in the press or investment community;

Strategic actions by us such as new joint ventures, acquisitions or restructuring;

Actions by institutional stockholders;

General market conditions; and

Domestic and international economic factors unrelated to our performance.

The stock markets in general have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock.

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Provisions in our charter documents and Delaware law may delay or prevent acquisition of us, which could decrease the value of your shares.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it harder for a third party to acquire us without the consent of our board of directors. These provisions include a classified board of directors and limitations on actions by our stockholders by written consent. In addition, our board of directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. Although we believe these provisions provide for an opportunity to receive a higher bid by requiring potential acquirers to negotiate with our board of directors, these provisions apply even if the offer may be considered beneficial by some stockholders.

Item 2. ***Properties***

Our principal executive offices are located in San Diego, California. We also have a manufacturing facility and service centers located in the United States, as well as a service center in Brazil and a sales office in Saudi Arabia. Information about these facilities is set forth below:

Location	Principal Function	Approximate Square Feet	Leased/Owned
Rio de Janeiro, Brazil	Service Center	60,000	Leased
Chicago, Illinois	Service Center/Sales Office	56,000	Leased
Dublin, California	Manufacturing	44,300	Leased
Sioux City, Iowa	Service Center	31,900	Leased
Los Angeles, California	Service Center	31,200	Leased
San Diego, California	Headquarters/Warehouse	28,600	Leased
Omaha, Nebraska	Sales Office	3,900	Leased
Riyadh, Saudi Arabia	Sales Office	3,000	Leased

Leases for our facilities expire between May 2003 and January 2023. We currently expect to be able to extend the terms of expiring leases or to find suitable replacement facilities on reasonable terms. Our principal offices are located in San Diego, California, and consist of approximately 14,400 square feet of office space that we are leasing from WCB Thirty-One Limited Partnership through October 31, 2007. The lease has an option to extend the lease term for an additional five years. We lease approximately 31,900 square feet to operate our company-owned service center located in Sioux City, Iowa. We lease the Sioux City facility pursuant to a sub-lease that expires on February 1, 2020, but which provides us with an option to reduce the term of the lease to a ten-year period. We lease 44,300 square feet of space for our manufacturing facility located in Dublin, California. Our lease for the manufacturing space is on a monthly basis with an option to extend the lease term to five years. We lease approximately 31,200 square feet of space for our service center in Los Angeles, California. Our lease for this company-owned service center expires on January 1, 2014, with an option to extend the lease for an additional eight years. We lease this facility from a customer, which has agreed, to use the facility at a discounted rate, to irradiate its food products that have been tested by us and approved for irradiation by the FDA. In connection with the lease, this customer will receive a portion of the processing revenue generated at this facility. We lease approximately 56,000 square feet to operate our company-owned service center in Chicago, Illinois. Our lease for this processing facility expires on January 31, 2023, with an option to terminate the lease after 12 years. We lease additional space for sales offices in Omaha, Nebraska.

It is our policy to maintain our properties and equipment in good condition. Existing facilities are considered to be generally suitable and adequate for our present needs.

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Item 3. ***Legal Proceedings***

We are involved in legal actions in the normal course of our business. Our subsidiaries and we may be named as defendants in legal proceedings from time to time and our subsidiaries or we may assert claims from time to time. Based upon current information and review, we believe the ultimate liability or recovery with respect to pending actions would not materially affect our consolidated financial position or our results of operations. However, our evaluation of the likely impact of these actions could change in the future and an unfavorable outcome, depending upon the amount and timing, could have a material adverse effect on our results of operations or our cash flows in a future period.

Item 4. ***Submission of Matters to a Vote of Security Holders***

No matters were submitted to a vote of our stockholders during the fourth quarter of the year ended December 31, 2002.

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PART II

Item 5. ***Market for Registrant s Common Equity and Related Stockholder Matters***

Our common stock has traded on The NASDAQ National Market under the symbol SURE since our initial public offering on March 16, 2001. As of March 4, 2003, there were approximately 56,800 holders of record of our common stock, excluding beneficial owners of shares held in the names of brokers or other nominees.

The following table sets forth for the period indicated the high and low closing prices for our common stock as reported by The NASDAQ National Market:

	Fiscal 2002		Fiscal 2001	
	High	Low	High	Low
First Quarter	$10.55	$5.45	$10.19	$7.81
Second Quarter	6.82	4.80	19.45	6.92
Third Quarter	5.70	1.49	17.19	5.45
Fourth Quarter	5.99	1.48	16.75	4.69

No cash dividends were declared or paid in fiscal 2002. We anticipate that in the foreseeable future we will not pay dividends, but instead retain all available funds to finance internal growth and product development.

Issuance of Securities

On December 2, 2002, we entered into agreements with investors to sell an aggregate of 5,276,314 shares of our common stock for $4.75 per share, or an aggregate purchase price of approximately $25.1 million. In addition, we issued warrants to purchase 1,319,075 shares of our common stock at an exercise price of $6.00 per share. We issued these shares and warrants to the investors on December 3, 2002. The warrants are exercisable from the date of issuance until December 2, 2007. The shares issued under the agreements were offered through a placement agent, for which services we paid to the placement agent a fee of approximately $1.8 million. After the placement agent fee and before deducting related legal and accounting expenses, we realized net proceeds of approximately $23.3 million. We intend to use the proceeds for working capital needs and general corporate purposes. We issued all of the securities under an exemption from the registration requirements of the Securities Act of 1933, as amended (the Securities Act) pursuant to Section 4(2) of the Securities Act and/or Rule 506 of Regulation D under the Securities Act. All of the shares of common stock issued to the investors or to be issued upon exercise of the warrants issued to the investors were registered for resale on a registration statement on Form S-3, Registration No. 333-101971, which was declared effective on February 12, 2003. Our agreement with the investors requires us to cause the S-3 registration statement to remain effective until the earlier of (a) two years after it is declared effective by the SEC, (b) the date on which each selling stockholder s shares could be sold in a single three-month period under Rule 144 of the Securities Act, or (c) such time as all the common stock offered by the S-3 registration statement have been sold. We also agreed to indemnify each selling stockholder for claims made against them arising out of, among other things, statements made in the registration statement.

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Item 6. ***Selected Consolidated Financial Data (in thousands, except for per share data)***

The following data summarizes certain financial data for each of the prior five years ended December 31. The information presented should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this report.

	Year Ended December 31,				
	2002	2001	2000	1999	1998
Revenues:					
Non-affiliated parties	$ 8,147	$ 10,849	$ 29,448	$ 14,339	$ 11,184
Investee	9,161	12,151			
The Titan Corporation	19,568	18,267			
Total revenues	36,876	41,267	29,448	14,339	11,184
Cost of revenues:					
Non-affiliated parties	12,390	8,725	19,602	8,576	8,909
Investee	6,753	6,263			
The Titan Corporation	11,996	12,115			
Total cost of revenues	31,139	27,103	19,602	8,576	8,909
Gross profit	5,737	14,164	9,846	5,763	2,275
Selling, general and administrative expense	26,306	29,554	7,992	4,138	2,067
Stock-based compensation	16,568	54,270	648		
Research and development	817	2,153	524		
Income (loss) from operations	(37,954)	(71,813)	682	1,625	208
Interest income	209	1,267	230		
Interest expense	(1,282)	(7,022)	(3,841)	(1,299)	(1,154)
Other income, net	3,939	874			
Income (loss) before income tax provision (benefit)	(35,088)	(76,694)	(2,929)	326	(946)
Income tax provision (benefit)		(2,319)	(1,130)	121	(284)
Net income (loss)	$ (35,088)	$ (74,375)	$ (1,799)	$ 205	$ (662)
Basic earnings (loss) per common share:					
Net income (loss)	$ (0.53)	$ (1.36)	$ (0.04)	$ 0.00	$ (0.01)
Weighted average shares basic	66,741	54,534	46,817	46,630	46,584
Diluted earnings (loss) per common share:					
Net income (loss)	$ (0.53)	$ (1.36)	$ (0.04)	$ 0.00	$ (0.01)
Weighted average shares diluted	66,741	54,534	46,817	53,082	46,584
Financial Position					
Cash and cash equivalents	$ 27,336	$ 4,131	$	$	$
Total assets	151,997	117,784	53,181	23,924	14,192

Subordinated promissory note with The Titan Corporation		72,208	58,072		
Senior credit facility with The Titan Corporation	25,000				
Total stockholders equity (deficit)	106,633	28,352	(14,875)	18,287	11,792

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Item 7. ***Management s Discussion and Analysis of Financial Condition and Results of Operations***

The following discussion of the financial condition and results of operations of SureBeam Corporation should be read in conjunction with the audited consolidated financial statements and the related notes thereto included elsewhere in this Form 10-K. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including but not limited to, those discussed in the Factors Which May Affect Future Performance section of Item 1 of this Form 10-K. Our actual results may differ materially from those contained in any forward-looking statements.

When you read this section of this Form 10-K, it is important that you also read the consolidated financial statements and related notes included elsewhere in this Form 10-K. This section of this Form 10-K contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. We use words such as may, will, should, expect, plan, intend, an believe, estimate, predict, potential, or continue, the negative of such terms or other terminology to identify forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons. These forward-looking statements involve risks and uncertainties including, but not limited to, those referred to in this report as well as in the Company s public filings with the SEC, regarding the risk of gaining consumer acceptance, risks relating to the Company s history of losses and liquidity and risks of international operations.

Introduction

SureBeam Corporation was formed in August 2000, in connection with the contribution by The Titan Corporation, or Titan, of the assets, liabilities and operations related to its electronic food irradiation business. Titan s electronic food irradiation business had previously been operated as part of a division of Titan, together with Titan s medical equipment sterilization business and its linear electron beam accelerator business. The historical financial information included in this 10-K for 2000 relates to the three businesses of Titan that comprised this division and not just the electronic food irradiation business. References to SureBeam, the Company or us in this discussion and analysis section and in the historical financial statements refer to this division of Titan prior to the date of the contribution of the electronic food irradiation business to us by Titan.

Titan developed its electron beam process from technology developed under contracts with the federal government related to strategic defense initiatives during the 1980 s. Titan accounted for its electron beam technology business as a separate business segment since 1993. Prior to 1999, substantially all of the revenues of this segment were derived from selling medical equipment sterilization systems and from providing medical equipment sterilization services and, to a lesser extent, from selling linear electron beam accelerator systems for use by the federal government.

The historical financial information contained herein, except for the historical results as of and for the year ended December 31, 2000, reflects the results of operations and financial condition of the electronic food irradiation business on a stand-alone basis. This discussion and analysis section for the year ended December 31, 2000 is based upon the historical results of operations of Titan s entire linear electron beam accelerator business, including the medical equipment sterilization business and the linear electron beam accelerator business for government use. The historical results of operations and financial condition of SureBeam are presented as a combination of entities under common control on a historical cost basis in a manner similar to a pooling of interests for all periods presented.

Prior to August 4, 2000, we derived our revenues from the manufacturing of medical equipment sterilization and electronic food irradiation systems, providing medical equipment sterilization services and the manufacturing of linear electron beam accelerators for use by government agencies. After August 4, 2000 our revenues consist of electronic food irradiation system sales, food processing revenue and revenues to Titan. We have three classifications of revenues on our consolidated statements of operations: revenues from non-affiliated parties, revenues from investee and revenues from Titan. Revenues from non-affiliated parties represent all revenue generated from food processing and all electronic food irradiation system sales not associated with RESAL or Titan. All of the revenues from investee relate to our $53.0 million purchase order contract with RESAL. Revenues from Titan represents sales of our electronic irradiation systems and services

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related to Titan Scan Technologies medical sterilization business, Titan s government linear accelerator business and revenues in support of Titan s United States Postal Service contracts. Although Titan has not been an affiliate of SureBeam since August 5, 2002, we classify revenues from Titan separately to provide comparability for earlier periods and to reflect their significant influence over us resulting from our $50.0 million credit facility with them.

To date, our agreements with the third parties to our strategic relationships represent substantially all of our sales of SureBeam systems for food irradiation. Food processing service revenue was primarily derived in connection with our customer production runs as well as test marketing programs. We expect to derive increased revenues from providing food-processing services in future periods as the use of our systems for commercial processing grows. However, we cannot predict the rate at which market adoption of irradiation will occur and processing volumes increase. We also expect to derive income from food irradiation services through our equity ownership interests in the companies that operate the service centers.

Revenues derived from electronic food irradiation services are recorded at the time services are performed. Revenues derived from sales of electronic food irradiation systems under fixed-price contracts are accounted for using the percentage-of-completion method of accounting. Revenues from Titan are derived from fixed price contracts, using the percentage-of-completion method of accounting, or cost-plus contracts. These electronic food irradiation systems currently take a total of approximately 12 to 18 months to design, construct, install, integrate and deliver. These systems are highly customized to meet a customer s strict specifications and require us to construct new facilities or effect significant modifications to existing facilities to ensure efficient operation as they are integrated into the customer s facilities. We plan to make advances in the technology so that we may deliver complete systems in a shorter time period. If a customer defaults on its payment obligations under a contract accounted for on the percentage-of-completion method of accounting, or the contract is otherwise considered to be impaired, an impairment charge to earnings for the receivable arising from previously recorded revenues in respect of such contract would be taken at that time.

Strategic Alliance

In June 2001, we received a purchase order contract in the aggregate amount of $50.0 million from RESAL for ten electronic food irradiation systems for the operation of multiple service centers in the Saudi Arabia region for irradiating poultry and disinfesting dates. In May 2002, the purchase order contract for these systems was modified to $53.0 million to construct systems for three large service centers with a combination of high power x-ray and electron beam technology. We commenced the construction of these systems for RESAL and recognized and recorded, under the percentage-of-completion method of accounting, $21.3 million in revenue on this contract through December 31, 2002, of which $12.1 million and $9.2 million was recognized during the years ended December 31, 2001 and 2002, respectively. Revenues derived from this purchase order contract are classified as revenues from investee in the accompanying consolidated statements of operations. Certain shipments of equipment to Saudi Arabia that were scheduled to take place in March 2003 have been delayed due to the war in Iraq and we anticipate that our other scheduled shipments to Saudi Arabia will be similarly delayed, pending resolution of the war. We had anticipated milestone payments during 2003 of $24.9 million. We anticipate shipping upon resolution of the war in the Middle East. The remaining systems are scheduled to be shipped within the next 15 to 18 months thereafter. We received payments aggregating $5.3 million through March 25, 2003 based on milestone payments and expect to continue to receive additional milestone payments as they become due and payable until the contract is complete.

In April 2002, we formed a joint venture under the name SureBeam Middle East, LLC. with RESAL. SureBeam Middle East, LLC. will provide, among other things, food irradiation services through the three planned service centers in the Saudi Arabia region. As of December 31 2002, we owned a 19.9% interest in SureBeam Middle East, LLC. and RESAL and other Saudi nationals own the remaining 80.1%. We account for our ownership interest in SureBeam Middle East, LLC. using the equity method of accounting under APB Opinion No. 18 The Equity Method of Accounting for Investments in Common Stock. In accordance with the joint venture agreement, RESAL s amended purchase order contract may be assigned to SureBeam Middle East, LLC. at such time as the joint venture receives sufficient funds from the third party investors. As

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of December 31, 2002, a portion of the purchase order contract has been assigned to SureBeam Middle East, LLC. As a result, revenue recognized under the contract is presented in the consolidated statements of operations as revenue from investee and we have eliminated our 19.9% interest in the gross profit recognized under the percentage-of-completion method of accounting in connection with the current purchase order. We estimate that the total profit under the current purchase order contract that will be eliminated as a result of our equity interest in SureBeam Middle East, LLC. will be approximately $4.5 million to $5.5 million. Pursuant to the joint venture agreement, for five years following the date of SureBeam Middle East, LLC. s commercial registration, SureBeam Middle East, LLC. has an exclusive right of first negotiation to negotiate and enter into agreements to provide irradiation services for the treatment of food products (excluding water), animal hides and flowers in Saudi Arabia, Egypt, Lebanon, Syria, Iraq, Iran, Libya, Tunisia and Algeria. The joint venture will govern our strategic relationship with the operator of these systems, including royalty and management fees and a minority equity ownership of the operator that will operate the service centers.

Acquisition

In May 2000, Tech Ion Industrial Brasil S.A., or Tech Ion, placed purchase orders with us for eleven electronic food irradiation systems, which we expected to result in approximately $55.0 million in revenue over the next three years, including $22.4 million that was recognized through September 30, 2001. SureBeam Brasil Ltda., or SureBeam Brasil, which was jointly established by Tech Ion, and Titan SureBeam Brazil Inc., our wholly owned subsidiary, was to provide, among other things, food irradiation services through four planned service centers. In October 2001, in order to ensure the completion of the project with Tech Ion to build service centers in Brazil that were under construction, we entered into a stock purchase agreement with Tech Ion to purchase an additional 60.1% of SureBeam Brasil, bringing our total equity ownership in SureBeam Brasil to 80.1%. In connection with the additional equity interest, we paid Tech Ion $750,000 upon the execution of the agreement and will pay an additional $250,000 upon the nationalization of the linear accelerators and material handling systems for the Rio de Janeiro service center from Tech Ion to SureBeam Brasil. We also exchanged our trade receivables of $22.4 million due from Tech Ion and forgave $3.5 million of a loan we had previously made to Tech Ion for building improvements and equipment. We have recorded an intangible asset of $2.5 million that represents the total consideration amount of the agreement that exceeds the fair value of the assets purchased. The intangible asset represents a favorable land lease and location next to the Rio de Janeiro CEASA, the depot for fresh food distribution in Rio de Janeiro, and the license granted by CNEN, Brazil s Nuclear Regulatory Commission, for the use of our technology in Brazil, the only electronic food irradiation license granted to date by CNEN. Tech Ion obtained these items for SureBeam Brasil and they are being amortized on a straight-line basis over five years, the free rent period of the ten-year lease. On April 1, 2002, the remaining $1.5 million owed us by Tech Ion was exchanged for its remaining 20.0% interest in SureBeam Brasil. The $1.5 million was included in prepaid expense and other current assets in the accompanying balance sheet at December 31, 2001. Due to the exchange we recorded an additional $700,000 as an intangible asset that will be amortized over the remaining 54-month life of the existing intangible asset. The remaining $800,000 was recorded as part of the service center building cost. We estimate that the first service center in Brazil will become operational in the second quarter of 2003 and we will be obligated to provide additional working capital to fund its operations through its startup phase and until it can generate its own cash needs.

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Results of Operations (in thousands)

	Year Ended December 31,		
	2002	2001	2000
Total revenues	$ 36,876	$ 41,267	$29,448
Total cost of revenues	31,139	27,103	19,602
Gross profit	5,737	14,164	9,846
Selling, general and administrative expense	26,306	29,554	7,992
Stock-based compensation	16,568	54,270	648
Research and development	817	2,153	524
Income (loss) from operations	(37,954)	(71,813)	682
Interest expense, net	(1,073)	(5,755)	(3,611)
Other income, net	3,939	874	
Income tax benefit		(2,319)	(1,130)
Net loss	$(35,088)	$(74,375)	$ (1,799)

As a Percentage of Revenues

	Year Ended December 31,		
	2002	2001	2000
Total revenues	100.0%	100.0%	100.0%
Total cost of revenues	84.5	65.7	66.6
Gross profit	15.5	34.3	33.4
Selling, general and administrative expense	71.3	71.6	27.1
Stock-based compensation	44.9	131.5	2.2
Research and development	2.2	5.2	1.8
Income (loss) from operations	(102.9)	(174.0)	2.3
Interest expense, net	(2.9)	(13.9)	(12.3)
Other income, net	10.7	2.1	
Income tax benefit		(5.6)	(3.8)
Net loss	(95.2)%	(180.2)%	(6.1)%

Revenue Classifications

	Year Ended December 31,		
	2002	2001	2000

Non-affiliated parties	$ 8,147	$10,849	$29,448
Investee	9,161	12,151	
The Titan Corporation	19,568	18,267	
Total	$36,876	$41,267	$29,448

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Revenue Classifications as a Percentage of Total Revenues

	Year Ended December 31,		
	2002	2001	2000
Non-affiliated parties	22.1%	26.3%	100.0%
Investee	24.8	29.4	
The Titan Corporation	53.1	44.3	
Total	100.0%	100.0%	100.0%

Revenues

We have three classifications of revenues on the face of our consolidated statements of operations: revenues from non-affiliated parties, revenues from investee and revenues from Titan. Revenues from non-affiliated parties represent all revenue generated from food processing and all electronic food irradiation system sales not associated with RESAL or Titan. Revenues from investee represent electronic food irradiation system sales generated from RESAL. To date, all of the revenues from investee relate to our $53.0 million RESAL purchase order contract. Revenues from Titan represents sales of our electronic irradiation systems and services related to Titan Scan Technologies medical sterilization business, Titan s government linear accelerator business and revenues in support of Titan s United States Postal Service contracts. Although Titan has not been an affiliate of SureBeam since August 5, 2002, we classify revenues from Titan separately to provide comparability for earlier periods.

Prior to August 4, 2000, we derived our revenues from the manufacturing of medical equipment sterilization and electronic food irradiation systems, providing medical equipment sterilization services and the manufacturing of linear electron beam accelerators for use by government agencies. Our total revenues increased from $29.4 million in 2000 to $41.3 million in 2001 and decreased from $41.3 million to $36.9 million in 2002. Excluding the effects of revenues derived from the government linear accelerator business and medical equipment sterilization, which are no longer part of our business, our revenues increased from $25.2 million in 2000 to $41.3 million in 2001 and decreased from $41.3 million in 2001 to $36.9 million.

Revenues from non-affiliated parties. Revenues from non-affiliated parties decreased from $29.4 million in 2000 to $10.8 million in 2001 and from $10.8 million in 2001 to $8.1 million in 2002. Prior to August 4, 2000, we derived our revenues from the manufacturing of medical equipment sterilization and electronic food irradiation systems, providing medical equipment sterilization services and the manufacturing of linear electron beam accelerators for use by government agencies. Subsequent to August 4, 2000, revenues from non-affiliated parties represents electronic food irradiation system sales and food processing revenues. Excluding the effects of revenues derived from the government linear accelerator business and medical equipment sterilization, which are no longer part of our business, our revenues decreased from $25.2 million in 2000 to $10.8 million in 2001 and from $10.8 million in 2001 to $8.1 million in 2002.

For the year ended December 31, 2000, we had electronic food irradiation system sales and food processing revenues of $25.2 million or 86% of total revenues. Of this $25.2 million, 97%, or $24.5 million, was derived from sales of electronic food irradiation systems primarily from three customers and 3%, or $700,000, was derived from food processing services. Revenues derived from medical sterilization systems sales were $449,000 or 1% of total revenues. Revenues derived from medical equipment sterilization services were $2.8 million or 10% of total revenues and revenues derived from the sale of linear electron beam accelerators sold to the federal government were $941,000 or 3% of total revenues. The sales of electronic food irradiation systems for 2000 were recorded in connection with our contracts with Hawaii Pride LLC, or Hawaii Pride, Tech Ion and Texas A&M University.

For the year ended December 31, 2001, we had electronic food irradiation system sales and food processing revenues of $10.8 million or 26% of total revenues. Of this $10.8 million, 91%, or $9.8 million, was derived from sales of electronic food irradiation systems primarily from two customers and 9%, or $1.0 million, was derived from food processing services. The 2001 sales of electronic food irradiation systems decreased due

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to the completion of our Hawaii Pride contract during 2000, reduced revenue on our Texas A&M University contract as well reduced revenue from our contract with Tech Ion prior to the execution of the stock purchase agreement with Tech Ion.

For the year ended December 31, 2002, we had electronic food irradiation system sales and food processing revenues of $8.1 million or 22% of total revenues. Of this $8.1 million, 87%, or $7.0 million, was derived from sales of electronic food irradiation systems primarily from three customers and 13%, or $1.1 million, was derived from food processing services. The reduced sales of electronic food irradiation systems was related to lower revenue from our contract with Texas A&M University that was completed in the third quarter of 2002, plus lower revenue from the two new contracts, Vietnam and Salubris, versus revenue recorded on Tech Ion in 2001. In the future we expect to sign additional electronic food irradiation systems sales contracts and process additional pounds in our service centers, which we expect will increase revenues from non-affiliated parties.

Revenue from food irradiation system sales have declined in each of the last two years. This reduction is the result of the completion of the Hawaii Pride and Texas A&M University contracts and the acquisition of the Tech Ion contract while new contracts have not generated the same level of revenue.

During 2002 we made significant advances in implementing our strategy. The volume of food products processed at our service centers in 2002 increased by 33% from 2001 increasing from 11.1 million pounds to 14.8 million pounds. In addition, we have experienced a significant increase in the number of customers testing products at our Sioux City, Chicago, and Los Angeles service centers and in the number of potential customers, which are currently in discussions with us regarding the use of our electronic food irradiation technology. Many of these discussions are preliminary and no assurance can be made that we will enter into agreements with these potential customers, or that any agreements we enter into with these customers will prove to be profitable to us. We have expanded the types of packaging configurations that we can process using our patented technology and our customers have increased the kinds of products we are processing for them. We believe the increased level of processing by our customers and the agreement to construct and install in-line systems indicate an increasing level of consumer acceptance of electronically irradiated food products. This acceptance is further evidenced by the recent introduction of electronically irradiated food products by several restaurants, as well as major retail grocery stores, in the United States. For 2002, food processing services represented a small portion, or 3%, of our total revenues versus system sales.

Revenues from Investee. Revenues from investee represent electronic food irradiation system sales generated from RESAL. To date, all of the revenues from investee relate to our $53.0 million RESAL purchase order contract. Revenues from investee decreased from $12.1 million in 2001 to $9.2 million in 2002. In the fourth quarter 2001 and the first quarter of 2002, we reduced our activities on this contract to focus our efforts on the United States Postal Service contract in which we were the prime sub-contractor for Titan. We expect the revenues from investee to increase over the next year as we continue to progress on this purchase order contract.

Revenues from The Titan Corporation. Revenues from Titan represents sales of our electronic irradiation systems and services related to Titan Scan Technologies medical sterilization business, Titan s government linear accelerator business and revenues in support of Titan s United States Postal Service contracts. Although Titan has not been an affiliate of SureBeam since August 5, 2002, we classify revenues from Titan separately to provide easier comparability to earlier periods and reflect their significant influence which results from our $50.0 million credit facility from them. Revenues for Titan increased from $18.3 million in 2001 to $19.6 million in 2002. Included in the revenues from Titan for the years ended December 31, 2001 and 2002, is $12.5 million and $8.1 million, respectively, of revenue recognized in support of Titan s United States Postal Service contract for which we are the main sub-contractor. The remaining revenues were primarily related to revenues recognized from the sale of medical equipment sterilization systems using the percentage-of-completion method of accounting. We entered into an exclusive contract for the sale of systems and integration services to Titan and its affiliates. Titan will be obligated to purchase its requirements for linear accelerators and systems from us through December 31, 2003 and was required to purchase integration services through December 31, 2002, subject to some limited exceptions. Equipment and

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services will be provided at our cost-plus a 20% mark-up unless both parties agree to other terms with respect to any purchase order. Titan has no guaranteed purchases under this agreement and we cannot predict the number of systems or amount of services that will be purchased; however, we expect revenue from Titan to decrease from 2001 and 2002 levels.

Gross Profit

Our cost of revenues consists primarily of the components and materials associated with the linear accelerator, material handling system and controls and direct labor to assemble, install and integrate the medical equipment sterilization and electronic food irradiation systems, as well as overhead such as travel, indirect labor and fringe benefits related to the production of the systems and the manufacturing of linear electron beam accelerators. Also included in cost of revenues are all direct and indirect costs associated with providing medical equipment sterilization and electronic food irradiation services. These costs are comprised of direct and indirect labor, depreciation, rent, dosimetry supplies, maintenance and utilities as well as other related costs to operate a service center. Dosimetry supplies are consumables used during facility operations to monitor performance and to ensure the integrity of the dose of the irradiation delivered to the product for quality assurance purposes and to satisfy federal requirements.

Our gross profit margin was flat from 2000 to 2001 and decreased from 34% in 2001 to 16% in 2002. The decrease is due to a negative gross profit on food processing, underutilization of the service centers, opening of new facilities during late 2001 and 2002 and higher percentage of revenues from Titan, which have a lower gross profit than systems sales from non-affiliated parties and systems sales to the investee. We are projecting that our gross profit will improve and eventually increase significantly as the service centers become fully utilized. Our pounds processed increased by 71% from 2000 to 2001, increasing from 5.9 million pounds to 11.1 million pounds. Our pounds processed increased 33% from 2001 to 2002, increasing from 11.1 million pounds to 14.8 million pounds. The service centers are highly capital intensive and increased volumes are the key to our profitability. If significant increased in volumes are not realized, our gross profit will continue to suffer.

Segment Financial Data

We report our business segment information in accordance with Statement of Financial Accounting Standards No. 131, Disclosures About Segments of an Enterprise and Related Information (SFAS 131). We have established three operating and reportable segments: food processing services, system sales and support and medical sterilization services.

Management evaluates the performance of its operating segments separately to individually monitor the different factors affecting financial performance. Segment gross profit or loss includes substantially all of the segment s direct costs of operations. Costs for accounting, sales and marketing, administrative and legal activities, as well as gains and losses, interest income and expense and income taxes are managed at the corporate segment. We evaluate segment performance based on gross profit or loss. Consequently, the results of operations of the segments may not be indicative of the actual results that would be shown in the financial statements of these segments if prepared on a stand-alone basis.

Prior to August 4, 2000, all of our revenues were derived from the manufacturing of medical equipment sterilization and electronic food irradiation systems, providing medical equipment sterilization services and the manufacturing of linear electron beam accelerators for use by government agencies. After August 4, 2000 our revenues consist of electronic irradiation system sales and food processing revenue.

The food processing services segment which was established in August 2000, represents all irradiation services from the company owned service centers for all food (excluding water), flowers and animal hides. The processing services apply a specific dose of irradiation to the product as it passes through our system. Revenues are recognized at the time the processing is completed. The costs associated with this segment represent the operating costs of the service center, which include labor, utilities, depreciation and supplies.

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The system sales and support segment represents revenues derived from sales of electronic irradiation systems and support for food services, medical sterilization services and mail sanitation services. Also included are revenues related to selling linear electron beam accelerator systems for use by the federal government. System sale revenues for this segment are recognized using the percentage-of-completion method of accounting for fixed price contracts and time and materials plus a fee for cost-plus contracts, which are recognized at the time services are performed. The costs associated with this segment represent the labor, material and overhead allocated to the specific contracts.

The medical sterilization services segment represents all irradiation services performed at Titan owned service centers for medical sterilization. This segment terminated on August 4, 2000.

The following tables summarize segment data for 2002, 2001 and 2000 (in thousands):

	2002	2001	2000
Revenues:			
Food processing services	$ 1,079	$ 1,014	$ 700
System sales and support	35,797	40,253	25,921
Medical sterilization services			2,827
	$36,876	$41,267	$29,448

	2002	2001	2000
Gross profit (loss):			
Food processing services	$ (6,000)	$ (1,729)	$ (1,373)
System sales and support	11,737	15,893	11,372
Medical sterilization services			(153)
	$ 5,737	$14,164	$ 9,846

Revenues

Food processing services. Revenues food processing services increased from $700,000 in 2000 to $1.0 million in 2001 and from $1.0 million in 2001 to $1.1 million in 2002. The increase was due to the increased number of pounds being processed at our service centers. We began processing food at our Sioux City, Iowa service center in April 2000. Food processing services performed at our Sioux City service center accounted for all of our food processing services revenue for 2000 and 2001. We began processing in our Chicago, Illinois service center in the first quarter of 2002 while we began processing in our Los Angeles, California service center in the first quarter 2003. We expect to begin processing in our Rio de Janeiro, Brazil service center in the second quarter of 2003.

The volume of food products processed at our service centers in 2001 increased by 88% from 2000 increasing from 5.9 million pounds to 11.1 million pounds. During 2002, we made significant advances in implementing our strategy as electronically irradiated fresh ground beef was introduced into the marketplace. The volume of food products processed at our service centers in 2002 increased by 33% from 2001 increasing from 11.1 million pounds to 14.8 million pounds. Revenues from food products processed increased 6% or 27 percentage points less than the increase in pounds due to a lower average per pound processing fee as a result of an increase in commercial processing versus product testing which is at a higher fee. In addition, we have experienced a significant increase in the number of customers testing products at our Sioux City, Chicago, and Los Angeles service centers and in the number of potential customers, which are currently in discussions with us regarding the use of our electronic food irradiation technology. Many of these discussions are preliminary and no assurance can be made that we will enter into agreements with these potential customers, or that any agreements we enter into with these customers will prove to be profitable to us. We have expanded the types of packaging configurations that we can process using our patented technology and our customers have increased the kinds of products we are processing for them. We believe the increased level of processing by our customers indicate an increasing level of consumer acceptance of electronically irradiated food products. This

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acceptance is further evidenced by the recent introduction of electronically irradiated food products by several restaurants, as well as major retail grocery stores, in the United States. Electronically irradiated fresh ground beef was first introduced into a test market of 13 grocery stores in January 2002. As of December 31, 2002, this irradiated fresh ground beef was in approximately 1,500 grocery stores and sales were approximately 45 pounds per store per week. As of March 24, 2003 SureBeam processed fresh ground beef is sold in approximately 4,600 stores. For 2002, 2001 and 2000, food-processing services represented a small portion, or 3%, 2%, and 2%, respectively, of our total revenues.

System sales and support. Systems sales and support revenues increased from $25.9 in 2000 to $40.3 million in 2001 and decreased from $40.3 million in 2001 to $35.8 million in 2002. The system sales and support segment consists of sales of electronic irradiation systems for food services, medical sterilization services, mail sanitation services and sales to the federal government. For the year ended December 31, 2000, we had electronic food irradiation system sales of $24.5 million primarily to three customers. Revenues derived from medical sterilization systems sales were $449,000 and revenues derived from the sale of linear electron beam accelerators sold to the federal government were $941,000 for the year ended December 31, 2000. The sales of electronic food irradiation systems for 2000 were recorded in connection with our contracts with Hawaii Pride LLC, or Hawaii Pride, Tech Ion and Texas A&M University.

For the year ended December 31, 2001, we had electronic food irradiation system sales of $22.0 million primarily from three customers. Revenues derived from medical sterilization systems sales were $5.8 million and revenues derived from mail sanitation systems sales were $12.5 million. The 2001 sales of electronic food irradiation systems decreased due to the completion of our Hawaii Pride contract during 2000, reduced revenue on our Texas A&M University contract and reduced revenue from our contract with Tech Ion prior to the execution of the stock purchase agreement with Tech Ion which was offset by the new RESAL purchase order contract.

For the year ended December 31, 2002, we had electronic food irradiation system sales of $16.2 million primarily from four customers. Revenues derived from medical sterilization systems sales were $11.5 million and revenues derived from mail sanitation systems sales were $8.1 million. The reduced sales of electronic food irradiation systems was related to lower revenue from our contract with Texas A&M University that was completed in the third quarter of 2002, plus lower revenue from the two new contracts, Vietnam and Salubris, when compared to revenue recorded on Tech Ion and RESAL in 2001. The mail sanitation revenue was down due to the closeout of the initial United States Postal Service contract. In the future we expect to sign additional electronic food irradiation systems sales contracts and we believe that we will experience a decrease in the revenues from medical sterilization system sales and mail sanitation system sales.

Medical sterilization service. Medical sterilization service revenue decreased from $2.8 million in 2000 to zero in the future years. In 2000, the medical sterilization business was incorporated in our revenues through August. SureBeam Corporation was formed in August 2000, in connection with the contribution by Titan, of the assets, liabilities and operations related to its electronic food irradiation business. Titan s electronic food irradiation business had previously been operated as part of a division of Titan, together with Titan s medical equipment sterilization business and its linear electron beam accelerator business. The medical sterilization services segment became part of Titan as of August 2000.

Gross Profit or Loss

Food processing services. The gross loss on the food processing services segment increased from $1.4 in 2000 to $1.7 million in 2001 and from $1.7 million in 2001 to $6.0 million in 2002. Our service centers are very capital intensive and have high fixed costs associated with their operations and this along with their underutilization results in losses. We began operations in our Sioux City service center in April 2000. The increased gross loss from 2000 to 2001 was a result of an entire year of costs for our Sioux City service center for 2001 as compared to nine months in 2000. The increased gross loss from 2001 to 2002 was a direct result of our Chicago service center becoming operational in the first quarter of 2002 and our Los Angeles service center becoming operational in the fourth quarter of 2002 which added costs but minimal revenue. We expect

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the utilization in our service centers to increase in the future enabling us to cover both our fixed and variable costs of operating the service centers.

System sales and support. Gross profit on the system sales and support segment increased from $11.4 in 2000 to $15.9 million in 2001 and decreased from $15.9 million in 2001 to $11.7 million in 2002. As a percentage of systems sales and support revenue the gross margin decreased from 44% in 2000 to 39% in 2001 and from 39% in 2001 to 33% in 2002. The reduction is due primarily to the increased percentage of medical sterilization systems sales, which have a lower gross margin than our food irradiation system sales and our mail sanitation system sales. Our medical sterilization system sales are with Titan which historically been priced as cost-plus 20% fixed fee contracts. We believe that as our food irradiation system sales become a greater percentage of our revenue our gross margins will increase.

Medical sterilization service. The gross margin on the medical sterilization service segment was low due to the underutilization of the existing service centers.

Selling, General and Administrative

Our selling, general and administrative expenses consist primarily of personnel costs, occupancy costs, staff recruiting costs, travel expenses, depreciation expense, selling expenses, marketing and promotional costs and amortization of intangible assets. Administrative expenses also include an expense allocation from Titan through August 4, 2002, the date of our spin off from Titan, for its performance on our behalf of routine corporate services, including insurance, employee benefits, payroll, tax services and management information systems and support.

Our selling, general and administrative expense increased from $8.0 million in 2000 to $29.6 million in 2001 and decreased from $29.6 million in 2001 to $26.3 million in 2002. As a percentage of total revenues, selling, general and administrative expenses increased from 27% in 2000 to 72% in 2001 and decreased from 72% in 2001 to 71% in 2002. The increase in 2001 was a result of increased sales and marketing expenses of $7.2 million related to brand awareness campaigns and advertising, increased legal expense of $3.0 million related to patent litigation, increased bonus expense of $2.5 million, increased impairment charge of $1.4 million related to the Hawaii Pride receivable and other increased expenses, such as personnel cost and added travel, to build our current infrastructure. The decrease of $3.2 million from 2001 to 2002 resulted from decreased legal fees of $1.7 million resulting from the settlement of the patent infringement case, decreased bonus expense of $1.6 million, decreased amortization of $2.7 million related to the intangible asset that was fully amortized in the first quarter of 2002, which was offset by a $3.0 million increase in impairment charges related to the Hawaii Pride receivable. Sales and marketing as well as personnel costs remained relatively flat over 2001 to 2002. We expect the selling, general and administrative expenses to increase in total but reduce as a percentage of revenue in the future, as we continue to increase sales and marketing expenses as we expand our processing and brand awareness and continue build our infrastructure based on our expected growth.

Stock-Based Compensation

Our stock-based compensation increased from $648,000 in 2000 to $54.3 million in 2001 and decreased from $54.3 million in 2001 to $16.6 million in 2002. During 2000, we granted options under the 2000 Stock Option and Incentive Plan and recorded deferred stock-based compensation of $3.2 million for which the fair market value on the date of grant exceeded the exercise price. We recognized stock-based compensation on these options of $648,000, $808,000 and $808,000 for the years ended December 31, 2000, 2001 and 2002, respectively. Unamortized deferred stock-based compensation for these options at December 31, 2002 was $967,000. During 2001, in connection with the completion of our initial public offering, stock options granted under the Nonstatutory Stock Option Plan were converted from variable plan options to fixed plan options. Accordingly, deferred stock-based compensation of $78.6 million was recorded, representing the extent to which the $10.00 per share offering price exceeded the exercise price of the options. Additionally, since substantial portions of these options were vested at the time of completion of the public offering, stock-based compensation of approximately $38.7 million was immediately expensed at that time. The remaining deferred stock-based compensation balance related to these options will be recognized as compensation expense over

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the remaining four-year vesting period of these options. There was no stock-based compensation for these options during 2000 and we recorded a total of $53.5 million and $15.8 million of stock-based compensation related to these options during 2001 and 2002, respectively. In conjunction with the completion of our spin-off from Titan on August 5, 2002, all options held by Titan employees and directors under this plan became fully vested, which resulted in increased amortization of the deferred stock-based compensation charges for this plan for the three months ended September 30, 2002 by $2.9 million. Unamortized deferred stock-based compensation for these options at December 31, 2002 was $9.4 million. We expect the stock-based compensation to decrease over the next two years due to options becoming fully vested and the Titan employees and directors accelerated vesting in 2002 related to our spin-off.

Research and Development

Our research and development expenses increased from $524,000 in 2000 to $2.2 million in 2001 and decreased from $2.2 million in 2001 to $817,000 in 2002. Research and development expenses, as a percentage of total revenues increased from 2% in 2000 to 5% in 2001 and decreased from 5% in 2001 to 2% in 2002. Excluding the impact from the medical equipment sterilization business and the government linear accelerator business, research and development expenses increased from $499,000 in 2000 to $2.2 million in 2001 and decreased from $2.2 million in 2001 to $817,000 in 2002. The increased research and development expense in 2001 related to the development of our high power x-ray linear accelerator and our split-beam linear accelerator. Extensive work was performed on the projects causing higher research and development expenses in 2001. Our current research and development activities are focused on increasing the capability and efficiency of our existing technology, minimizing the space occupied by our SureBeam systems, and developing new food product applications. We have assembled a team of experts in our industry to enhance and drive our research and development efforts. Our research and development experts have many years of experience in the area of enhancing food safety and extending shelf life using irradiation in addition to their broad experience with linear accelerators and charged particle beams. In addition, we have an agreement with Texas A&M University and the Texas Agricultural Experiment Station for the purpose of researching and developing product applications for our technology. We are currently working with Texas A&M University on several research projects, which include studies on flavor profiles, viral destruction, food products applications and consumers willingness to pay more for irradiated foods. In addition, we often benefit from the research and development efforts of our component suppliers. Historically, our research and development activities were incidental to work being performed under government contracts and were in the form of our right to retain any technologies developed as a result of our efforts on those contracts. We expect future research and development expense to increase as we utilize the Texas A&M University facility as well as develop the next generation of equipment.

Interest Income

Our interest income increased from $230,000 in 2000 to $1.3 million in 2001 and decreased from $1.3 million in 2001 to $209,000 in 2002. There was no impact on interest income from the medical sterilization business or the government linear accelerator business in 2000. During 2001, our investments and cash generated $1.3 million of interest income that was directly related to the investment of proceeds we received from our initial public offering on March 16, 2001. Our cash, cash equivalents and investments were reduced to $7.9 million as of December 31, 2001. The decrease from 2001 was a direct result of the reduced cash, cash equivalents and investment balance that we had during 2002. We expect our interest income to increase in 2003 based on our cash and cash equivalents position of $27.3 million at December 31, 2002. These funds were received in conjunction with our private placement in the fourth quarter of 2002. We also expect to receive additional funds from food processing services and system sales.

Interest Expense

Our interest expense increased from $3.8 million in 2000 to $7.0 million in 2001 and decreased from $7.0 million in 2001 to $1.3 million in 2002. There was no impact on interest expense from the medical sterilization business or the government linear accelerator business 2000. The increased interest expense is due

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to the increased borrowing on the subordinated note payable to Titan in 2001. Titan agreed to lend us a maximum amount of $75.0 million including accrued interest to fund working capital requirements. In 2001, Titan agreed to exchange up to $75.0 million of our debt for additional Class B and Class A shares of our common stock and $2.0 million and $73.0 million was exchanged during 2001 and 2002, respectively. The decrease in interest expense from 2001 was a direct result of the conversion of the subordinated note payable to Titan. Additionally, Titan has extended a $50.0 million senior secured credit facility to us that allows us to borrow, in addition to our previous borrowing, up to $12.5 million per quarter during in the fourth quarter of 2002 through the fourth quarter of 2003, subject to the $50.0 million limitation on borrowing. We have borrowed $25.0 million against this senior credit facility at December 31, 2002. Based on this balance outstanding, we expect interest expense to increase in the future until the balance is repaid to Titan.

Other Income (Expense), Net

Our other income, net increased from $874,000 in 2001 to $3.9 million in 2002. The increase is a result of recording $4.0 million of licensee fee income in 2002 as compared to $1.0 million in 2001. During the fourth quarter of 2001, Titan agreed to purchase a perpetual and exclusive, non-royalty bearing license to use our intellectual property for all applications and fields other than food (excluding water), animal hide and flower markets for $8.0 million. Cash received from this agreement has been deferred and is being recognized ratably over two years. As such, $1.0 million of license fee income is recorded in each quarter for eight quarters, beginning in the fourth quarter of 2001. The license fee income was offset by realized losses of $30,000 and $126,000 for the years ended December 31, 2002 and 2001, respectively, associated with the investments available for sale. Additionally, we recorded a loss on the disposal of assets in 2002 of $46,000. We expect our other income, net to decrease in 2003 based on the completion of the recognition of the license fee income in the third quarter of 2003.

Income Taxes

Income taxes reflect effective benefit rates of 39% in 2000, 3% in 2001 and 0% in 2002. Prior to the spin-off, we were included in the consolidated federal income tax return of Titan. Pursuant to our tax sharing agreement, Titan will compensate us for any tax benefit received by Titan from the use of our net operating losses in their consolidated federal income tax return. The amount is payable on the earlier of when we could have used the loss ourselves or when the losses expire (20 years). We had an operating loss for the years ended December 31, 2001 and 2002, and expect to continue to incur losses for the remainder of 2003. Our tax benefit is dependent upon the usage of our losses by Titan. To date, a receivable of $2.3 million has been recognized in connection with the use of our losses by Titan. An additional amount may be recognized depending upon our future profitability. In conjunction with the spin-off, we have been subsequently deconsolidated from Titan and the tax sharing agreement between us and Titan will no longer apply to tax years beginning on or after August 6, 2002.

Net Loss

Our net loss increased from $1.8 million in 2000 to $74.4 million in 2001 and decreased from $74.4 million in 2001 to $35.1 million in 2002. Excluding the impact of the stock-based compensation, our net loss increased from $1.2 million in 2000 to $20.1 million in 2001 and decreased from $20.1 million in 2001 to $18.5 million in 2002. We expect that our net loss will continue to decrease as we increase our gross profit by adding capacity through our company owned service centers and reduce the percentage of revenues derived through sales to Titan, which historically have lower gross margins than our systems sales to other parties and we continue to monitor our expenses.

Liquidity and Capital Resources

We have used cash principally to construct systems for our strategic alliances and fund working capital advances for these strategic alliances, to construct company-owned service centers and systems, to construct systems for Texas A&M, to expand our manufacturing capacity, and to fund our working capital requirements. We spend significant funds to construct systems for our strategic alliances in advance of payment. We also are

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spending significant funds to construct new company-owned service centers and systems in anticipation of future demand. These service centers have operated at losses using significant funds. At December 31, 2002, we had available cash and cash equivalents of $27.3 million.

Since our initial public offering on March 16, 2001, our cash requirements have been met through proceeds of approximately $59.8 million, net of underwriting commissions, fees and other offering costs, from our initial public offering, approximately $3.0 million in advances under the $75.0 million credit facility, $25.0 million in advances on the $50.0 million senior secured credit facility with Titan discussed below, payments from contracts for work performed both from Titan and other outside parties on system sales, payments totaling $8.0 million from Titan associated with the perpetual license related to non-food items and approximately $23.3 million net of underwriting commissions, fees and other offering costs, from our private placement transaction in the fourth quarter of 2002. In connection with the contribution by Titan to SureBeam in August 2000, we assumed the cumulative advances of approximately $39.0 million, as evidenced by a subordinated, unsecured promissory note payable to Titan. Under this note, Titan agreed to lend us a maximum amount of $75.0 million, including accrued interest, and we borrowed $75.0 million. The promissory note was due in August 2005 and bore interest at the greater of the rate of 10% per annum or Titan s effective weighted average interest rate under its senior credit facility. On December 31, 2001, $2.0 million of the subordinated note payable to Titan was exchanged for 190,385 shares of our Class B common stock. Additionally, the remaining $73.0 million of the subordinated note payable to Titan was exchanged on February 13, 2002 for 4,441,496 shares of our Class A common stock and 3,225,765 shares of our Class B common stock.

Status of Our $50.0 Million Credit Facility with Titan

During 2002, Titan extended a $50.0 million senior secured credit facility to us. As of March 28, 2003, we have borrowed $25.0 million on this credit facility and we have up to a maximum of $25.0 million available. The credit facility allows us to borrow, in addition to our previous borrowings, up to $12.5 million per quarter through the fourth quarter of 2003, subject to the $50.0 million cumulative limitation on borrowing. We have not borrowed additional amounts on the credit facility since October 30, 2002. We do not anticipate borrowing additional amounts on the credit facility during 2003 or during the remaining period that the credit facility is outstanding. As of December 31, 2002, we were in compliance with all covenants of the credit facility.

Under our credit facility we are obligated to make minimum quarterly principal payments as follows: 13.75% of the outstanding principal balance as of December 31, 2003 during each quarter in 2004; 25% of the outstanding principal balance as of December 31, 2004 during each quarter in 2005; and, all remaining principal by December 31, 2005. In addition, with some exceptions, we are obligated to use net proceeds from the sale of assets and securities to repay amounts advanced under the credit facility. The interest rate is Titan s effective weighted average term debt rate under Titan s credit agreement plus three percent. As of December 31, 2002, the interest rate on the credit facility was 8.08%. Interest is payable monthly beginning in January 2003. In January 2003, we paid $914,000 to Titan for 2002 interest under the credit facility. The credit facility is secured by a first priority lien on all of our assets.

Credit Facility Availability

For the quarter ending March 31, 2003, the maximum amount available for borrowing is $12.5 million. The maximum amount available for borrowing in each of the second, third and fourth quarters of 2003 is based upon our earnings before interest, taxes, depreciation and amortization (EBITDA) for the prior quarter as a percentage of the EBITDA target in our annual operating plan.

If actual EBITDA is negative $2.4 million or higher for the quarter ending March 31, 2003, then up to 100% of the quarterly maximum or $12.5 million will be available for borrowing during the quarter ending June 30, 2003. If our actual EBITDA is negative $3.0 million during the quarter ending March 31, 2003, then up to 50% of the quarterly maximum or $6.3 million will be available for borrowing during the quarter ending June 30, 2003. If our actual EBITDA is between negative $2.4 million and negative $3.0 million during the quarter ending March 31, 2003, then the maximum amount available for borrowing during the quarter ending

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June 30, 2003 shall be determined by linear interpolation between $6.3 million and $12.5 million. If our actual EBITDA is lower than negative $3.0 million for the quarter ending March 31, 2003, no amounts will be available for borrowing through the credit facility during the quarter ending June 30, 2003.

For the quarter ending June 30, 2003, our target EBITDA is $505,000. If our actual EBITDA for the quarter ending June 30, 2003 is positive, but less than $126,000, or 25% of the target EBITDA, then the maximum amount available in the quarter ending September 30, 2003, would be $5.0 million, provided that no amounts would be available unless we covenant during the quarter ended September 30, 2003 to limit our total operating expenses (defined as research and development and selling, general and administrative expenses) to $5.0 million. No amounts would be available under the credit facility during the quarter ended September 30, 2003, if we have negative EBITDA for the quarter ending June 30, 2003. If our actual EBITDA for the quarter ended June 30, 2003 is $126,000, or 25% of the target EBITDA, then the maximum amount available in the quarter ended September 30, 2003, would be $6.3 million or 50% of the quarterly maximum and for each percentage of actual EBITDA above $126,000, or 25% of target EBITDA, the percentage of the quarterly maximum above 50% would be increased on a pro rata basis.

For the quarter ending September 30, 2003, our target EBITDA is $4.1 million. Therefore, if our actual EBITDA for the quarter ended September 30, 2003 is positive, but less than $1.0 million, or 25% of the target EBITDA, then the maximum amount available in the quarter ended December 31, 2003, would be $5.0 million, provided that no amounts would be available unless we covenant during the quarter ended December 31, 2003 to limit our total operating expenses (defined as research and development and selling, general and administrative expenses) to $5.0 million. No amounts would be available under the credit facility during the quarter ending December 31, 2003, if we have negative EBITDA for the quarter ending September 30, 2003. If our actual EBITDA for the quarter ended September 30, 2003 is $1.0 million, or 25% of the target EBITDA, then the maximum amount available in the quarter ended December 31, 2003, would be $6.3 million or 50% of the quarterly maximum and for each percentage of actual EBITDA above $1.0 million, or 25% of target EBITDA, the percentage of the quarterly maximum above 50% would be increased on a pro rata basis.

Credit Facility Limitation on Capital Expenditures

The Titan credit facility contains certain covenants, which act to limit our capital expenditures. If our revenue for any quarter in 2002 is greater than 85% of the quarterly revenue target set forth in our annual operating plan for such quarter, we have agreed that we will not incur cumulative capital expenditures during the next quarter (including capital expenditures incurred during such quarter and all prior quarters during 2002) greater than $500,000 in excess of the capital expenditure budget for that next quarter and all prior quarters during 2002, set forth in our annual operating plan.

Our quarterly revenue target for the quarter ended December 31, 2002, was $12.5 million. Our revenues for the quarter ended December 31, 2002 were $12.1 million, which were in excess of $10.6 million or 85% of our quarterly revenue target for such fiscal quarter. Therefore, we could have capital expenditures in the quarter ending March 31, 2003 of up to approximately $19.6 million. There is no capital expenditure covenant subsequent to March 31, 2003.

Credit Facility Limitation on Operating Expenses

The Titan credit facility contains certain covenants, which act to limit the amount of operating expenses which we may incur.

If our revenue for any quarter in 2002 is greater than 85% of the quarterly revenue target set forth in the annual operating plan for such quarter, then for the following quarter, we may not incur operating expenses in excess of $500,000 more than the operating expenses, (excluding amortization and depreciation included in operating expenses), for such quarter as set forth in the annual operating plan. Under certain circumstances we may incur additional operating expenses if we had unutilized availability from previous quarters.

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As noted above, our revenue for the quarter ended December 31, 2002, was greater than $10.6 million, or 85% of our quarterly revenue target of $12.5 million in our annual operating plan for the quarter, then during the quarter ending March 31, 2003, we may not incur operating expenses in excess of $7.9 million or $500,000 more than the operating expenses set forth in our annual operating plan. There is no operating expense covenant subsequent to March 31, 2003.

The credit agreement also includes covenants limiting our incurrence of debt, investments, declaration of dividends and other restricted payments, sale of stock of subsidiaries and consolidations and mergers. The credit agreement, however, does not contain any financial covenants requiring us to maintain specific financial ratios.

In addition, Titan has guaranteed some of our lease obligations, and we are obligated to reimburse Titan for any payments they make under these guaranties. Any guarantee payments Titan makes reduces amounts available for future borrowing under the credit agreement. We will pay Titan a monthly fee of 10% of the guaranteed monthly payments. Some of the guaranteed leases have longer terms than the credit facility. If Titan remains a guarantor at the maturity date for the credit facility, then we plan to enter into a reimbursement agreement with Titan covering the outstanding guarantees.

On December 2, 2002, we entered into agreements with investors to sell an aggregate of 5,276,314 shares of our common stock for $4.75 per share, or an aggregate purchase price of approximately $25.1 million. In addition, we issued warrants to purchase 1,319,075 shares of our common stock at an exercise price of $6.00 per share. We issued these shares and warrants to the investors on December 3, 2002. The warrants are exercisable from the date of issuance until December 2, 2007. The shares issued under the agreements were offered through a placement agent, for which services we paid to the placement agent a fee of approximately $1.8 million. After the placement agent fee and before deducting related legal and accounting expenses, we realized net proceeds of approximately $23.3 million. We intend to use the proceeds for working capital needs and general corporate purposes. We issued all of the securities under an exemption from the registration requirements of the Securities Act of 1933, as amended (the Securities Act) pursuant to Section 4(2) of the Securities Act and/or Rule 506 of Regulation D under the Securities Act. All of the shares of common stock issued to the investors or to be issued upon exercise of the warrants issued to the investors are restricted until we register them. We agreed to file a registration statement with the SEC covering the resale of the shares issued or issuable to each selling stockholder. Our agreement requires us to cause the S-3 registration statement to remain effective until the earlier of (a) two years after it is declared effective by the SEC, (b) the date on which each selling stockholder s shares could be sold in a single three-month period under Rule 144 of the Securities Act, or (c) such time as all the common stock offered by the registration statement have been sold. We also agreed to indemnify each selling stockholder for claims made against them arising out of, among other things, statements made in the filed S-3 registration statement, Registration No. 333 101971.

Our operating activities used cash of $11.0 million for the year ended December 31, 2002, primarily due to an increase in accounts receivable of $5.5 million primarily related to the unbilled receivable of on our Saudi contract, a decrease of $2.4 million from the receivable from Titan and an increase of $3.6 million payable to Titan. A decrease in inventories of $1.2 million, as well as personnel costs and other expenditures associated with the development of the electronic food irradiation business.

Our investing activities used cash of $15.5 million for the year ended December 31, 2002, primarily due to capital expenditures of $18.4 million related to our service centers under construction and completed in 2002 offset by the sale of available-for-sale investments of $3.7 million. Also included in cash used for investing activities for the year ended December 31, 2002 were advances to the Hawaii Pride LLC, or Hawaii Pride, of $745,000 for working capital requirements.

In November 1999, we entered into an agreement with Hawaii Pride and affiliated parties, whereby Hawaii Pride would acquire a SureBeam system and construct a facility in Hilo, Hawaii for the purpose of disinfesting fruit and other products. This system was delivered and paid for in June 2000. In addition, we advanced $5.1 million to Hawaii Pride as of December 31, 2001. The monies advanced were utilized for costs relating to the acquisition of land, construction of the building and infrastructure, equipment (excluding the SureBeam system), other start-up costs and working capital purposes. During the fourth quarter of 2001, we

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recorded an impairment charge of $1.4 million against the outstanding receivable balance and reserved 50% of all additional advances made to Hawaii Pride. During 2002, we loaned Hawaii Pride an additional $745,000 and took an additional $373,000 impairment charge. We have advanced $5.8 million to Hawaii Pride through December 31, 2002. As we continued to monitor Hawaii Pride s progress throughout 2002, SureBeam continued to be encouraged with the demand that existed for the product and believed that as the new papaya tree plantings matured supply would be abundant, Hawaii Pride would achieve profitability in the spring of 2003. During the fourth quarter of 2002, Hawaii Pride s primary distributor went bankrupt. This resulted in a several month disruption in Hawaii Pride s distribution, a significant amount of fruit spoilage and an uncollectible receivable of approximately $250,000. Based on these events, we reassessed the probability of collecting the loan in the ordinary course of business from the cash flows of Hawaii Pride and recorded an additional impairment charge of $4.0 million in the fourth quarter, the remaining unreserved amount. We can forgive $1.0 million of the amount advanced for the exercise of our option for 19.9% of the equity of Hawaii Pride. Although we have the ability to convert an additional $1.9 million of the advance into 50% ownership of Hawaii Pride, this conversion feature may only be exercised upon Hawaii Pride s default of its loan obligations, mismanagement of the operating facility, a liquidity event or if Hawaii Pride fails to operate the business in a prudent and reasonable manner. The remaining balance of the advance represents a note receivable bearing interest at 8%, with interest payments due to us monthly. In June 2000, Hawaii Pride obtained a 15-year loan of approximately $6.8 million from the USDA. If Hawaii Pride defaults on its USDA loan obligations, or fails to comply with USDA requirements, we have the right to acquire 100% of the equity of Hawaii Pride for a nominal amount. Under the terms of the agreement, we will receive a management fee based on the facility s net revenues over the term of the USDA loan.

In June 2001, we received a purchase order contract in the aggregate amount of $50.0 million from RESAL for ten electronic food irradiation systems to operate in multiple service centers in the Saudi Arabia region for irradiating poultry and disinfesting dates. In 2002, the purchase order contract for these systems was modified to $53.0 million to construct systems for three large service centers with a combination of high power x-ray and electron beam technology. We commenced construction on these systems for RESAL and have recognized, under the percentage-of-completion method of accounting, $21.3 million in revenue, which has been recorded on this contract through December 31, 2002, of which $9.2 million was recognized during the year ended December 31, 2002. Revenues derived from this order are classified as revenues from investee in the accompanying consolidated statements of operations. Certain shipments of equipment to Saudi Arabia that were scheduled to take place in March 2003 have been delayed due to the war in Iraq and we anticipate that our other scheduled shipments to Saudi Arabia will be similarly delayed, pending resolution of the war. We had anticipated milestone payments during 2003 of $24.9 million. We anticipate shipping upon resolution of the war in the Middle East. The remaining systems are scheduled to be shipped within the next 15 to 18 months thereafter. We received payments aggregating $5.3 million through March 25, 2003 based on milestone payments and expect to continue to receive additional milestone payments as they become due and payable until the contract is complete.

In April 2002, we formed a joint venture under the name SureBeam Middle East, LLC. with RESAL. SureBeam Middle East, LLC. will provide, among other things, food irradiation services through planned service centers in the Saudi Arabian region. As of December 31, 2002, we own a 19.9% interest in SureBeam Middle East, LLC. and RESAL and other Saudi nationals own the remaining 80.1%. We account for our ownership interest in SureBeam Middle East, LLC. using the equity method of accounting under APB Opinion No. 18 The Equity Method of Accounting for Investments in Common Stock. In accordance with the joint venture agreement, RESAL s purchase order contract dated June 2001 may be assigned to SureBeam Middle East, LLC. at such time as the joint venture receives sufficient funds from the third party investors. As of December 31, 2002, a portion of the purchase order contract has been assigned to SureBeam Middle East, LLC. As a result, revenue recognized under the contract is presented in the consolidated statements of operations as revenue from investee and we have eliminated our 19.9% interest in the profit recognized under the percentage-of-completion method of accounting in connection with the original purchase order contract. We estimate that the total profit under the original contract that will be eliminated as a result of our equity interest in SureBeam Middle East, LLC. will be approximately $4.5 million to $5.5 million. Pursuant to the joint venture agreement, for five years following the date of SureBeam Middle East, LLC. s

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commercial registration, SureBeam Middle East, LLC. has an exclusive right of first negotiation to negotiate and enter into agreements to provide irradiation services for the treatment of food products (excluding water), animal hides and flowers in Saudi Arabia, Egypt, Lebanon, Syria, Iraq, Iran, Libya, Tunisia and Algeria. The joint venture will govern our strategic relationship with the operator of these systems, including royalty and management fees and a minority equity ownership of the operator that will operate the service centers.

In October 2001, we contracted to manufacture eight SureBeam systems for $26.0 million for Titan in connection with Titan s agreement with the United States Postal Service, or USPS. During 2002, our purchase order from Titan related to the USPS was closed out at $19.5 million dollars. Under this agreement, Titan arranged to provide electron beam systems and services to sanitize mail by eliminating the threat of anthrax. We worked with Titan and Titan s business units in providing the systems to the USPS. We were a principal subcontractor to Titan under its prime contract. In accordance with the milestone payments of the contract, we received $19.5 million in cash from Titan during 2002.

In September 2002, we received an order from Titan for $6.0 million in connection with a new contract with the USPS. Under this agreement,