

EARTHSHELL CORP  
Form 10-K/A  
April 30, 2003

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

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**FORM 10-K/A**

(Mark One)

**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**

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

**For the Transition Period From \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number 333-13287**

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**EARTHSHELL CORPORATION**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of incorporation or organization)

**77-0322379**  
(I.R.S. Employer Identification No.)

**800 Miramonte Drive, Santa Barbara, California**  
(Address of principal executive office)

**93109**  
(Zip Code)

**(805) 897-2294**  
(Registrant's telephone number, including area code)

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

**None**

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

**Common Stock \$.01 par value**  
(Title of each 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  No

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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. Yes  No

Indicate by checkmark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes  No

The aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 28, 2002 was \$155,390,444.

The number of shares outstanding of the Registrant's Common Stock as of April 29, 2003 was 155,744,206.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's Annual Meeting of Stockholders to be held on June 3, 2003 are incorporated by reference in Part III of this Annual Report on Form 10-K.

As used herein, the terms "EarthShell" and the "Company" shall mean EarthShell Corporation unless the context otherwise indicates and the term "Proxy Statement" shall mean the Proxy Statement for the Company's 2003 Annual Meeting of Stockholders to be held on June 3, 2003.

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**PART I**

**ITEM 1. BUSINESS**

**The Company**

EarthShell® Corporation ("EarthShell" or the "Company") was organized in November 1992 as a development stage company engaged in the commercialization of a proprietary composite material technology, designed with the environment in mind, for the manufacture of disposable packaging for the foodservice industry. Current and future products include hinged-lid containers, plates, bowls, foodservice wraps, cups, and cutlery ("EarthShell Packaging").

The EarthShell composite material is primarily made from abundantly available and low cost natural raw materials such as limestone and potato starch. The Company believes that foodservice disposables made of this material and offering certain environmental benefits, will have comparable or superior performance characteristics, such as greater strength and rigidity, and can be commercially produced and sold at prices that are competitive with comparable conventional paper and plastic foodservice disposables.

The Company's objective is to establish EarthShell Packaging® as the preferred disposable packaging material for the foodservice industry throughout the world based on comparable performance, environmental superiority and competitive pricing. EarthShell's approach for achieving this objective has been to: (i) license the EarthShell technology to strategically selected manufacturing or operating partners to manufacture, market, distribute and sell EarthShell Packaging; (ii) attain customer acceptance and demand for EarthShell Packaging through key market leaders and environmental groups; and (iii) demonstrate the manufacturability and improved economics with initial strategic partners. The Company believes that this approach aligns key market segments with select industry partners, minimizes potential direct competition from these producers, enables effective brand management, captures the value of manufacturing process improvements and creates potential for continuing income streams beyond the life of the patents.

The Company believes that it is transitioning through a pivotal point in its development where the fundamental premises of its business approach have been sufficiently demonstrated and the expansion phase of its business is beginning.

**Industry Overview**

Based on industry studies, the Company believes that the annual spending on foodservice disposable packaging is approximately \$11 billion in the U.S. and over \$25 billion globally. According to industry studies of the U.S. market, approximately 54% of the total foodservice disposable packaging is purchased by quick-service restaurants and 46% by other institutions such as hospitals, stadiums, airlines, schools, restaurants (other than quick-service restaurants), and retail stores. The Company believes that of the foodservice disposables purchased in the U.S. by quick-service restaurants and other institutions, approximately 45% are made of coated or plastic laminated paper and 55% are made of

non-paper materials such as plastic, polystyrene or foil. A breakdown of the various components of the global market for foodservice disposables is as follows:

**Potential Global Market for Foodservice Disposable Packaging**

	Market Size	
	\$	%
(\$ in millions)		
<b>Current Commercial Products</b>		
Clamshell Containers	\$ 1,500	6%
Plates, Bowls	4,000	16
<b>Commercial Prototypes</b>		
Wraps	1,750	7
Hot Cups	2,750	11
<b>Concept Prototypes</b>		
Cold Cups	5,000	20
Containers, Trays	3,500	14
Straws, Cup Lids	2,750	11
Pizza Boxes	2,000	8
Cutlery	1,750	7
<b>Total</b>	<b>\$ 25,000</b>	<b>100%</b>

In addition to the U.S., the market opportunity for EarthShell Packaging is particularly strong in Europe and Asia due to heightened environmental concerns and government regulations. In Europe, environmental legislation, such as the so-called "Green Dot" laws have created an opportunity for environmentally preferable products. Meanwhile, new regulations in many Asian countries have mandated a reduction in polystyrene production stimulating an increased demand for foodservice packaging manufactured from acceptable alternative materials. Furthermore, improvements in the Asian and European composting and recycling infrastructure are expected to facilitate the use of environmentally preferable products.

## Products

EarthShell Packaging is based on a patented composite material technology licensed on an exclusive worldwide basis from E. Khashoggi Industries LLC, the largest stockholder of the Company, and, on a limited exclusive, worldwide basis, from its wholly owned subsidiaries (collectively "EKI"). The Company's licensed field of use of the technology is for the development, manufacture and sale of disposable packaging for use in the foodservice industry and for certain specific food packaging applications.

Traditional foodservice disposables, wraps, and paperboard are currently manufactured from a variety of materials, including paper and plastic. The Company believes that none of these materials fully addresses three of the principal challenges facing the foodservice industry; namely performance, cost, and environmental impact. The Company believes that EarthShell Packaging addresses the combination of these challenges better than traditional alternatives and therefore will be able to achieve a considerable share of the foodservice disposable packaging market.

EarthShell Packaging can be categorized into three types: foam laminate, flexible wraps and paperboard substitutes. The EarthShell technology is currently being used to produce a wide variety of plates, bowls, and hinged-lid containers for all segments of the foodservice disposable packaging market, including quick-service restaurants, food and facilities management companies, the U.S.

government, universities/colleges, and retail operations. These products were developed using detailed environmental assessments and carefully selected raw materials and processes to minimize the harmful impact on the environment without sacrificing competitive price or performance.

### *Environment*

EarthShell's foodservice disposable products were developed over many years based on environmental models to reduce the environmental concerns of foodservice disposable packaging through the careful selection of raw materials, manufacturing processes and suppliers. For

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example, EarthShell Packaging reduces risk to wildlife compared to polystyrene foam packaging because it biodegrades when exposed to moisture in nature and can be composted in a commercial facility (where available) or even in consumers' backyards.

### *Performance*

The Company believes that it has demonstrated that its foam laminate products, including hinged-lid containers, plates, bowls, and prototype cutlery, meet the critical performance requirements of the marketplace, including rigidity, graphic capabilities, insulation, shipping, handling and packaging. The Company believes its foodservice wraps also meet critical performance requirements of the marketplace, including flexibility, folding characteristics, graphic capabilities, insulation, shipping, handling and packaging. Finally, the Company believes that its paperboard substitute product, which is currently under development, can be manufactured using the same basic raw materials as the foam laminate disposables and wraps and will be readily accepted by the market.

### *Current Commercial Product Applications*

Plates

Bowls

Hinged-lid containers

Foodservice wraps

Some examples of where EarthShell Packaging plates, bowls, and hinged-lid containers have been or are currently used include:

Quick-Service Restaurants	McDonald's Corporation ("McDonalds")
Facilities Management	Sodexo Bon Appetit Aramark
Government	U.S. Department of the Interior U.S. Department of Defense Environmental Protection Agency General Services Administration
Universities	Cornell University University of California, Davis Hampshire College
Retail	Wal-Mart Stores Green Earth Office Supply

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In addition to rigid packaging products, the Company recently introduced flexible packaging such as sandwich and foodservice wraps through its alliance partner, E.I. DuPont de Nemours and Company ("DuPont"), and is presently selling these products on a limited basis to key customers in test markets.

### *Future Commercial Product Applications*

Noodle Bowls

Trays

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Hot and Cold Cups

Cutlery

Lids/Straws

### *Cost*

Since EarthShell Packaging is uniquely engineered from commonly available, low cost natural raw materials such as limestone and starch, the Company believes EarthShell products can be manufactured more cost-effectively.

### *Product Recognition*

To date, the Company has won the following awards for EarthShell Packaging:

<b>Award/Recognition</b>	<b>Date</b>	<b>Organizations</b>
Closing the Circle Award Won by EarthShell's demonstration partner, the U.S. Dept. of the Interior	2002	White House Task Force on Waste Prevention and Recycling
Best of the Best Award 1 <sup>st</sup> Place foam packaging	2002	Foodservice and Packaging Institute
DuPont Award for Innovation in Food Processing and Packaging	2002	DuPont, National Food Processors Association, and Campden & Chorleywood Food Research Association
Green Seal Certification (hinged-lid container)	2000	Green Seal
Innovation in Real Materials Award	1998	Innovation in Materials Conference

## **Business Strategy**

The Company's objective is to establish EarthShell Packaging as the preferred foodservice disposable packaging. The Company's strategies to achieve this objective are to:

Develop products that deliver comparable or greater performance and cost-competitiveness with environmental advantages as compared to traditional packaging alternatives

Demonstrate customer demand as well as product performance and positioning

Prove manufacturability and economics of EarthShell Packaging

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License the EarthShell technology to leading manufacturing partners to manufacture, market, distribute and sell EarthShell Packaging

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Expand the business by replicating the EarthShell model across multiple operating partners to increase capacity

Educate the market and build awareness for the EarthShell brand

Defend a portfolio of patents relating to the EarthShell technology

*Creating Consumer Demand for EarthShell Packaging:* The Company believes that the use of EarthShell Packaging by key foodservice operators will accelerate the acceptance of the products by other users. To this end, the Company continues to work with major purchasers of foodservice disposables in the development and testing of prototype hot and cold cups, plates, bowls and trays in order to demonstrate superior product performance, highlight cost-benefit and build demand for EarthShell Packaging. To support this effort, the Company operates a product development center in Goleta, California for the production of prototypes for its manufacturing partners. In conjunction with the commercial introduction of products by foodservice operators, the Company intends to launch public relations campaigns, promoting the environmental benefits of EarthShell Packaging to environmental groups, policy makers, legislators, the media and the general public. The Company also expects that the EarthShell Packaging brand name will appear on EarthShell products.

*Licensing Existing Manufacturers of Foodservice Disposables:* The Company's strategy includes licensing the EarthShell technology to, or joint venturing with, strategically selected manufacturing or operating partners for the manufacture, marketing, distribution and sale of EarthShell Packaging. Licensing the technology to companies such as Sweetheart Cup Company ("Sweetheart") and Huhtamäki Oyj ("Huhtamäki") will enable the Company to take advantage of their respective manufacturing expertise and existing distribution networks, thereby accelerating the market penetration of EarthShell Packaging. This approach also minimizes the need to hire sales and marketing personnel. The Company intends to seek additional qualified licensees and joint venture partners and to provide all of its licensees and joint venture partners with technical and ongoing support designed to facilitate the application of the EarthShell technology, further refine manufacturing processes and reduce production costs. The Company will monitor licensee and joint venture operations to keep apprised of product quality.

*Developing International Markets:* The Company's international strategy is to license the technology to strategic partners in major international markets. In many cases, those partners may introduce EarthShell Packaging in foreign markets through quick-service restaurant industry leaders who have already introduced EarthShell foodservice disposables in the U.S. To date, EarthShell has signed agreements with Huhtamäki for western Europe, Australia and New Zealand for foam laminated products and with Green Packaging to manufacture and distribute noodle bowls in Asia. In addition, the Dupont Alliance Agreement, which provides for the execution and delivery of license agreements permitting DuPont to sell certain EarthShell products, such as foodservice wraps, is global in geographic scope. The Company expects to continue to enter into other strategic licenses or joint ventures with key international packaging suppliers.

### Licensing Business Model

EarthShell believes that its licensing business model will enable it to generate a sustainable royalty revenue stream. The licensing model enables the Company to concentrate on the continuing development of quality food packaging products that reduce the harmful impact to the environment. This approach contemplates that manufacturing, marketing, distribution and sale of EarthShell Packaging will be the responsibility of the Company's manufacturing licensees.

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Beyond the revenue opportunities, the Company believes the licensing model has positive implications for the Company's cost structure. As the Company moves beyond the product development phase and reduces its investment in demonstration manufacturing operations, it believes it will continue to reduce monthly operating costs and position itself to take advantage of the operating leverage provided by the licensing model.

EarthShell Packaging will be manufactured by the Company's licensed manufacturing partners. Given the low cost of the raw materials required, these strategic manufacturing partners should have a financial incentive to produce EarthShell Packaging rather than comparable traditional paperboard/polystyrene products even after a royalty payment to EarthShell.

The Company believes that its progress to date with Sweetheart, Huhtamäki, Green Earth Packaging ("GEP"), Green Packaging SDN BHD ("GP") and DuPont reflects its partners' commitment to the EarthShell business model. As the Company successfully transitions the

responsibility for manufacturing to its partners, the Company will no longer need to fund manufacturing operations and incur capital expenditures to build new manufacturing capacity.

While the Company believes it will be successful in developing cost competitive products with its partners, delays in developing such products could adversely impact the introduction and market acceptance of EarthShell Packaging and could have an adverse effect on the Company's business, financial condition and results of operations.

### Strategic Relationships

We believe that we have demonstrated the positive business fundamentals of EarthShell Packaging to our licensees. The Company's licensees and operating partners are now committing capital to purchase equipment to provide EarthShell Packaging products or otherwise develop the EarthShell products or production capacity. For example, GEP and Sweetheart are building capacity through new equipment orders. The Company intends to proliferate the use of EarthShell Packaging in the U.S. and international markets through agreements with additional licensed partners. By leveraging the infrastructure of manufacturing partners, the Company believes it can accelerate the market penetration of EarthShell Packaging. Current strategic partners include:

Sweetheart

Huhtamäki

GEP

GP

DuPont

The Company entered into an agreement with Sweetheart in late 1997 to develop and operate manufacturing lines at Sweetheart's Owings Mills facility for the production of hinged-lid containers for McDonald's Big Mac® sandwiches. For several years, the Company worked closely with Sweetheart and McDonald's to create an acceptable product design and meet required performance standards. During that period, over 20 million EarthShell Packaging hinged-lid containers for Big Mac sandwiches were used on a trial basis. As a result of these efforts, the EarthShell hinged-lid container is now an approved product for use in the McDonald's system. At this time EarthShell Packaging hinged-lid containers are no longer being produced for McDonald's, while Sweetheart determines plans for future production capacity (see *Manufacturing*).

In October 2002, as a result of the demonstration of a viable manufacturing process for plates, bowls and hinged-lid containers and the availability of turnkey manufacturing equipment with performance guarantees from qualified equipment suppliers, Sweetheart and the Company entered into

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a new Sublicense & Operating Agreement. This agreement gives Sweetheart a priority right to certain U.S. market segments, provided they build manufacturing capacity and achieve minimum sales targets over a five-year period. Under this agreement, to retain its priority right, Sweetheart must achieve minimum thresholds in product sales in 2003 and beyond. In December of 2002, Sweetheart issued its initial purchase orders for new equipment to manufacture plates and bowls. The first of this new equipment is planned to become available by mid-2003.

In July 2002, the Company and DuPont signed a strategic Alliance Agreement to develop environmentally preferred packaging and systems. Presently, the Company is working with DuPont to explore and develop potential applications for DuPont's Biomax® biopolymer resins as a component of EarthShell Packaging. DuPont is selling EarthShell foodservice wraps using proprietary composite biopolymer blends to initial select customers and the Company expects that the sales of these wraps to expand during 2003.

In October 2001, the Company entered into license agreements with GEP and GP. These two entities, formed specifically to commercialize EarthShell Packaging in the U.S. and Asia, are subsidiaries of Dominance, Inc., part of a Malaysian group of companies with over 50 years of manufacturing experience. GEP plans to produce plates and bowls for U.S. markets, while GP will produce noodle bowls for Asian markets. All



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products will be marketed under the EarthShell Packaging brand. As part of the agreements, GEP and Green Packaging will build manufacturing capacity to produce products using EarthShell technology. GEP has acquired a manufacturing location in New Boston, Texas and has ordered production equipment to produce plates and bowls. This facility is expected to be in commercial operation by mid-2003. GP has a facility in Malaysia.

In May 1999, the Company signed an agreement with Huhtamäki creating Polarcup Earthshell ApS, a joint venture to commercialize EarthShell Packaging throughout western Europe, Australia and New Zealand. In cooperation with the joint venture, EarthShell designed and commissioned the construction of a commercial line for the manufacture of hinged-lid containers in Europe. In mid-2002 the joint venture assumed responsibility for the installation and start-up of the manufacturing line at Huhtamäki's Goettingen, Germany facility. The Company expects final factory acceptance testing to be completed by mid-2003.

The Company has been focused on garnering support and achieving commercial validation for EarthShell Packaging from key environmental groups, strategic manufacturing partners and foodservice purchasers. During this period, the Company has also devoted resources to the optimization of product design and the development of cost-effective manufacturing processes. In cooperation with existing manufacturing partners, the Company has financed and built initial commercial demonstration production capacity and sold limited quantities of plates, bowls, and hinged-lid containers.

After overcoming obstacles typical of new technology development, EarthShell believes it now has a high quality and cost-effective product, a lower risk, profitable business model and the strategic relationships necessary to take advantage of a significant market opportunity. With expansion of production capacity and expected sales of its products by its licensees in 2003 accompanied by royalty revenue generation, EarthShell expects its products to continue to gain acceptance in the marketplace and believes it is poised to support capacity expansion and market penetration by its licensees leading to its own royalty revenue growth.

### Manufacturing

The EarthShell manufacturing process for foam laminate products consists of blending the component ingredients of a proprietary composite material in a mixer, depositing the mixture into heated cavity molds, heating the molded mixture for approximately one minute, removing the product, trimming excess material, and applying functional coatings with desired graphics. EarthShell Packaging uses commonly available natural raw materials, such as limestone, potato or corn starch, as well as

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natural fiber and functional coatings. The Company believes that these raw materials are currently available from multiple existing suppliers in quantities sufficient to satisfy projected demand.

Over the past several years, the Company has been working to demonstrate the commercial viability of its manufacturing processes to enable its operating partners to compete effectively with conventional disposable foodservice packaging and to transfer the operational and financial responsibility of its production lines to its operating partners. To date the Company has been producing limited amounts of EarthShell Packaging at production volumes that are low relative to the intended and necessary capacities of the manufacturing lines that are required to achieve efficiencies and cost effectiveness.

The Company entered into an Operating Agreement with Sweetheart in late 1997 whereby the Company financed and built production capacity at Sweetheart's Owings Mills, Maryland manufacturing facility to demonstrate that its hinged-lid containers could be produced commercially for McDonald's. For several years the Company worked closely with McDonald's and created an acceptable product design which met required performance standards. After a lengthy commercial validation process, during which McDonald's purchased and used over 20 million EarthShell sandwich containers in select restaurants, McDonald's approved the product design for national use in March 2001. At this time, Sweetheart is evaluating process improvements and licensed machinery suppliers that have committed to supply turn-key lines with performance guarantees. While Sweetheart is finalizing its plan for construction of new capacity, production has ceased at Sweetheart's Owings Mills facility. As of December 31, 2002 the Company's Owings Mills manufacturing lines are being carried on its balance sheet at a net book value of zero.

Additionally, Sweetheart has entered into an expanded agreement with the Company to manufacture and sell EarthShell plates, bowls and other new products as they become available. Sweetheart will have a priority market position and be required to meet certain market thresholds to maintain this position going forward.

Although the manufacturing processes currently being used to manufacture EarthShell Packaging are based on generally available methods and equipment, it has taken much longer and has cost much more than anticipated to integrate the machinery in an automated fashion and to

refine the manufacturing processes and equipment to operate at commercially viable levels. The Company has been working to achieve additional manufacturing efficiencies and economics prior to launching full-scale expansion.

In May 2002, the Company announced that it had licensed and certified various equipment builders to supply turnkey manufacturing equipment to EarthShell licensees. These equipment builders offer performance guarantees. The Company believes that this development will now allow for the expansion of production capacity for foam laminate plates, bowls, hinged-lid containers and cups. Detroit Tool and Engineering ("DTE") is the first certified manufacturer to have provided performance guarantees for turnkey manufacturing modules on order and under construction. DTE's first fully integrated line has been demonstrated in factory performance testing to meet all of the specified performance criteria for the production of EarthShell plates and bowls and is scheduled for installation at GEP's U.S. facility in 2003. The Company believes that the combined capacity of its licensed equipment vendors will be sufficient to meet the expected licensee demand for foam laminate production manufacturing lines for the foreseeable future.

The Company has also manufactured EarthShell Packaging plates and bowls at a pilot facility in Goleta, California developed in cooperation with GEP. Plates and bowls from this facility are being used to supply EarthShell customers such as Wal-Mart until GEP completes its U.S. facility in mid to late 2003.

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### **Patents, Proprietary Rights and Trademarks**

The technology that the Company licenses from EKI is the subject of numerous issued and pending patents in the U.S. and internationally. The Company believes the patents and pending patent applications provide broad protection covering foam laminate EarthShell Packaging, material composition and the manufacturing processes. As of December 31, 2002, EKI had over 130 U.S. and international patents and has pending patent applications relating to the compositions, products and manufacturing processes used to produce EarthShell Packaging food and beverage containers. Patents currently issued do not begin to expire until 2012 and provide some protection until 2018. Pending patents, if granted, would extend protection through 2019. Sixteen of the issued U.S. patents and five of the pending U.S. patents relate specifically to molded food and beverage containers manufactured from the new composite material, the formulation of the new composite material used in virtually all of the EarthShell Packaging currently under development. The Company and EKI will continue to seek domestic and international patent protection for further developments in the technology and will vigorously enforce rights against any person infringing on the technology.

The Company owns the EarthShell trademark and certain other trademarks, and has been licensed by EKI to use the trademark ALI-ITE for the composite material.

### **Relationship with and Reliance on EKI**

The Company has an exclusive, worldwide, royalty-free license to use and license the EKI technology to manufacture and sell disposable, single-use containers for packaging or serving food or beverages intended for consumption within a short period of time (less than 24 hours).

On July 29, 2002, the Company entered into an amendment to its Amended and Restated License Agreement with EKI (the "License Agreement") expanding the field of use for the EarthShell technology to include noodle bowls used for packaging instant noodles, a worldwide market that the company estimates to be approximately \$1 billion. Because the noodle bowl development was made at no cost to EarthShell and is an incremental field of use, EarthShell will pay to EKI 50% of any royalty or other consideration it receives in connection with the sale of products within this particular field of use.

In addition, on July 29, 2002 the Company entered into a License & Information Transfer Agreement with bio-tec Biologische Naturverpackungen GmbH & Co. KG and bio-tec Biologische Naturverpackungen Forschungs und Entwicklungs GmbH, together know as "Biotec", a wholly owned subsidiary of EKI, to utilize the Biotec technology for foodservice applications, including the food wraps and cutlery used in foodservice applications (the "Biotec Agreement"). EKI had previously granted to the Company priority rights to license certain product applications on an exclusive basis from Biotec in consideration for the Company's payment of a \$100,000 monthly licensing fee to Biotec. In addition, in consideration of the monthly payment, Biotec agreed to render technical services to the Company at Biotec's cost plus 5%. The licensing fee and services arrangements were continued in the Biotec Agreement. Under the terms of the Biotec Agreement, Biotec is entitled to receive 25% of any royalties or other consideration that the Company receives in connection with the sale of products utilizing the Biotec technology.

During 2002, and January 2003, EKI made a series of loans to the Company totaling approximately \$5.8 million. These loans were used to pay operating costs and accrued interest at 7% or 10% per annum. Some of these loans were not repaid at their stated maturity, and thereby became convertible, at EKI's election, into shares of the Company's common stock. In connection with the issuance and sale in March 2003 of

the Company's 2% secured convertible debentures due in 2006 (the "2006 Debentures") to a group of institutional investors, EKI agreed to subordinate the repayment of these loans to the payment in full of the Company's obligations under the 2006 Debentures. In addition, EKI and Biotec agreed to subordinate certain payments to which they were otherwise entitled

under the License Agreement and the Biotec Agreement (other than their respective percentages of any royalties received by the Company) to the satisfaction in full of the Company's obligations under the 2006 Debentures. They further agreed not to assert any claims against the Company for breaches of the License Agreement or the Biotec Agreement (other than the assertion of certain equitable remedies to enjoin the Company from, for example, selling products outside its field of use) until such time as the Company's obligations under the 2006 Debentures are satisfied in full. EKI and Biotec also agreed to allow the Company to pledge its interest in the License Agreement to secure its obligations under the 2006 Debentures, and certain additional concessions were made by EKI and Biotec to permit the Company greater flexibility in selling its rights under the License Agreement and the Biotec Agreement to third parties in an insolvency context. These rights terminate upon the satisfaction in full of the obligations under the 2006 Debentures. In consideration for its willingness to subordinate the payments and advances that are owed to it, the Company issued to EKI in March 2003 a warrant to acquire one million shares of the Company's common stock at a price of \$0.50 per share with a ten year term.

Under the terms of the License Agreement and the Amended and Restated Patent Agreement for the Allocation of Patent Costs between the Company and EKI, any patents granted in connection with the EarthShell technology are the property of EKI, and EKI may obtain a benefit therefrom, including the utilization and/or licensing of the patents and related technology in a manner or for uses unrelated to the license granted to the Company in the foodservice disposables field of use. Effective January 1, 2001, EarthShell assumed direct responsibility to manage and maintain the patent portfolio underlying the License Agreement with EKI and to pay directly all related costs.

In connection with the issuance and sale of the 2006 Debentures, Mr. Essam Khashoggi, who controls EKI and is the beneficial owner of approximately 38% of the Company's common stock, agreed for himself and on behalf of EKI, not to sell any of the Company's shares for an 18 month period concluding in August 2004 (excluding shares issuable to former EKI employees under existing option grants and shares pledged under an existing security agreement with a third party lender).

## Competition

Competition among food and beverage container manufacturers in the foodservice industry is intense. Virtually all of these competitors have greater financial and marketing resources at their disposal than does the Company, and many have established supply, production and distribution relationships and channels. Companies producing competitive products may reduce their prices or engage in advertising or marketing campaigns designed to protect their respective market shares and impede market acceptance of EarthShell Packaging. In addition, some of the Company's licensees and joint venture partners manufacture paper, plastic or foil packaging that may compete with EarthShell Packaging.

Several paper and plastic disposable packaging manufacturers and converters and others have made efforts to increase the recycling of these products. Increased recycling of paper and plastic products could lessen their harmful environmental impact, one major basis upon which the Company intends to compete. A number of companies have introduced or are attempting to develop biodegradable starch-based materials, plastics, or other materials that may be positioned as potential environmentally superior packaging alternatives. It is expected that many existing packaging manufacturers may actively seek to develop competitive alternatives to the Company's products and processes. The Company believes its patents uniquely position it to incorporate a proportion of low cost, inorganic fillers with its material, which, relative to other starch-based or specialty polymers, will allow it to result in lower material cost, but the development of competitive, environmentally attractive, disposable foodservice packaging could render the Company's technology obsolete and could have an adverse effect on the business, financial condition and results of operations of the Company.

## Certain Risk Factors

Because the Company is still in its developmental stage and has very limited operating history, it remains subject to the inherent challenges and risks of establishing a new business enterprise. To date, production volumes of EarthShell Packaging products have been low relative to intended and necessary capacity of the manufacturing lines. The success of future operations depends upon the ability of our licensees to

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manufacture products made with EarthShell Packaging in sufficient quantities so as to be commercially feasible and then to distribute and sell those products at competitive costs. Consistent commercially feasible production volumes had not been achieved and assured competitive cost figures had not yet been proven as of December 31, 2002.

As of December 31, 2002, the Company had not yet reported any operating revenues and had experienced aggregate net losses of approximately \$295.8 million from inception. The Company does not expect to operate profitably during fiscal year 2003. The Company may need to seek additional third party financing to meet its operating and capital needs, and there is no assurance that additional funding will be available to the Company, and, if it is available, such financing may be (i) extremely costly, (ii) dilutive to existing stockholders and/or (iii) restrictive to the Company's ongoing operations.

The Company has no experience in commercially manufacturing, distributing and marketing foodservice disposables and is dependent on its licensees to manufacture and distribute EarthShell Packaging. Agreements with the licensees permit them to manufacture and sell other foodservice disposable packaging products that are not based on EarthShell Packaging. The licensees also manufacture paper or polystyrene packaging which will compete with EarthShell Products, and they may not devote sufficient resources or otherwise be able successfully to manufacture, distribute or market EarthShell Packaging. Their failure to do so would be grounds for termination of exclusivity provisions in their license agreement, but might also delay the distribution of EarthShell Packaging into the marketplace.

The success of the Company depends substantially on its ability to design, develop and manufacture foodservice disposables that are not as harmful to the environment as conventional disposable foodservice containers made from paper, plastic and polystyrene. Although EarthShell Packaging offers a number of environmental advantages over conventional packaging products, it may also possess characteristics that consumers or environmental groups could perceive as negative for the environment. In particular, EarthShell Packaging may result in more solid waste by weight, and manufacturing them may release greater amounts of some pollutants than occurs with some other packaging.

The Company does not own the technology necessary to manufacture EarthShell Packaging and is dependent upon the License Agreement to use that technology. The licensed technology is limited to the development, manufacture and sale of specified foodservice disposables for use in the foodservice industry, and there is no right to exploit opportunities to apply this technology or improve it outside this field of use. If EKI were to file for or be declared bankrupt, the Company would likely be able to retain its rights under the License Agreement with respect to U.S. patents; however, it is possible that steps could be taken to terminate its rights under the License Agreement with respect to international patents. EKI is the controlling stockholder of the Company, and conflicts could arise with regard to performance under the license agreement, corporate opportunities or time devoted to the business of the Company by officers and directors who are common to both EKI and the Company.

### Government Regulation

The manufacture, sale and use of EarthShell Packaging are subject to regulation by the U.S. Food and Drug Administration (the "FDA"). The FDA's regulations are concerned with substances used in food packaging materials, not with specific finished food packaging products. Thus, food or beverage containers will be in compliance with FDA regulations if the components used in the food and

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beverage containers: (i) are approved by the FDA as indirect food additives for their intended uses and comply with the applicable FDA indirect food additive regulations; or (ii) are generally recognized as safe for their intended uses and are of suitable purity for those intended uses.

The Company believes that the EarthShell Packaging hinged-lid container and all other current and prototype EarthShell Packaging products of the Company are in compliance with all requirements of the FDA and do not require additional FDA approval. The Company cannot be certain, however, that the FDA will agree with these conclusions.

### Employees

As of January 1, 2003, the Company had 40 employees. The Company's employees are not represented by a labor union, and the Company believes it has a good relationship with its employees.

## ITEM 2. PROPERTIES

As of December 31, 2002, the Company leased 3,353 square feet of office space in Lutherville, Maryland. The Company's monthly lease payment with respect to this space is \$5,449. The lease expires on September 30, 2003. The Company leases 8,966 square feet of office and

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research and development space in Santa Barbara, California. This lease expires on December 31, 2003. The Company's monthly lease payment with respect to this space is \$21,070. The Company leases 54,800 square feet of space for its product development center in Goleta, California. The Company's monthly lease payment with respect to this space is \$41,905. This lease expires on May 31, 2003.

The Company believes it will be able to lease comparable space at a comparable price when these leases expire.

### ITEM 3. LEGAL PROCEEDINGS

None.

### ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None.

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## PART II

### ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The Company's common stock is currently traded on the NASDAQ Small Cap Market, and prior to March 5, 2003 traded on the NASDAQ National Market, under the symbol: EARTH. For the periods indicated, the following table presents the range of high and low closing sale prices for the Company's common stock as reported by the NASDAQ National Market:

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>Total Year</u>
<b>2002</b>					
Market price per common share					
High	\$ 2.05	\$ 1.40	\$ 1.08	\$ 0.80	\$ 2.05
Low	\$ 1.15	\$ 0.36	\$ 0.50	\$ 0.58	\$ 0.36
<b>2001</b>					
Market price per common share					
High	\$ 2.50	\$ 4.68	\$ 3.67	\$ 2.83	\$ 4.68
Low	\$ 1.25	\$ 2.00	\$ 2.02	\$ 1.83	\$ 1.25

The number of stockholders of record of the Company's common stock at April 14, 2003 was 1,087. At April 14, 2003, Mr. Essam Khashoggi, directly or indirectly, owned approximately 38% of the outstanding common stock of the Company.

The Company is a developmental stage company and does not intend to declare or pay cash dividends on its common stock in the foreseeable future.

### ITEM 6. SELECTED FINANCIAL DATA

The selected financial data set forth below should be read in conjunction with the Company's Financial Statements and Notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K.

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**Selected Financial Data**  
(in thousands, except per share data)

	For the Year Ended December 31					November 1, 1992 (inception) through December 31, 2002
	2002	2001	2000	1999	1998	
<b>Statement of Operations Data</b>						
Research and development expenses	\$ 26,890	\$ 47,148	\$ 37,265	\$ 30,471	\$ 19,982	\$ 204,157
General and administrative expenses	9,590	9,634	6,843	11,872	9,296	64,614
Depreciation and amortization	3,099	5,874	5,704	4,644	881	22,461
Gain on sale of property and equipment	(441)					(441)
Interest expense (income), net	132	(356)	(1,264)	(3,448)	(4,026)	(3,984)
Related party patent expenses			362	645	486	8,693
Debenture conversion cost	321					321
Net loss	39,591	62,302	48,912	44,188	26,620	295,834
Preferred dividends					777	9,927
Net loss available to common stockholders	39,591	62,302	48,912	44,188	27,397	305,761
Average shares outstanding	135,326	112,232	101,419	100,045	95,707	95,527
<b>Balance Sheet Data</b>						
Cash and cash equivalents	\$ 111	\$ 828	\$ 7,792	\$ 26,413	\$ 86,590	
Short-term investments				8,971	6,531	
Working capital (deficit)	(8,315)	(6,941)	2,107	32,886	87,054	
Total assets	18,024	19,886	48,474	87,199	135,638	
Convertible debentures, amounts payable to related party, accrued interest and accrued dividends	10,190		266	1,386	1,181	
Deficit accumulated during development stage	(295,834)	(256,243)	(193,941)	(145,029)	(100,841)	
Stockholders' equity (deficit)	(3,473)	11,536	42,296	80,686	124,875	
Shares outstanding	144,656	118,323	104,502	100,045	100,045	
<b>Per Common Share</b>						
Basic and diluted loss per share	\$ 0.29	\$ 0.56	\$ 0.48	\$ 0.44	\$ 0.29	3.20

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**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

The following discussion should be read in conjunction with the Selected Financial Data and the Company's Consolidated Financial Statements and Notes thereto included elsewhere in this Annual Report on Form 10-K. Such consolidated financial statements and information have been prepared to reflect the historical operations, assets and liabilities of the Company from the date of the Company's organization on November 1, 1992 through December 31, 2002.

Information in this Annual Report on Form 10-K including but not limited to "Management's Discussion and Analysis of Financial Condition and Results of Operations" contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. These statements may be identified by the use of forward-looking terminology such as "may," "will," "expect," "anticipate," "estimate," or "continue," or the negative thereof or other comparable terminology. Any one factor or combination of factors could cause the Company's actual operating performance or financial results to differ from those anticipated by management that are described herein. Factors influencing the Company's operating performance and financial results include, but are not limited to, changes in the general economy, the availability of financing, governmental regulations concerning, but not limited to, environmental issues, and other risks and unforeseen circumstances affecting the Company's business which may be discussed elsewhere in this Annual Report on Form 10-K.

**Results of Operations**

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Year Ended December 31, 2002 Compared with the Year Ended December 31, 2001

The Company's net loss decreased \$22.7 million to \$39.6 million from \$62.3 million for the year ended December 31, 2002 compared to the year ended December 31, 2001.

*Research and Development Expenses.* Total research and development expenses are comprised of *Related party research and development expenses* and *Other research and development expenses*. Total research and development expenditures for the development of EarthShell Packaging® decreased \$20.2 million to \$26.9 million from \$47.1 million for the year ended December 31, 2002 compared to the year ended December 31, 2001.

*Related party research and development expenses* are comprised of the \$100,000 monthly licensing fee for the use of the Earthshell technology and for technical services, both of which were payable to EKI, a stockholder of the Company, or Biotec, a wholly owned subsidiary of EKI. Related party research and development expenses totaled \$1.5 million for each of the years ended December 31, 2002 and December 31, 2001.

*Other research and development expenses* are comprised of personnel costs for production and development and their travel and direct overhead and impairment charges on manufacturing property and equipment constructed for demonstration purposes. Other research and development expenses decreased \$20.3 million to \$25.4 million from \$45.7 million for the year ended December 31, 2002 compared to the year ended December 31, 2001. The decrease in other research and development expenses in 2002 compared to 2001 was primarily a result of reduced expenditures in 2002 from concluding the demonstration manufacturing of hinged-lid containers in Owings Mills, Maryland. This decrease was partially offset by the commencement of demonstration manufacturing of bowls and plates in Goleta, California. Impairment charges on property and equipment of \$9.8 million for the year ended December 31, 2002 and \$19.4 million for the year ended December 31, 2001 were included in other research and development expenses.

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The Company entered into a strategic relationship agreement with Sweetheart in late 1997 whereby the Company financed and built a production line at Sweetheart's Owings Mills, Maryland manufacturing facility to demonstrate that its clamshell products could be produced commercially for McDonald's. The Company worked closely with Sweetheart and McDonald's to create an acceptable product design, develop a commercially viable operation and meet required performance standards. Since 1997 the Company has intended to transfer the production lines at Owings Mills to Sweetheart.

In the fourth quarter of 2001, the Company wrote down \$12.3 million of property and equipment at Owings Mills to reflect the net realizable value of the equipment and machinery based on a quotation from a third party. During the first half of 2002 production at the Owings Mills facility ceased as Sweetheart contemplated construction of new, updated production lines. The Company has been negotiating with Sweetheart and certain equipment manufacturers to assess their interest in utilizing portions of the Company's existing production lines and infrastructure in Owings Mills; however, definitive agreements have not been reached and the Company is unable to determine the amount, if any, of compensation it might receive in disposing of its production lines in Owings Mills. As a result, the Company wrote down the remaining \$7.5 million of the equipment at Owings Mills during the year ended 2002. As of December 31, 2002 the Company's Owings Mills production lines are being carried on its balance sheet at a net book value of zero.

The commercial production line in Goettingen, Germany is being financed and constructed by the Company for the Company's joint venture with Huhtamäki. During 2001, \$1.2 million of the Goettingen line was written off to reflect equipment that had no further application in the product development cycle. During the third quarter of 2002 the Company concluded, after obtaining quotations from various machinery suppliers for an identical line, that \$1.7 million of the cost of the line will not be recoverable and therefore the carrying value of the line was written down by this amount of which \$1.6 million was recorded in the third quarter of 2002 and the remaining \$0.1 million was recorded in the fourth quarter of 2002.

During the fourth quarter of 2001 and the fourth quarter of 2002, \$5.9 million and \$0.5 million, respectively, of equipment at the Company's product development center was written off because it had no further application in the product development cycle.

*Total General and Administrative Expenses.* *Total General and Administrative Expenses* are comprised of personnel costs for marketing, finance and administration, and their travel and direct overhead. Total general and administrative expenses were \$9.6 million for both the year ended December 31, 2002 and, the year ended December 31, 2001. Patent prosecution and maintenance fees remained flat year over year. Reduction in headcount and legal expenses was offset by an increase in insurance and Nasdaq fees, as well as an increase in investor and public

relations programs.

*Depreciation and Amortization Expense.* Depreciation and amortization expense decreased \$2.8 million to \$3.1 million from \$5.9 million for the year ended December 31, 2002 compared to the year ended December 31, 2001. The decrease in depreciation expense is primarily attributable to the decrease in fixed assets as a result of the impairment of equipment to net realizable value during both 2002 and 2001.

*Interest Income.* Interest income decreased \$0.3 million to \$0.1 million from \$0.4 million for the year ended December 31, 2002 compared to the year ended December 31, 2001. The decrease was the result of lower cash balances available for investment for the comparative years.

*Interest Expense.* Interest expense increased \$0.3 million to \$0.3 million from \$0.0 million for the year ended December 31, 2002 compared to the year ended December 31, 2001. The increase was the result of the issuance of 1.5% secured convertible debentures due in 2007 (the "2007 Debentures"), accretion of the discount related to the warrants issued in conjunction with the 2007 Debentures, and short-term notes payable to a related party. These debentures will accrue approximately \$0.3 million in

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annual interest expense until they expire or convert into common stock. The short-term working capital loans will accrue approximately \$0.3 million in annual interest expense until they are repaid.

*Debenture Conversion Cost.* Debenture Conversion Cost was \$0.3 million for the year ended December 31, 2002. The expense represents the cost of forcing the conversion of \$1.0 million of the 2007 Debentures in the third quarter of 2002.

*Gain on Sale of Property and Equipment.* The gain on the sale of property and equipment was \$0.4 million for the year ended December 31, 2002. The gain was primarily due to the Company selling equipment no longer required to meet objectives, most of which was fully depreciated.

*Year Ended December 31, 2001 Compared with the Year Ended December 31, 2000*

The Company's net loss increased \$13.4 million to \$62.3 million from \$48.9 million for the year ended December 31, 2001 compared to the year ended December 31, 2000.

*Research and Development Expenses.* Total research and development expenditures for the development of EarthShell Packaging® increased \$9.8 million to \$47.1 million from \$37.3 million for the year ended December 31, 2001 compared to the year ended December 31, 2000, including impairment of property and equipment used in development and early stages of manufacturing. Excluding the effect of the impairment of property and equipment, research and development expenditures increased \$2.4 million to \$27.7 million in 2001 from \$25.3 million in 2000. The \$2.4 million increase in research and development expense is a result of continued improvements to the production process and increased production for EarthShell Packaging plates, bowls and hinged-lid containers, which includes the increased supply of hinged-lid containers to McDonald's Corporation® restaurants in the Chicago area.

As the development and commercialization of the manufacturing technology progresses, the Company periodically assess its property and equipment used in development and early stages of manufacturing in order to reflect the lower of cost or fair value (see *Critical Accounting Assumptions*). The impairment of property and equipment increased \$7.4 million to \$19.4 million from \$12.0 million for the year ended December 31, 2001 compared to the year ended December 31, 2000. Of the \$19.4 million charge taken in the fourth quarter of 2001, \$12.3 million is an impairment to net realizable value for the manufacturing equipment located at the Owings Mills facility. The remaining \$7.1 million impairment was taken as certain research and development equipment was determined to have no further application in the product development cycle.

*Total General and Administrative Expenses.* Total general and administrative expenses increased \$2.8 million to \$9.6 million from \$6.8 million for the year ended December 31, 2001 compared to the year ended December 31, 2000. Personnel and related overhead costs increased \$1.3 million as a result of the direct hiring of certain EKI administrative personnel effective January 1, 2001. A portion of the costs were previously captured in related party research and development expenses. Other personnel related costs increased by \$0.7 million as a result of the hiring of additional finance, marketing, and administrative personnel along with stock grants awarded to senior management when comparing the 2001 year end to the 2000 year end. Legal fees increased by \$0.8 million primarily due to the Company assuming direct responsibility for managing the patent portfolio relating to the EarthShell technology previously managed by EKI, and reimbursed by the Company under Related Party Patent Expenses, and as a result of the final settlement of its lawsuit with Novamont. As a result of the successful settlement with Novamont, the Company's rights to manufacture and distribute the foodservice disposable packaging through its operating



partners are fully protected and expanded to include the application of Novamont technology.

*Depreciation and Amortization Expense.* Depreciation and amortization expense increased \$0.2 million to \$5.9 million from \$5.7 million for the year ended December 31, 2001 compared to the

year ended December 31, 2000. The increase in depreciation expense is the result of placing certain assets in-service with respect to the Company's commercial manufacturing equipment at the Owings Mills facility.

*Related Party Patent Expenses.* Legal fees reimbursed to EKI under the Patent Agreement with EKI decreased \$0.4 million to \$0.0 from \$0.4 million for the year ended December 31, 2001 compared to the year ended December 31, 2000. Effective January 1, 2001, the Company assumed direct responsibility for the management of the patent portfolio.

*Interest Income.* Interest income decreased \$0.9 million to \$0.4 million from \$1.3 million for the year ended December 31, 2001 compared to the year ended December 31, 2000. The decrease was a result of lower cash balances available for investment for the comparative years.

## Liquidity and Capital Resources

*Cash Flow.* The Company's principal uses of cash for the year ended December 31, 2002 were to fund operations and purchase equipment to facilitate the development of manufacturing capacity for EarthShell Packaging. Net cash used in operations was \$23.0 million and \$33.9 million for the years ended December 31, 2002 and 2001, respectively. Net cash used in investing activities was \$2.3 million and \$3.6 million for the years ended December 31, 2002 and 2001, respectively. Net cash provided by financing activities was \$24.6 million and \$30.6 million for the years ended December 31, 2002 and 2001, respectively. As of December 31, 2002 the Company had cash and related cash equivalents totaling \$0.1 million. In March 2003, the Company concluded a financing transaction that resulted in approximately \$11.0 million of net proceeds as further described below.

*Capital Requirements.* The Company paid or accrued approximately \$2.8 million in capital expenditures for the year ended December 31, 2002, primarily related to the purchase of manufacturing equipment for its first commercial line to be installed in cooperation with Huhtamäki at their Goettingen, Germany facility. Construction of the commercial line was largely completed in 2002. Therefore the Company does not expect to make significant capital expenditures in the year 2003.

*Sources of Capital.* As part of the Company's initial public offering on March 27, 1998, the Company issued 10,526,316 shares of common stock, for which it received net proceeds of \$206 million. On April 18, 2000 and January 4, 2001, the Company filed shelf registration statements for 5 million and 15 million shares, respectively, of the Company's common stock. During the years ended December 31, 2002, 2001 and 2000 the Company sold approximately 1.7 million, 13.5 million and 4.5 million shares of common stock in private transactions under such registration statements and received net proceeds from such sales of approximately \$2.3 million \$30.5 million and \$10.5 million, respectively. All shares available under such registration statements have been sold as of December 2002.

In December of 2001 the Company filed a shelf registration statement providing for the sale of up to \$50 million of securities, including secured or unsecured debt securities, preferred stock, common stock, and warrants. These securities may be offered, separately or together, in distinct series, and in amounts, at prices and on terms to be set forth in the prospectus contained in the registration statement, and in subsequent supplements to the prospectus. During the year ended December 31, 2002, the Company sold 22.6 million shares of common stock in negotiated transactions under such registration statement and received net proceeds from such sales of \$19.6 million.

On August 12, 2002 the Company issued \$10 million in aggregate principal amount of the 2007 Debentures to institutional investors. These debentures bear interest at a rate of 1.5% per annum. The holders of these debentures had the right to convert the debentures into the Company's common stock at an initial conversion price of \$1.30 per share, which has been reduced to \$0.50 per share as a result of anti-dilution adjustments. Based on the conversion price relative to the fair market value of the

common stock at the date of issue, the debentures were deemed to have no beneficial conversion feature. The proceeds from the debentures are held in restricted accounts linked to irrevocable letters of credit in favor of the debenture holders such that unrestricted access to the proceeds from the sale of the debentures occurs only upon conversion of the debentures into shares of the Company's common stock. In addition to the holders' conversion option, under certain circumstances, the Company has the right to force conversion of up to \$500,000 of the debentures per week at a 15% discount to the market price of the Company's stock. Subject to certain conditions set forth in the debentures, the Company may prepay the debentures upon twenty business days notice for 104% of the outstanding principal balance of the debentures. If during any consecutive 90 day period following August 12, 2002, the holders of the debentures or the Company have not converted more than an aggregate of \$3.0 million of the original principal amount of \$10.0 million or, on August 12, 2003 the holders of the debentures or the Company have not converted more than an aggregate of \$7.5 million of the original principal amount of \$10.0 million, the holders of the debentures may require the Company to prepay all or a portion of the debentures for an amount in cash equal to the principal amount of the debentures to be prepaid, plus all accrued and unpaid interest, such amount being payable on the 20th trading day following the Company's receipt of a prepayment notice. During the third quarter of 2002, the Company forced conversion of \$1.0 million of the debentures for 2.0 million shares of common stock, reducing the outstanding balance to \$9.0 million. Subsequent to December 31, 2002 the Company forced conversion of an additional \$800,000 of the debentures for approximately 1.7 million shares of common stock, reducing the outstanding balance to \$8.2 million as of February 28, 2003. In March 2003, as part of a new convertible debenture financing, the Company repaid \$5.2 million of the debentures, and also exchanged \$2.0 million of these debentures for new 2006 Debentures which are not secured by cash, thereby releasing the related cash. In connection with this restructuring, the Company issued approximately 0.6 million shares of common stock to the original debenture holders. There was an outstanding balance of an aggregate of \$1.0 million of the 2007 Debentures as of March 31, 2003. In April 2003 a default occurred with respect to the 2007 Debentures upon the Company's independent auditors issuing a report on the Company's financial statements for the year ended December 31, 2002 that included an explanatory paragraph relating to the Company's ability to continue as a going concern. As a result of this default the Company may be required to repurchase the remaining \$1.0 million principal amount of 2007 Debentures for an amount equal to the greater of 115% of principal, plus accrued interest, or 115% of the then market value of the 2,000,000 shares into which the outstanding debentures are convertible. The Company believes that the potential amount payable to the holders of the outstanding \$1.0 million principal amount of 2007 Debentures resulting from this default is not significantly more than the amount payable under the terms of the debentures that existed prior to the default.

During 2002, the Company's largest shareholder, EKI, made various simple interest working capital loans to the Company. These loans bear interest at a rate of 7% or 10% per annum, and are payable on demand. As of December 31, 2002, the outstanding principal balance of these loans was \$1,745,000. In January 2003, EKI made additional working capital loans to the Company totaling \$1,010,000. Some of these loans were not repaid at their stated maturity, and thereby became convertible, at EKI's election, into shares of the Company's common stock. As part of the issuance and sale of the 2006 Debentures completed in March 2003, repayment of these loans totaling \$2,755,000 has been subordinated to the new debentures with strict covenants governing their repayment.

In March 2003, the Company issued and sold \$10.55 million in aggregate principal amount of the 2006 Debentures to a group of institutional investors. After transaction fees, the Company realized net proceeds of approximately \$9.0 million, which, together with the \$2.0 million realized as a result of the exchange of such amount of the 2006 Debentures for a like amount of the 2007 Debentures discussed above, means that the Company gained net proceeds of approximately \$11.0 million from the two transactions. The remaining shares under the December 2001 shelf registration described above have been used to secure shares potentially issuable upon conversion of the 2006 Debentures.

Management's plans include reducing expenses and raising cash from either the issuance of debt or equity securities, or both, and through transferring its demonstration manufacturing lines to its operating partners. The Company completed a convertible debenture transaction in March 2003 that provided the Company with cash of approximately \$11.0 million. While the Company believes that the cash raised through the convertible debenture financing transaction in March 2003 combined with expense reductions will be sufficient for the Company to meet its current obligations and to cover operating expenses through the year ending December 31, 2003, the Company may need to raise additional financing. The Company can not assure that its expense reduction programs will be successful, that additional financing will be available to it, or, if available, that the terms will be satisfactory, or that it will be able to negotiate mutually agreeable terms for the transfer of its manufacturing lines to its operating partners. If the Company is not successful in reducing expenses, or raising additional capital it may not be able to continue as a going concern for a reasonable period of time.

### **Critical Accounting Assumptions**

*Estimated Net Realizable Value of Property and Equipment.* The Company has been engaged in the development of manufacturing equipment to validate acceptance of EarthShell products and their pricing. To this end the Company has developed manufacturing lines in Owings Mills, Maryland, Goleta, California and in Goettingen, Germany. The Company evaluates the recoverability of property and equipment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. If there is an indication that the carrying value of an asset may not be recoverable and the estimated future cash flows (undiscounted and without interest charges) from the use

of the asset are less than the carrying value, a write-down is recorded to reduce the related asset to its estimated fair value.

The Company entered into a strategic relationship with Sweetheart in late 1997 whereby the Company financed and built a production line at Sweetheart's Owings Mills, Maryland manufacturing facility to demonstrate that its hinged-lid containers could be produced commercially for McDonald's. The Company worked closely with Sweetheart and McDonald's to create an acceptable product design and meet required performance standards. During the first half of 2002 production at the Owings Mills facility ceased as Sweetheart contemplated construction of new, updated production lines. The Company has been negotiating with Sweetheart and certain equipment manufacturers to assess their interest in utilizing portions of the Company's existing production lines and infrastructure in Owings Mills; however, definitive agreements have not been reached and the Company is unable to determine the amount, if any, of compensation it might receive in disposing of its production lines in Owings Mills. As a result, the Company wrote down the remaining \$7.5 million of the equipment at Owings Mills during the year ended 2002. As of December 31, 2002 the Company's Owings Mills production lines are being carried on its balance sheet at a net book value of zero. The Company will continue its negotiations with Sweetheart and certain equipment manufacturers to dispose of its production lines in Owings Mills; however, failure to reach definitive agreements may require the Company to consider alternate approaches. If the Company is successful in disposing of its production lines in Owings Mills for consideration in excess of the carrying value of the assets, the Company might recognize gains upon such dispositions.

The Company's business plans for 2003 call for the transfer of operational and financial control of its manufacturing line in Germany to its manufacturing licensee, PolarCup EarthShell ApS. At such time as the machinery is demonstrated to perform at an agreed upon level, the Company expects to receive reimbursement for the replacement value of the line. The Company is carrying the equipment at its expected replacement value based on quotations from various equipment suppliers for the cost of an identical line. Failure of the equipment to perform at a level satisfactory to the licensee or failure to conclude the transfer of the lines to the licensee may require the Company to consider alternative

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approaches to utilize the equipment, such as finding an alternate licensee to take over, relocating the equipment, or dismantling the line. Any one of these alternatives could have a negative economic impact on the carrying value of the equipment.

The consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. During the period from November 1, 1992 (inception) to December 31, 2002, the Company has incurred a cumulative net loss of \$295,833,940 and has a working capital deficit of \$8,314,872 at December 31, 2002. These factors, along with others, may indicate that the Company will be unable to continue as a going concern for a reasonable period of time. Management's plans to address these factors include reducing expenses and raising cash from either the issuance of debt or equity securities, or both, and through transferring its demonstration manufacturing lines to its operating partners. In March 2003, the Company completed a transaction involving the issuance of convertible debt. This transaction provided the Company with cash of approximately \$11.0 million; however, use of these proceeds is subject to a number of restrictions, including a restriction not to use more than \$4.0 million of the proceeds to pay existing accounts payable. While the Company believes that the cash raised through the convertible debenture financing transaction in March 2003 combined with expense reductions will be sufficient for the Company to meet its current obligations and to cover operating expenses through the year ending December 31, 2003, the Company may need to raise additional financing. The Company can not assure that its expense reduction programs will be successful, that additional financing will be available to it, or, if available, that the terms will be satisfactory, or that it will be able to negotiate mutually agreeable terms for the transfer of its manufacturing lines to its operating partners. If the Company is not successful in reducing expenses, or raising additional capital it may not be able to continue as a going concern for a reasonable period of time. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

#### **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

The Company's treasury function controls all decisions and commitments regarding cash management and financing arrangements. Treasury operations are conducted within a framework that has been authorized by the board of directors.

The Company is exposed to interest rate risk on its fixed rate short-term working capital loans to EKI and its fixed rate long-term convertible debenture obligations. As of December 31, 2002, these fixed rate debt obligations totaled approximately \$10.7 million, or \$1.7 million of short-term loans and \$9.0 million of long-term loans. The short-term working capital loans bear interest at a fixed rate of 10% per annum. The long-term convertible debentures bear interest at a fixed rate of 1.5% per annum. While generally an increase in market interest rates will decrease the value of this debt, and decreases in rates will have the opposite effect, we are unable to estimate the impact that interest rate changes will have on the value of the substantial majority of this debt as there is no active public market for this debt. However, a hypothetical 100-basis point increase in the interest rates associated with the Company's borrowings during 2002, would have increased our net

loss by approximately \$0.05 million.

**ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

See Index to Consolidated Financial Statements and Schedules.

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

None.

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**PART III**

**ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT**

The information required by this item will be contained in the Company's Proxy Statement for its 2003 annual meeting of stockholders, which will be filed on or before April 30, 2003 and is incorporated herein by reference.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item will be contained in the Company's Proxy Statement for its 2003 annual meeting of stockholders, which will be filed on or before April 30, 2003 and is incorporated herein by reference.

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

The information required by this item will be contained in the Company's Proxy Statement for its 2003 annual meeting of stockholders, which will be filed on or before April 30, 2003 and is incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

The information required by this item will be contained in the Company's Proxy Statement for its 2003 annual meeting of stockholders, which will be filed on or before April 30, 2003 and is incorporated herein by reference.

**ITEM 14. CONTROLS AND PROCEDURES**

The Company maintains a system of internal controls and procedures designed to provide reasonable assurance as to the reliability of the Company's published consolidated financial statements and other disclosures included in this report. Within the 90-day period prior to the date of this report, the Company's Chief Executive Officer and Chief Financial Officer evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures pursuant to Rule 13a-14 of the Securities Exchange Act of 1934. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective to ensure that the Company is able to collect, process and disclose the information it is required to disclose in the report it files with the Securities and Exchange Commissions within the required time periods.

Since the date of the most recent evaluation of the Company's internal controls by the Company's Chief Executive Officer and Chief Financial Officer, there have been no significant changes in such controls or in other factors that could have significantly affected those controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

**ITEM 15. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this item will be contained in the Company's Proxy Statement for its 2003 annual meeting of stockholders, which will be filed on or before April 30, 2003 and is incorporated herein by reference.

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**PART IV****ITEM 16. EXHIBITS, CONSOLIDATED FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K**

(a)

**Index to Consolidated Financial Statements****1. Consolidated Financial Statements:**

Independent Auditors' Report	F-2
Consolidated Balance Sheets as of December 31, 2002, and 2001	F-3
Consolidated Statements of Operations for the years ended December 31, 2002, 2001, 2000, and for the period from November 1, 1992 (inception) through December 31, 2002	F-4
Consolidated Statements of Stockholders' Equity (Deficit) for the years ended December 31, 2002, 2001, 2000, 1999, 1998, 1997, 1996, 1995, 1994 and 1993	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2002, 2001, 2000, and the period from November 1, 1992 (inception) through December 31, 2002	F-6
Notes to the Consolidated Financial Statements	F-7

**2. Consolidated Financial Statement Schedules:**

All schedules have been omitted because they are not required, not applicable, or the information required to be set forth therein is included in the Company's Consolidated Financial Statements or the Notes therein.

(b)

**Reports on Form 8-K**

The Company filed two reports on Form 8-K during the quarter ended December 31, 2002. Information regarding the items reported on is as follows:

<b>Date</b>	<b>Item Reported On</b>
October 30, 2002	The Company announced preliminary third quarter 2002 financial and operating results for the period ended September 30, 2002.
November 26, 2002	The Company announced that it is not in compliance with two Nasdaq National Market minimum requirements and is considering being listed on the Nasdaq SmallCap market.

(c)

**Exhibits**

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- 3.1 Certificate of Incorporation of the Company.(1)
- 3.2 Bylaws of the Company.(1)
- 3.3 Certificate of Designation, Preferences Relative, Participating, Optional and Other Special Rights of the Company's Series A Cumulative Senior Convertible Preferred Stock.(1)
- 3.4 Amended and Restated Certificate of Incorporation of the Company.(1)
- 3.5 Amended and Restated Bylaws of the Company.(1)
- 4.1 Specimen certificate of Common Stock.(1)
- 4.2 Form of Secured Convertible Debenture due August 12, 2007.(13)
- 4.3 Form of Warrant to purchase Common Stock dated August 12, 2002.(13)
- 4.4 Form of Note under Loan Agreement dated as of September 9, 2002 between the Company and E. Khashoggi Industries, LLC.(15)
- 4.5 Form of Secured Convertible Debenture due March 5, 2006.(17)
- 4.6 Intellectual Property Security Agreement dated as of March 5, 2003 among the Company, E. Khashoggi Industries, LLC and the investors signatory thereto.(17)

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- 4.7 Waiver and Amendment to Debentures and Warrants dated as of March 5, 2003 among the Company and the purchasers identified on the signature pages thereto.(17)
  - 4.8 Second Amendment to Securities Purchase Agreement and Warrants, dated February 24, 2003 among the Company and the purchasers identified on the signature pages thereto.(17)
  - 4.9 Exchange Agreement dated as of March 5, 2003 between the Company and the institutional investor signatory thereto.(17)
  - 10.1 Amended and Restated License Agreement dated February 28, 1995 by and between the Company and E. Khashoggi Industries("EKI").(2)
  - 10.2 Registration Rights Agreement dated as of February 28, 1995 by and between the Company and EKI, as amended.(1)
  - 10.3 Employment Agreement dated October 19, 1993 by and between the Company and Scott Houston, as amended.(1)
  - 10.4 Stock Purchase Agreement dated as of September 16, 1993 by and between the Company and the persons named therein.(1)
  - 10.5 Registration Rights Agreement dated as of September 16, 1993 by and between the Company and the persons named therein, as amended.(1)
  - 10.6 Sublicense Agreement dated June 19, 1995 by and between the Company and Dopaco, Inc, as amended.(1)
  - 10.7 Sublicense Agreement dated November 9, 1994 by and between the Company and Genpak Corporation, as amended.(1)
  - 10.8 EarthShell Container Corporation 1994 Stock Option Plan.(1)
  - 10.9 EarthShell Container Corporation 1995 Stock Incentive Plan.(1)
  - 10.10 Form of Stock Option Agreement under the EarthShell Container Corporation 1994 Stock Option Plan.(1)
  - 10.11 Form of Stock Option Agreement under the EarthShell Container Corporation 1995 Stock Incentive Plan.(1)
  - 10.12 Warrant to Purchase Stock issued July 2, 1996 by the Company to Imperial Bank.(1)
  - 10.13 Warrant to Purchase Stock issued June 7, 1996 by the Company to Imperial Bank.(1)
  - 10.14 Employment Agreement dated October 1, 1997 by and between the Company and Simon K. Hodson.(1)
  - 10.15 Amended and Restated Technical Services and Sublease Agreement dated October 1, 1997 by and between the Company and EKI.(1)
  - 10.16 Amended and Restated Agreement for Allocation of Patent Costs dated October 1, 1997 by and between the Company and EKI.(1)
  - 10.17 Warrant to Purchase Stock issued November 15, 1996 by the Company to Imperial Bank.(1)
  - 10.18 Letters dated August 22, 1997 from Shelby Yastrow to Simon K. Hodson and Simon K. Hodson to Shelby Yastrow.(1)
  - 10.19 Warrant to Purchase Stock issued October 6, 1997 by the Company to Imperial Bank.(1)
  - 10.20 Sublicense Agreement dated October 16, 1997 by and between the Company and Sweetheart Cup Company Inc.(1)
  - 10.21 Operating Agreement for the Production of Hinged Sandwich Containers for McDonald's Corporation between Sweetheart Cup Company Inc. and the Company dated as of October 16, 1997.(1)
  - 10.22 Warrant to Purchase Stock dated December 31, 1997 by the Company to Imperial Bank.(1)
  - 10.23 Letter Agreement re Haas/Biopac Technology dated February 17, 1998 by and between the Company and EKI.(1)

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- 10.24 Second Amendment to 1995 Stock Incentive Plan of the Company.(1)
- 10.25 Amendment No. 2 to Registration Rights Agreement dated as of September 16, 1993.(1)

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- 10.26 Amendment No. 2 to Registration Rights Agreement dated February 28, 1995.(1)
  - 10.27 Employment Agreement dated March 23, 1998 by and between the Company and William F. Spengler.(3)
  - 10.28 Employment Agreement dated April 15, 1998 by and between the Company and Vincent J. Truant.(3)
  - 10.29 Employment Agreement dated July 22, 1998 by and between the Company and Michael M. Hagerty.(3)
  - 10.30 Lease Agreement dated June 4, 1998 by and between the Company and Baltimore Center Associates Limited Partnership.(3)
  - 10.31 Lease Agreement dated May 1, 1998 by and between the Company and ORIX SBAP Goleta Venture, a general partnership.(3)
  - 10.32 Design, Procurement and Construction Management Services Agreement dated May 13, 1998 by and among the Company, Sweetheart Cup Company Inc., CH2M Hill Industrial Design Corporation, and IDC Construction Management, Inc.(3)
  - 10.33 First Amendment dated June 2, 1998 to the Amended and Restated License Agreement by and between the Company and E. Khashoggi Industries("EKI").(4)
  - 10.34 First Amendment to 1995 Stock Incentive Plan of the Company.(5)
  - 10.35 Third Amendment to 1995 Stock Incentive Plan of the Company.(6)
  - 10.36 Fourth Amendment to 1995 Stock Incentive Plan of the Company.(6)
  - 10.37 Lease Agreement dated July 2, 1999 by and between the Company and Chippewa limited partnership.(7)
  - 10.38 Employment Agreement dated April 15, 2000 by and between the Company and Richard DiPasquale.(7)
  - 10.39 Lease Agreement dated August 23, 2000 by and between the Company and Heaver Properties, LLC.(7)
  - 10.40 Termination of Lease Agreement dated October 13, 2000 by and between the Company and Chippewa limited partnership.(7)
  - 10.41 The Food Group Settlement Agreement.(8)
  - 10.42 Joint Development Agreement by and between the Company and DuPont.(8)
  - 10.43 Lease Agreement dated April 1, 2001 by and between the Company and Nancarrow.(8)
  - 10.44 Employment agreement dated March 2001 by and between the Company and Dr. Per Anderson.(8)
  - 10.45 Employment agreement dated March 16, 2001 by and between the Company and Simon Hodson.(8)
  - 10.46 Purchase and sale agreement by and between the Company and EKI for certain fixed assets.(8)
  - 10.47 Letter of agreement by and between the Company and Donald Samaria.(8)
  - 10.48 Settlement Agreement with Novamont dated August 3, 2001.(9)
  - 10.49 Amendment to Common Stock Purchase Agreement dated March 28, 2001.(9)
  - 10.50 License Agreement by and between the Company and Green Earth Packaging, Inc.(10)
  - 10.51 License Agreement by and between the Company and Green Packaging SDN BHD.(10)
  - 10.52 Common Stock Purchase Agreement dated as of May 15, 2002 between the Company and the purchaser signatory thereto.(11)
  - 10.53 Common Stock Purchase Agreement dated as of July 30, 2002 between the Company and the purchaser signatory thereto.(12)
  - 10.54 Securities Purchase Agreement dated as of August 12, 2002 between the Company and the investors signatory thereto.(13)
  - 10.55 Amendment #1 to Employment Agreement dated as of May 15, 2002 by and between the Company and Vince Truant.(14)
  - 10.56 Loan Agreement dated as of September 9, 2002 between the Company and E. Khashoggi Industries, LLC.(15)

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- 10.57 Alliance Agreement dated 25 July, 2002 between the Company and E. I. DuPont de Nemours and Company.(16)
  - 10.58 Second Amendment dated 29 July, 2002 to Amended and Restated License Agreement between E. Khashoggi Industries, LLC and the Company.(16)

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- 10.59 License and Information Transfer Agreement dated 29 July, 2002 between the Biotec Group and the Company.(16)
  - 10.60 Loan and Securities Purchase Agreement dated as of March 5, 2003 between the Company and the investors signatory thereto.(17)
  - 23.1 Independent Auditor's consent
  - 99.1 Certification of Chief Executive Officer and certification of Chief Financial Officer.
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- (1) Previously filed, as an exhibit to the Company's Registration Statement on Form S-1 and amendments thereto, File no. 333-13287, and incorporated herein by reference.
- (2) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q, for the quarter ended March 31, 1998, and incorporated herein by reference.
- (3) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q, for the quarter ended June 30, 1998, and incorporated herein by reference.
- (4) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q, for the quarter ended September 30, 1998, and incorporated herein by reference.
- (5) Previously filed as an exhibit to the Company's annual report on Form 10-K, for the fiscal year ended December 31, 1998, and incorporated herein by reference.
- (6) Previously filed as part of the Company's definitive proxy statement on Schedule 14A, file no. 000-23567, for its 1999 annual meeting of stockholders, and incorporated herein by reference.
- (7) Previously filed as an exhibit to the Company's annual report on Form 10-K, for the fiscal year ended December 31, 2000, and incorporated herein by reference.
- (8) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q, for the quarter ended March 31, 2001, and incorporated herein.
- (9) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q, for the quarter ended June 30, 2001, and incorporated herein.
- (10) Previously files as an exhibit to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2002, and incorporated herein by reference.
- (11) Previously filed as an exhibit to the Company's current report on Form 8-K dated May 15, 2002, and incorporated herein by reference.
- (12) Previously filed as an exhibit to the Company's current report on Form 8-K dated July 30, 2002, and incorporated herein by reference.
- (13) Previously filed as an exhibit to the Company's current report on Form 8-K dated August 12, 2002, and incorporated herein by reference.
- (14) Previously filed as an exhibit to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2002, and incorporated herein by reference.





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Signature	Title	Date
<hr/> <i>/s/</i> HAMLIN JENNINGS <hr/>	Director	April 29, 2003
Hamlin Jennings		
<hr/> <i>/s/</i> GEORGE ROLAND <hr/>	Director	April 29, 2003
George Roland		

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**CERTIFICATIONS**

I, Simon K. Hodson, certify that:

1. I have reviewed this annual report on Form 10-K of EarthShell Corporation;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b)

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any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: April 29, 2003

By: /s/ SIMON K. HODSON

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Simon K. Hodson  
Chief Executive Officer

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**CERTIFICATIONS**

I, D. Scott Houston, certify that:

1. I have reviewed this annual report on Form 10-K of EarthShell Corporation;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material



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December 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2002 and 2001, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2002 and for the period from November 1, 1992 (inception) through December 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company is a development stage enterprise engaged in the commercialization of foodservice disposable packaging with the environment in mind. As discussed in the notes to the consolidated financial statements, during the period from November 1, 1992 (inception) to December 31, 2002, the Company has incurred a cumulative net loss of \$295,833,940 and has a working capital deficit of \$8,314,872 at December 31, 2002. These matters raise substantial doubt about the Company's ability to continue as a going concern. Management's plans concerning these matters are also described in the notes to the consolidated financial statements. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Deloitte & Touche LLP  
Deloitte & Touche LLP

Los Angeles, California  
April 29, 2003

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### EARTHSHELL CORPORATION (A Development Stage Enterprise) CONSOLIDATED BALANCE SHEETS

	December 31,	
	2002	2001
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 111,015	\$ 828,007
Restricted cash	12,500,000	
Prepaid expenses and other current assets	570,802	580,472
	13,181,817	1,408,479
Total current assets		3,500,000
<b>RESTRICTED CASH</b>		<b>3,500,000</b>
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>4,476,174</b>	<b>14,591,111</b>
<b>INVESTMENT IN JOINT VENTURE</b>	<b>366,012</b>	<b>386,275</b>
	<b>\$ 18,024,003</b>	<b>\$ 19,885,865</b>
<b>LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 7,904,957	\$ 8,349,808

	December 31,	
Payable to related party	578,779	
Accrued purchase commitment	3,500,000	
Notes payable to related party	1,745,000	
Convertible debentures	7,767,953	
	<u>21,496,689</u>	<u>8,349,808</u>
<b>STOCKHOLDERS' (DEFICIT) EQUITY</b>		
Preferred Stock, \$.01 par value, 10,000,000 shares authorized; 9,170,000 Series A shares designated; no shares issued and outstanding as of December 31, 2002 and 2001		
Common stock, \$.01 par value, 200,000,000 shares authorized; 144,655,641 and 118,323,054 shares issued and outstanding as of December 31, 2002 and 2001, respectively	1,446,556	1,183,231
Additional paid-in common capital	290,931,330	266,595,422
Deficit accumulated during the development stage	(295,833,940)	(256,242,596)
Accumulated other comprehensive loss	(16,632)	
	<u>(3,472,686)</u>	<u>11,536,057</u>
<b>TOTAL</b>	<u>\$ 18,024,003</u>	<u>\$ 19,885,865</u>

See Notes to Consolidated Financial Statements.

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**EARTHSHELL CORPORATION**  
**(A Development Stage Enterprise)**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Year Ended December 31,			November 1, 1992 (inception) through December 31, 2002
	2002	2001	2000	
<b>Expenses:</b>				
Related party research and development	\$ 1,488,070	\$ 1,465,250	\$ 8,654,612	\$ 69,878,908
Other research and development	25,401,869	45,683,165	28,610,758	134,277,655
Related party general and administrative expenses	(24,444)	(24,444)	157,593	2,191,614
Other general and administrative expenses	9,614,037	9,658,116	6,685,777	62,422,685
Depreciation and amortization	3,099,367	5,874,144	5,703,630	22,461,430
Related party patent expenses			362,244	8,693,105
Gain on sale of property and equipment	(441,413)			(441,413)
	<u>39,137,486</u>	<u>62,656,231</u>	<u>50,174,614</u>	<u>299,483,984</u>
Interest income	(134,391)	(355,520)	(1,263,809)	(10,809,633)
Related party interest expense	66,599			4,837,330
Other interest expense	199,880			1,988,618

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	Year Ended December 31,			November 1, 1992 (inception)
				through December 31, 2002
Debt conversion cost	320,970			320,970
	39,590,544	62,300,711	48,910,805	295,821,269
Income Taxes	800	800	800	12,671
Net Loss	39,591,344	62,301,511	48,911,605	295,833,940
Preferred Dividends				9,926,703
Net Loss Available To Common Stockholders	\$ 39,591,344	\$ 62,301,511	\$ 48,911,605	\$ 305,760,643
Basic And Diluted Loss Per Common Share	\$ 0.29	\$ 0.56	\$ 0.48	\$ 3.20
Weighted Average Number Of Common Shares	135,326,037	112,231,689	101,419,330	95,526,926

See Notes to Consolidated Financial Statements.

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**EARTHSHELL CORPORATION**  
(A Development Stage Enterprise)  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY**

	Cumulative Convertible Preferred Stock Series A		Additional Paid-In Preferred Capital	Common Stock		Additional Paid-In Common Capital	Deficit Accumulated during Development Stage	Accumulated Other Comprehensive Loss	Totals
	Shares	Amount		Shares	Amount				
<b>ISSUANCE OF COMMON STOCK AT INCEPTION</b>				82,530,000	\$ 3,150	\$ 6,850			\$ 10,000
Sale of preferred stock, net	6,988,850	\$ 267	\$ 24,472,734						24,473,001
Net loss							\$ (7,782,551)		(7,782,551)
<b>BALANCE, DECEMBER 31, 1993</b>	6,988,850	267	24,472,734	82,530,000	3,150	6,850	(7,782,551)		16,700,450
Net loss							(16,582,080)		(16,582,080)
<b>BALANCE, DECEMBER 31, 1994</b>	6,988,850	267	24,472,734	82,530,000	3,150	6,850	(24,364,631)		118,370
Contribution to equity						1,117,723			1,117,723
Net loss							(13,914,194)		(13,914,194)
<b>BALANCE, DECEMBER 31, 1995</b>	6,988,850	267	24,472,734	82,530,000	3,150	1,124,573	(38,278,825)		(12,678,101)
Contribution to equity						650,000			650,000
Issuance of stock warrants						246,270			246,270
Net loss							(16,950,137)		(16,950,137)
<b>BALANCE, DECEMBER 31, 1996</b>	6,988,850	267	24,472,734	82,530,000	3,150	2,020,843	(55,228,962)		(28,731,968)
Compensation related to stock options, warrants and stock grants.						3,156,659			3,156,659
Net loss							(18,992,023)		(18,992,023)
	6,988,850	267	24,472,734	82,530,000	3,150	5,177,502	(74,220,985)		(44,567,332)

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BALANCE, DECEMBER 31, 1997	Cumulative Convertible Preferred Stock							
	Series A	69,621	(69,621)	822,150	(822,150)			
262 to 1 stock split								
Conversion of preferred stock into common stock	(6,988,850)	(69,888)	(24,403,113)	6,988,850	69,888	24,403,113		
Issuance of common stock				10,526,316	105,263	205,883,493	205,988,756	
Preferred stock dividends						(9,926,703)	(9,926,703)	
Net loss						(26,620,052)	(26,620,052)	
<b>BALANCE, DECEMBER 31, 1998</b>				100,045,166	1,000,451	224,715,255	(100,841,037)	124,874,669
Net loss							(44,188,443)	(44,188,443)
<b>BALANCE, DECEMBER 31, 1999</b>				100,045,166	1,000,451	224,715,255	(145,029,480)	80,686,226
Issuance of common stock				4,457,169	44,572	10,477,216		10,521,788
Net loss							(48,911,605)	(48,911,605)
<b>BALANCE, DECEMBER 31, 2000</b>				104,502,335	1,045,023	235,192,471	(193,941,085)	42,296,409
Issuance of common stock				13,520,719	135,208	30,418,832		30,554,040
Compensation related to stock options, warrants and stock grants				300,000	3,000	984,119		987,119
Net loss							(62,301,511)	(62,301,511)
<b>BALANCE, DECEMBER 31, 2001</b>				118,323,054	1,183,231	266,595,422	(256,242,596)	11,536,057
Issuance of common stock				24,308,236	243,082	21,658,634		21,901,716
Common stock warrants issued in connection with convertible debentures						1,521,046		1,521,046
Conversion of convertible debentures to common stock				2,024,351	20,243	979,757		1,000,000
Debentures conversion cost						176,471		176,471
Net loss							(39,591,344)	(39,591,344)
Foreign currency translation adjustment							\$ (16,632)	(16,632)
Comprehensive loss								(39,607,976)
<b>BALANCE, DECEMBER 31, 2002</b>	\$	\$	144,655,641	\$ 1,446,556	\$ 290,931,330	\$ (295,833,940)	\$ (16,632)	\$ (3,472,686)

See Notes to Consolidated Financial Statements

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**EARTHSHELL CORPORATION**  
**(A Development Stage Enterprise)**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

Year Ended December 31,

November 1,  
1992  
(inception)  
through  
December 31,  
2002



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	2002	2001	2000	1999
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>				
Net loss	\$ (39,591,344)	\$ (48,911,605)	\$ (48,911,605)	\$ (295,833,940)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	3,099,367	5,874,144	5,703,631	22,461,430
Compensation related to issuance of stock, stock options and warrants to directors, consultants and officers		987,119		4,848,641
Amortization and accretion of debenture issue costs	144,500			415,777
Debentures conversion cost	320,970			320,970
Loss on sale, disposal or impairment of property and equipment	9,340,375	19,386,412	11,968,967	47,213,540
Equity in the losses from joint venture	20,263	37,153	21,890	149,426
Accrued purchase commitment	3,500,000			3,500,000
Net loss on sale of investments				32,496
Accretion of discounts on investments				(410,084)
Changes in operating assets and liabilities:				
Prepaid expenses and other assets	9,670	(87,583)	21,773	(570,802)
Accounts payable and accrued expenses	(444,851)	2,438,911	784,307	7,904,957
Payable to related party	578,779	(266,312)	(1,119,425)	578,779
Net cash used in operating activities	(23,022,271)	(33,931,667)	(31,530,462)	(209,388,810)
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>				
Purchase of investments U.S. government securities				(52,419,820)
Purchase of restricted time deposit in connection with purchase commitment				(3,500,000)
Proceeds from sales and redemption of investments			8,970,638	52,797,408
Proceeds from sales of property and equipment	477,566			775,236
Investment in joint venture				(515,438)
Purchase of property and equipment	(2,802,371)	(3,586,020)	(6,582,863)	(75,798,115)
Net cash (used in) provided by investing activities	(2,324,805)	(3,586,020)	2,387,775	(78,660,729)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>				
Proceeds from issuance of common stock	21,901,716	30,554,040	10,521,788	284,040,180
Common stock issuance costs				(15,178,641)
Proceeds from issuance of convertible debentures	10,000,000			10,000,000
Purchase of restricted time deposit in connection with issuance of convertible debentures	(10,000,000)			(10,000,000)
Proceeds from release of restricted time deposit upon conversion of convertible debentures into common stock	1,000,000			1,000,000
Proceeds from issuance of notes payable to related party	4,825,000			19,095,000
Repayment of notes payable to related party	(3,080,000)			(15,325,651)
Proceeds from drawings on line of credit with bank				14,000,000
Repayment of line of credit with bank				(14,000,000)
Preferred dividends paid				(9,926,703)
Proceeds from issuance of preferred stock				25,675,000
Preferred stock issuance costs				(1,201,999)
Net cash provided by financing activities	24,646,716	30,554,040	10,521,788	288,177,186
Effect of exchange rate changes on cash and cash equivalents	(16,632)			(16,632)
<b>(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS</b>	(716,992)	(6,963,647)	(18,620,899)	111,015
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD</b>	828,007	7,791,654	26,412,553	26,412,553
<b>CASH AND CASH EQUIVALENTS, END OF PERIOD</b>	\$ 111,015	\$ 828,007	\$ 7,791,654	\$ 111,015

**SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION**

## Cash paid for:

Income taxes	\$	800	\$	800	\$	800	\$ 11,871
Interest		21,038					3,049,298
Common stock warrants issued in connection with convertible debentures		<u>1,521,046</u>					1,827,214
Conversion of convertible debentures into common stock		1,000,000					1,000,000
Transfer of property from EKI							28,745
Conversion of preferred stock into common stock							69,888

**SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:**

In 2002, warrants for the purchase of 2,500,000 shares of common stock were issued in connection with the issuance of the convertible debentures. The estimated fair value of the warrants of \$1,521,046, based upon the Black-Scholes method of valuation, was recorded as an original issue discount thereby reducing the carrying value of the convertible debentures and as an increase in additional paid-in common capital.

In 2001, 300,000 shares of common stock were granted to consultants and officers with a fair market value on the date of grant of \$792,353.

In 2001, 130,000 stock options were granted to consultants. The Company recorded \$194,766 of expense in conjunction with these transactions.

See Notes to Consolidated Financial Statements.

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**EARTHSHELL CORPORATION**  
**(A Development Stage Enterprise)**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Basis of Presentation and Nature of Operations**

EarthShell Corporation was incorporated in Delaware on November 1, 1992 as a subsidiary of E. Khashoggi Industries, LLC (together with its predecessor entities, "EKI"). Beginning in January 2002, the consolidated financial statements of EarthShell Corporation include the accounts of its wholly-owned subsidiary, PolarCup EarthShell GmbH. All significant intercompany balances and transactions have been eliminated in consolidation. Both EarthShell Corporation and its subsidiary (collectively "EarthShell" or the "Company") are development stage enterprises. In connection with the formation of the Company, the Company entered into an Amended and Restated License Agreement (the "License Agreement") for certain technology developed by EKI, exclusively for use in connection with the manufacture and sale of selected disposable food and beverage containers for use in the foodservice industry. Investments in affiliated companies with a 20% to 50% ownership interest where control does not exist are accounted for using the equity method. The accompanying consolidated financial statements reflect only the costs and expenses related to the application of the technology under development since the Company's formation on November 1, 1992.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. During the period from November 1, 1992 (inception) to December 31, 2002, the Company has incurred a cumulative net loss of \$295,833,940 and has a working capital deficit of \$8,314,872 at December 31, 2002. These factors, along with others, may indicate that the Company will be unable to continue as a going concern for a reasonable period of time.

Management's plans to address these factors include reducing expenses and raising cash from either the issuance of debt or equity securities, or both, and through transferring its demonstration manufacturing lines to its operating partners. In March 2003, the Company completed a transaction involving the issuance of convertible debt. This transaction (see Subsequent Events) provided the Company with cash of approximately \$11.0 million; however, use of these proceeds is subject to a number of restrictions, including a restriction not to use more than \$4.0 million of the proceeds to pay existing accounts payable. The Company may need to raise additional financing. The Company can not assure that its expense reduction programs will be successful, that additional financing will be available to it, or, if available, that the terms will be satisfactory, or that it will be able to negotiate mutually agreeable terms for the transfer of its manufacturing lines to its operating partners. While the Company believes that the cash raised through the convertible debenture financing transaction in March 2003 combined with expense reductions will be sufficient to meet its current obligations and to cover operating expenses through the year ending December 31, 2003, if the Company is not successful in reducing expenses, or raising additional capital it may not be able to continue as a going concern for a reasonable period of time.

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The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

Management has made estimates and assumptions in the preparation of these consolidated financial statements that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

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In November 2002, the Company announced that it is not in compliance with two Nasdaq National Market minimum requirements and is considering being listed on the Nasdaq SmallCap market. Since March 5, 2003 the Company's common stock is traded on the NASDAQ SmallCap Market under the symbol: EARTH

### Operations and Financing

The Company was engaged in initial concept development from 1993 to 1998. During this period, the Company focused on enhancing the material science technology licensed from EKI, initial development of the Company's foam packaging products (primarily, its hinged-lid sandwich containers, which are referred to as "hinged-lid containers"), and the development of relationships with key licensees and end-users.

Since 1998, the Company has been primarily engaged in commercial validation of the EarthShell Packaging container for the McDonald's® Corporation ("McDonald's") Big Mac® sandwich, in commercialization of plates, bowls and sandwich wraps for other customers, and other market development activities. During this stage, the Company has worked to demonstrate the commercial viability of its business model by optimizing product design, garnering support from key members of the environmental community, expanding validation of the environmental profile through third party evaluations, developing commercially viable manufacturing processes, establishing and refining licensing arrangements with the Company's licensed partners, and validating product performance and price acceptance through commercial contracts with influential purchasers in key segments of the foodservice market. In cooperation with its manufacturing partners, the Company has financed and built initial commercial demonstration production capacity and has sold limited quantities of plates, bowls, and hinged-lid containers.

As demonstration of the business fundamentals to licensees is accomplished, the Company expects that its operating partners will assume operational and financial responsibility for the initial commercial production lines or will build additional capacity. The Company intends to expand the use of EarthShell Packaging in the U.S. and in international markets through agreements with additional licensed partners. By leveraging the infrastructure of its manufacturing licensees, the Company believes the go-to-market strategy will accelerate the market penetration of EarthShell Packaging.

Currently, the Company's strategic relationships include Detroit Tool and Equipment ("DTE"), Green Earth Packaging, Inc. ("GEP"), E. I. DuPont de Nemours and Company ("DuPont"), and Sweetheart Cup Company Inc. ("Sweetheart"), all in the U.S., Huhtamäki Oyj, ("Huhtamäki") in Europe, and Green Packaging SDN BHD ("Green Packaging") in Malaysia. The Company has not recorded any revenues from operations since its inception, and proceeds from sales of plates, bowls and hinged-lid containers to date have been recorded as an offset to the cost of its demonstration manufacturing operations.

As part of the Company's initial public offering on March 27, 1998, the Company issued 10,526,316 shares of common stock, for which it received net proceeds of \$206 million. On April 18, 2000 and January 4, 2001, the Company filed S-3 shelf registration statements for 5 million and 15 million shares, respectively, of the Company's common stock. During the years ended December 31, 2002, 2001, and 2000 the Company sold approximately 1.7 million, 13.5 million and 4.5 million shares of common stock under such registration statements and received net proceeds from such sales of approximately \$2.3 million, \$30.6 million and \$10.5 million, respectively. All shares available under such registration statements have been sold as of December 2002.

In December of 2001 the Company filed an additional shelf registration statement that provides for the sale of up to \$50 million of securities, including secured or unsecured debt securities, preferred stock, common stock, and warrants. These securities may be offered, separately or together, in distinct series, and amounts, at prices and terms to be set forth in the prospectus contained in the registration

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statement, and in subsequent supplements to the prospectus. During the year ended December 31, 2002, the Company sold 22.6 million shares of common stock under such registration statement and received net proceeds from such sales of \$19.6 million.

On August 12, 2002 the Company issued \$10.0 million in aggregate principal amount of convertible debentures, due August 2007, (the "2007 Debentures") and warrants to purchase 2.5 million shares of common stock to institutional investors for proceeds of \$10.0 million (see *Convertible Debenture*). The terms of the debentures requires the proceeds be held in restricted cash accounts linked to irrevocable letters of credit in favor of each debenture holder such that unrestricted access to the proceeds from the sale of the debentures generally occurs only upon conversion of the debentures into shares of the Company's common stock (see *Restricted Cash*). In March 2003, the Company issued \$10.55 million in aggregate principal amount of convertible debentures, due March 2006, (the "2006 Debentures") and 5.7 million shares of common stock to a group of institutional investors for net proceeds of approximately \$9.0 million. In connection with this transaction, the Company repaid \$5.2 million of the remaining balance of the 2007 Debentures, and exchanged \$2.0 million of the 2007 Debentures for the 2006 Debentures. This transaction provided the Company with net proceeds of approximately \$11.0 million. The Company's use of these proceeds is subject to a number of restrictions, including a restriction not to use more than \$4.0 million of the proceeds to pay existing accounts payable (see *Subsequent Events*). The remaining shares under the December 2001 shelf registration described above have been used to secure shares potentially issuable upon conversion of the 2006 Debentures.

During 2002, the Company's largest shareholder, EKI, made various simple interest working capital loans to the Company. These loans bear interest at a rate of 7% or 10% per annum, and are payable on demand. As of December 31, 2002, the outstanding principal balance of these loans was \$1,745,000. In connection with the March 2003 convertible debenture financing the remaining outstanding balance of these loans was subordinated to the 2006 Debentures. (see *Related Party Transactions*)

### **Prospective Accounting Standards**

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN No. 45"), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. FIN No. 45 elaborates on the disclosures to be made by a guarantor about its obligations under certain guarantees. FIN No. 45 also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the liability undertaken in issuing the guarantee. FIN No. 45 specifically identifies certain obligations that are excluded from the provisions related to recognizing a liability at inception; however, these guarantees are subject to the disclosure requirements of FIN No. 45. The initial recognition and measurement provisions of FIN No. 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements are effective for all annual periods ending after December 15, 2002. The Company does not expect the adoption of the recognition requirements of FIN No. 45 in 2003 to have a material impact on the Company's consolidated financial condition or results of operations.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure, an amendment of FASB Statement No. 123*. SFAS No. 148 amends SFAS No. 123, *Accounting for Stock-Based Compensation*, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS No. 148 amends certain disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. SFAS No. 148's amendment of the transition and annual disclosure requirements are effective for fiscal years ending after December 15, 2002. The Company does not intend to adopt the fair value provision of SFAS No. 123.

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### **Other Comprehensive Income**

The Company has reflected the provisions of SFAS No. 130, "Reporting Comprehensive Income", in the accompanying consolidated financial statements for all periods presented. The accumulated comprehensive loss and other comprehensive loss as reflected in the accompanying consolidated financial statements, respectively, consists of foreign currency translation adjustments.

### **Foreign Currency Translation**

Assets and liabilities of the Company's foreign subsidiary, PolarCup EarthShell GmbH, are translated into United States dollars at the exchange rate in effect at the close of the period, and revenues and expenses are translated at the weighted average exchange rate during the period. The aggregate effect of translating the financial statements of PolarCup EarthShell GmbH is included as a separate component of stockholders' equity. Foreign exchange gains/losses have been insignificant.

## Reclassifications

Certain items in the 2001 and 2000 financial statements have been reclassified to conform to the 2002 presentation.

### Cash and Cash Equivalents

Cash and cash equivalents include cash, funds invested in money market funds and cash invested temporarily in various instruments with maturities of three months or less at the time of purchase. The money market fund deposits have an investment objective to provide high current income to the extent consistent with the preservation of capital and the maintenance of liquidity and, therefore, are subject to minimal risk.

### Restricted Cash

At March 30, 1998, a certificate of deposit for \$3.5 million was opened as collateral for the letter of credit related to the Company's obligation under a letter agreement between the Company's majority stockholder, EKI, and the Company relating to a patent purchase agreement between EKI and a third party, as discussed in the *Commitments* note, and is classified as restricted cash on the balance sheets at December 31, 2002 and 2001. As of December 31, 2002, the \$3.5 million certificate of deposit is reflected as current in the accompanying balance sheet since the obligation will become payable on or about December 31, 2003.

In August 2002, proceeds from the issuance of \$10.0 million of the 2007 Debentures (see *Convertible Debentures*) were used to purchase restricted cash deposits to secure irrevocable letters of credit in favor of the debenture holders. Unrestricted access to the proceeds of the debentures occurs generally only upon conversion of the debentures into shares of the Company's common stock, accompanied by pro rata reductions in the letters of credit. At December 31, 2002, \$9.0 million of the proceeds were used to secure the irrevocable letters of credit. In March 2003 the Company prepaid \$5.2 million and restructured \$2.0 million of these secured convertible debentures, resulting in an outstanding aggregate balance of \$1.0 million as of March 31, 2003 (see *Subsequent Events*).

### Loss Per Common Share

Basic loss per common share is computed by dividing net loss available to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted loss per common share is computed by dividing net loss available to common stockholders by the weighted-average number of common shares outstanding plus an assumed increase in common shares

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outstanding for potentially dilutive securities, which consist of options and warrants to acquire common stock and convertible debentures. Net loss as reported is adjusted for preferred dividends. Potentially dilutive shares are excluded from the computation in loss periods, as their effect would be antidilutive. The dilutive effect of options and warrants to acquire common stock is measured using the treasury stock method. The dilutive effect of convertible debentures is measured using the if converted method. Basic and diluted loss per common share is the same for all periods presented because the impact of potentially dilutive securities is anti-dilutive. The dilutive effect of potentially dilutive securities was 463,153, 466,606, and 70,906, for the years ended at December 31, 2002, 2001 and 2000, respectively.

### Evaluation of Long-Lived Assets

In August 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," which supercedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of." SFAS No. 144 addresses financial accounting and reporting requirements for the impairment or disposal of long-lived assets. This statement also expands the scope of a discontinued operation to include a component of an entity, and eliminates the current exemption to consolidation when control over a subsidiary is likely to be temporary. The provisions of this statement are effective for fiscal years beginning after December 15, 2001 and interim periods within those fiscal years. Adoption of SFAS No. 144 in 2002 did not have a significant impact on the Company's financial statements.

The Company evaluates the recoverability of long-lived assets whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. If there is an indication that the carrying value of a long-lived asset may not be recoverable and the estimated future cash flows (undiscounted and without interest charges) from the use of the asset are less than the carrying value, a write-down is recorded to reduce the related asset to its estimated fair value (see *Property and Equipment*).

## Property and Equipment

Property and equipment are carried at cost. Depreciation and amortization is provided for using the straight-line method for financial reporting purposes based upon the estimated useful lives of the assets which range from three to seven years. The cost of assets sold or retired and the related amounts of accumulated depreciation are eliminated from the accounts and the resulting gain or loss is included in income. As described further below, the Company wrote down property and equipment related to commercialization of the EarthShell Packaging products technology by \$9.8 million in 2002, \$19.4 million in 2001, and \$12.0 million in 2000. The impairment charges were expensed to the category "Other research and development" in the accompanying Statements of Operations.

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The cost and accumulated depreciation of property and equipment at December 31 were as follows:

	2002	2001
	<u>          </u>	<u>          </u>
Commercial Manufacturing Equipment		
Owings Mills, Maryland	\$	\$ 10,000,000
Goettingen, Germany	4,000,000	2,915,215
Other Construction in Progress		544,833
	<u>          </u>	<u>          </u>
	4,000,000	13,460,048
Other Property and Equipment		
Product Development Center	2,077,438	3,793,737
Office Furniture and Equipment	742,931	774,146
Leasehold improvements	521,187	571,361
	<u>          </u>	<u>          </u>
	3,341,556	5,139,244
Total cost	7,341,556	18,599,292
Less: accumulated depreciation and amortization	(2,865,382)	(4,008,181)
	<u>          </u>	<u>          </u>
Property and equipment net	\$ 4,476,174	\$ 14,591,111
	<u>          </u>	<u>          </u>

The Company entered into a strategic relationship agreement with Sweetheart in late 1997 whereby the Company financed and built production lines at Sweetheart's Owings Mills, Maryland manufacturing facility to demonstrate that its hinged-lid containers could be produced commercially for McDonald's. The Company has worked closely with Sweetheart and McDonald's to create an acceptable product design and meet required performance standards. Since 1997 the Company had intended to transfer the production lines at Owings Mills to Sweetheart.

During 1999 and 2000 the Company consolidated its space in Owings Mills. In December 2000, management determined that the manufacturing configuration of the equipment at Owings Mills would have to be modified somewhat and additional process improvements implemented to accommodate product design changes and to achieve the design capacity of the plant. The reconfiguration of the lines was expected to result in a simplified manufacturing process. As a result of the planned modifications, the Company impaired \$11.0 million of assets located at Owings Mills during the fourth quarter of 2000, approximately \$0.7 million during the second quarter of 2000 and approximately \$0.3 million during the first quarter of 2000. In the fourth quarter of 2001, the Company wrote down \$12.3 million of property and equipment at Owings Mills to reflect the net realizable value of the equipment and machinery based on a quotation from a third party. During the first half of 2002 production at the Owings Mills facility ceased as Sweetheart contemplated construction of new, updated production lines. The Company has been negotiating with Sweetheart and certain equipment vendors to assess their interest in utilizing portions of the Company's existing production lines and infrastructure in Owings Mills in the construction of Sweetheart's new updated production lines; however, definitive agreements have not been reached and the Company is unable to determine the amount, if any, of compensation it might receive in disposing of its production lines and infrastructure in Owings Mills. As a result, the Company wrote down the remaining \$7.5 million of the equipment at Owings Mills during the year ended 2002; \$0.3 million in the third quarter and \$7.2 million in the fourth quarter. As of December 31, 2002 the Company's Owings Mills production lines are being carried on its balance sheet at a net book value of zero.

The commercial production line in Goettingen, Germany is being financed and constructed by the Company for the Company's joint venture (see *Investment in Joint Venture*) with Huhtamäki. During 2001, \$1.2 million of the Goettingen line was written off to reflect equipment

that had no further application in the product development cycle. During the third quarter of 2002 the Company concluded, after obtaining quotations from various machinery suppliers for an identical line, that

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\$1.7 million of the cost of the line will not be recoverable and therefore the carrying value of the line was written down by this amount of which \$1.6 million was recorded in the third quarter of 2002 and the remaining \$0.1 million was recorded in the fourth quarter of 2002.

During the fourth quarter of 2001 and the fourth quarter of 2002, \$5.9 million and \$0.5 million, respectively, of equipment at the Company's product development center was written off because it had no further application in the product development cycle.

### **Investment in Joint Venture**

On May 24, 1999, the Company entered into a joint venture agreement with Huhtamäki to commercialize EarthShell Packaging throughout Europe, Australia, New Zealand, and, on a country by country basis, Asia. The Company and Huhtamäki formed Polarcup EarthShell ApS ("PolarCup"), a Danish holding company, for the purpose of establishing operating companies to manufacture, market, sell and distribute EarthShell Packaging.

The Company contributed approximately 10,000 Euros as nominal share capital and 500,000 Euros for start-up capital. The Company has paid for the development of the initial commercial production line to be located at the Huhtamäki facility at Goettingen, Germany. After both joint venture partners agree that acceptable manufacturing economics can be achieved, the joint venture partners will share in the commercialization costs on an comparable basis. During 2002, 2001, and 2000 the Company recorded its equity in the losses of \$20,263, \$37,153, and \$21,890, respectively, on its investment in Polarcup EarthShell ApS.

### **Related Party Transactions**

In connection with the formation of the Company, the Company entered into a License Agreement (the "License Agreement") with EKI, a stockholder of the Company. Pursuant to the license agreement, as amended, the Company has an exclusive, worldwide, royalty-free license to use and license the EKI technology to manufacture and sell disposable, single-use containers for packaging or serving food or beverages intended for consumption within a short period of time (less than 24 hours) and to use certain trademarks owned by EKI in connection with the products covered under the License Agreement. The license continues to be in effect during the life of the patents licensed under the License Agreement covering the technologies. Patents currently issued do not begin to expire until 2012 and provide some protection through 2018. Pending patents, if granted, would extend protection through 2019. On July 29, 2002, the License Agreement was amended to expand the field of use for the EarthShell technology to include noodle bowls used for packaging instant noodles. The Company will pay to EKI 50% of any royalty or other consideration it receives in connection with the sale of products within this particular field of use. In addition, on July 29, 2002 the Company entered into a License & Information Transfer Agreement with Biotec, a wholly owned subsidiary of EKI, to utilize the Biotec technology for foodservice applications, including the food wraps used in foodservice applications (the "Biotec Agreement"). Effective January 1, 2001, EKI had previously granted to the Company priority rights to license certain product applications on an exclusive basis from Biotec in consideration for the Company's payment of a \$100,000 monthly licensing fee to Biotec. In addition, in consideration of the monthly payment, Biotec agreed to render technical services to the Company at Biotec's cost plus 5%. The licensing fee and services arrangements were continued in the Biotec Agreement. Under the terms of the Biotec Agreement, Biotec is entitled to receive 25% of any royalties or other consideration that the Company receives in connection with the sale of products utilizing the Biotec technology. For the years ended December 31, 2002 and 2001 the Company paid or accrued to EKI \$1,488,070 and \$1,465,250, respectively, under the License Agreement and Biotec Agreement, consisting of the \$100,000 per month licensing fee and materials and services provided by EKI, which vary based on the Company's given requirement. No such amounts were paid in 2000 under these agreements.

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From July 1, 1994 through December 31, 2000 the Company and EKI operated under various agreements pursuant to which the Company paid EKI for certain technical services and by which the Company subleased office space from EKI for \$5,600 per month. Technical services consisted of direct project labor hours incurred by EKI personnel at specified hourly billing rates and direct expenses incurred on approved projects. For the year ended December 31, 2000, the Company paid or accrued to EKI \$8,654,612 for services performed under the technical service agreements. Pursuant to resolutions adopted by the Board of Directors during 1999, the Company paid or accrued \$95,993 for salaries and benefits paid by EKI for administrative support personnel and \$61,600 for rent. Effective January 1, 2001 the Company and EKI ceased

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operating under these agreements, the Company hired directly from EKI the scientific, technical and administrative personnel it required for its operations and assumed direct responsibility for the lease obligations related to the office and laboratory space the Company was subleasing from EKI in Santa Barbara, California. The Company did not assume any accrued compensation obligations in connection with the transfer of the employees, and EKI remained obligated to pay all accrued vacation and severance liabilities. The Company entered into a new lease for the Santa Barbara office (cancelable on six-months' notice) beginning April 1, 2001. In each of 2002 and 2001, EKI paid the Company \$24,444 for the use of office space in the Company's Santa Barbara office. Effective March 1, 2003 the Company leases 8,966 square feet of office and research and development space in Santa Barbara, California. This lease expires on December 31, 2003. Effective March 1, 2003 EKI no longer sublets any space from the Company.

On January 1, 2001 the Company also purchased from EKI certain operating equipment and machinery, furniture, supplies, tools and leasehold improvements to facilitate the transfer of the EKI employees to the Company. The Company paid \$900,000 for the assets, which approximated net book value.

In the year ended December 31, 2000 and prior periods the Company reimbursed EKI for the costs and expenses incurred in filing, prosecuting, acquiring and maintaining certain patents and patent applications relating to the technology licensed to the Company under the License Agreement under an Amended and Restated Agreement for the Allocation of Patent Costs (the "Patent Agreement"). Legal fees of \$362,244 were paid to or on behalf of EKI during 2000 under the Patent Agreement. Effective January 1, 2001, EarthShell assumed direct responsibility to manage and maintain the patent portfolio underlying the License Agreement with EKI and to pay directly all related costs.

At December 31, 2002 and 2001, the amounts payable to EKI under the various agreements and for materials and services provided were \$0.6 million and \$0, respectively.

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On September 9, 2002 the Company entered into a Loan Agreement with EKI whereby EKI agreed to extend certain loans to the Company at EKI's sole discretion. Loans made under the Loan Agreement plus accrued interest are due and payable on the first to occur of i) receipt by the Company of proceeds from a qualified financing or ii) 30 days. If the Company fails to repay any loans made under the Loan Agreement by their due date, EKI may convert the defaulted outstanding loan balance into shares of the Company's common stock for \$0.50 per share. During 2002 the Company received \$4.8 million in loans from EKI, at interest rates of 7% or 10% per annum. At December 31, 2002, outstanding loans payable to EKI were \$1.745 million. As of December 31, 2002, approximately 3.5 million shares of the Company's common stock were issuable pursuant to the default provisions of the Loan Agreement. In January 2003 the Company received an additional \$1.0 million in short-term loans from EKI. As part of the new convertible debenture financing completed in March 2003 (see *Subsequent Events*), repayment of loans totaling \$2.755 million have been subordinated to the new debentures with strict covenants governing their repayment. In March 2003, the Company issued to EKI a warrant to purchase 1.0 million shares at \$0.50 per share in connection with the subordination of loans of \$2.755 million made to the Company and the elimination of the conversion feature.

### Accounts Payable and Accrued Expenses

The following is a summary of accounts payable and accrued expenses at December 31:

	2002	2001
Accounts Payable	\$ 6,902,990	\$ 6,633,184
Salaries, wages and benefits	538,189	475,799
Accrued expenses	352,232	815,325
Payable to Sweetheart Cup Company	111,546	425,500
	\$ 7,904,957	\$ 8,349,808

### Convertible Debentures

On August 12, 2002 the Company issued \$10.0 million in aggregate principal amount of the 2007 Debentures to institutional investors. These debentures bear interest at a rate of 1.5% per annum, payable quarterly in arrears on each January 31, April 30, July 31 and October 31. The holders of these debentures had the right to convert the debentures into the Company's common stock at an initial conversion price of \$1.30 per share, which was reduced to \$0.70 per share in November 2002 and then to \$0.50 per share in March 2003 as a result of anti-dilution adjustments. Based on the conversion price relative to the fair market value of the common stock at the date of issue, the debentures were deemed to have no beneficial conversion feature. The proceeds from the debentures are held in restricted accounts linked to irrevocable letters of



credit in favor of the debenture holders such that unrestricted access to the proceeds from the sale of the debentures generally occurs only upon conversion of the debentures into shares of the Company's common stock (see *Restricted Cash*). In addition to the holders' conversion option, under certain circumstances, the Company has the right to force conversion of up to \$500,000 of the debentures per week at a 15% discount to the market price of the Company's stock. Subject to certain conditions set forth in the debentures, the Company may prepay the debentures upon twenty business days notice for 104% of the outstanding principal balance of the debentures. If during any consecutive 90 day period following August 12, 2002, the holders of the debentures or the Company have not converted more than an aggregate of \$3.0 million of the original principal amount of \$10.0 million or, on August 12, 2003 the holders of the debentures or the Company have not converted more than an aggregate of \$7.5 million of the original principal amount of \$10.0 million, the holders of the debentures may require the Company to prepay all or a portion of the debentures for an amount in cash equal to the principal amount of the debentures to be prepaid, plus all accrued and unpaid interest, such amount being payable on the 20th trading day following the

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Company's receipt of a prepayment notice. During the third quarter of 2002, the Company forced conversion of \$1.0 million of the debentures for 2.0 million shares of common stock, reducing the outstanding balance to \$9.0 million. Subsequent to December 31, 2002 the Company forced conversion of an additional \$800,000 of the debentures for approximately 1.7 million shares of common stock, reducing the outstanding balance to \$8.2 million as of February 28, 2003. In March 2003, as part of a new convertible debenture financing, the Company repaid \$5.2 million of the debentures, and also exchanged \$2.0 million of these debentures for the new 2006 Debentures which are not secured by cash, thereby releasing the related cash. In connection with this restructuring, the Company issued approximately 0.6 million shares of common stock to the original debenture holders. There was an outstanding balance of an aggregate of \$1.0 million of the 2007 Debentures as of March 31, 2003. The issuance of the new debentures in March 2003, prepayment of \$5.2 million of the secured convertible debentures and the exchange of \$2.0 million of these debentures for \$2.0 million of the 2006 Debentures provided the Company with net proceeds of approximately \$11.0 million. The Company's use of these proceeds is subject to a number of restrictions, including a restriction not to use more than \$4.0 million of the proceeds to pay existing accounts payable (see *Subsequent Events*).

In connection with the issuance of the 2007 Debentures, the Company issued to the debenture holders warrants to purchase 2.5 million shares of the Company's common stock at \$1.20 per share (see *Stock Warrants*). A value of \$1,521,046 was ascribed to the warrants and recorded as an original issue discount based on the Black-Scholes method of valuation. During 2002 non-cash interest expense of \$144,500 and debenture conversion cost of \$320,970 was recognized in the statement of operations to reflect amortization of the original issue discount associated with the warrants and to reflect the 15% discount to the market price of the Company's common stock resulting from the forced conversions of the 2007 Debentures.

### Commitments

As of December 31, 2002, the Company leases office space in Lutherville, Maryland. The Company's monthly lease payment with respect to this space is \$5,449. The lease expires on September 30, 2003. The Company leases 8,966 square feet of office and research and development space in Santa Barbara, California. This lease expires on December 31, 2003. In the first quarter 2003 the Company reduced the amount of office space leased, thereby reducing the monthly lease payment to \$21,070. The Company leases 54,800 square feet of space for its product development center in Goleta, California. The Company's monthly lease payment with respect to this space is \$41,905. This lease expires on May 31, 2003. Future minimum lease payments required under these leases as of December 31, 2002 are \$541,266. Rental expenses for the years ended December 31, 2002, 2001 and 2000 amounted to \$927,386, \$980,978 and \$842,346, respectively.

During 1998, EKI entered into certain agreements with an equipment manufacturer providing for the purchase by EKI of certain technology applicable to starch-based disposable packaging. EKI licenses such technology to the Company on a royalty-free basis pursuant to the License Agreement. In connection with the purchase, and pursuant to the terms of a letter agreement with EKI, the Company agreed to pay the seller of the technology \$3.5 million on or about December 31, 2003, which obligation is secured by a letter of credit (see *Restricted Cash*). The Company's obligation to the seller of the technology will be reduced by 5% of the purchase price of any equipment purchased from the seller of the technology by EKI, the Company or its licensees prior to the obligation payment date. While the Company believes demand for such equipment will arise in the future, it is unable to estimate when such demand will occur or if such demand will result in any reduction of this obligation. As a result of these uncertainties and since the obligation will become payable on or about December 31, 2003, in the fourth quarter of 2002 the Company established a liability for the \$3.5 million commitment as of December 31, 2002 and recorded a corresponding expense to other research and development.

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In addition, the Company is required to pay the seller \$3.0 million over the five-year period commencing January 1, 2004 if EKI, the Company or their licensees make active use of the technology and have not purchased, by December 31, 2003, at least \$35.0 million of equipment from the seller. As of December 31, 2002 the Company and its licensees have neither actively used the technology nor purchased equipment from the seller. The Company does not plan to make active use of the technology during the year ending December 31, 2003. EKI has agreed to indemnify the Company to the extent the Company is required to pay any portion of this \$3.0 million obligation solely as a result of EKI's or its licensees' active use of such patents and related technology (other than use by the Company or its sublicensees). The \$3.0 million obligation to the seller of the technology is subject to reduction in an amount equal to 5% of the purchase price of any equipment purchased from the seller by EKI, the Company or their sublicensees during the five-year period commencing January 1, 2004.

### **Cumulative Convertible Preferred Stock**

During 1993, the Company completed a private placement of preferred stock totaling \$26,675,000, with net proceeds to the Company totaling \$24,473,001. Under the Series A Cumulative Senior Convertible Preferred Stock Purchase Agreement, the Company issued 6,988,850 shares of Series A cumulative senior convertible preferred stock at \$3.82 per share. Dividends, when declared, were payable on a quarterly basis at 8% per annum. At December 31, 1996, and December 31, 1997 cumulative undeclared dividends totaled \$7,016,000 and \$9,149,890, respectively. Each share of preferred stock was convertible into one share of common stock. Subject to the right of the holders of the preferred stock to convert their shares into common stock, the Company had the right to redeem the preferred stock at a price of \$3.87 per share between September 30, 1997 and September 30, 1998 and at a price of \$3.82 per share after September 30, 1998. After three years from the issuance, registration rights enabled the preferred stockholders to cause the Company to effect two registration statements for the common stock into which their shares of preferred stock are convertible. Preferred stockholders had the right to vote with the common stock as if the preferred stock had converted to common stock of the Company. Preferred stockholders had the right to elect one member to the Board of Directors.

To facilitate the sale by stockholders of Series A preferred stock in the Company's March 1998 initial public offering of common stock, 3,993,404 shares of the 6,988,850 shares of outstanding Series A preferred stock were converted to 3,993,404 shares of common stock. A portion of the converted shares was sold in the initial public offering by stockholders. In April 1998, the Board of Directors declared a cash dividend to preferred stockholders of \$1.40 per share based on the dividend rate of 8% per annum on the liquidation preference of the shares. The total dividends paid were \$9,725,201. By notice dated May 13, 1998, the Company called for redemption, effective July 14, 1998, of the remaining 2,995,446 shares of Series A preferred stock. In August 1998, the Board of Directors declared a cash dividend to former preferred stockholders of \$.0033 per share based on the dividend rate of 8% per annum of the liquidation preference pursuant to the Certificate of Designation, Preferences Relative, Participating, Optional and Other Special Rights for Series A Cumulative Senior Convertible Preferred Stock, which provided for dividends to accrue until the time of conversion, together with interest thereon at the rate of 8% per annum from the date of conversion until the date of payment. Total dividends and interest paid to the remaining Series A preferred stockholders was \$201,502. As of September 30, 1998, all outstanding shares of Series A preferred stock had been converted to common stock.

### **Retirement Benefits**

The Company established a qualified 401(k) plan for all of its employees in 1998. The 401(k) plan allows employees to contribute, on a tax-deferred basis, up to fifteen percent of their annual base compensation subject to certain regulatory and plan limitations. The Company uses a discretionary

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matching formula that matches one half of the employee's 401(k) deferral up to a maximum of six percent of annual base compensation. The 401(k) employer match was \$74,853 in 2002, \$114,746 in 2001, and \$61,189 in 2000.

### **Stock Options**

In 1994 the Company established the EarthShell Corporation 1994 Stock Option Plan (the "1994 Plan"). In 1995 the Company subsequently established the EarthShell Corporation 1995 Stock Incentive Plan (the "1995 Plan") which effectively superseded the 1994 Plan for options issued on or after the date of the 1995 Plan's adoption. The 1994 and 1995 Plans as amended (the "Plans") provide that the Company may grant an aggregate number of options for up to 10,000,000 shares of common stock to employees, directors and other eligible persons as defined by the Plans. Options issued to date under the Plans generally vest over varying periods from 0 to 5 years and generally expire 10 years from the date of grant.

Stock option activity for 2002, 2001 and 2000 is as follows:

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	2002		2001		2000	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Outstanding at beginning of year	2,776,000	\$ 6.12	2,322,620	\$ 7.26	2,284,250	\$ 8.08
Granted	2,025,750	2.87	720,000	3.22	425,000	6.45
Cancelled	(877,240)	6.21	(266,620)	8.19	(355,190)	11.52
Expired	(73,360)	15.77			(31,440)	7.63
Outstanding at end of year	3,851,150	4.21	2,776,000	6.12	2,322,620	7.26
Options exercisable at year-end	1,949,713	\$ 5.31	2,258,500	\$ 6.12	1,280,870	\$ 7.77

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The following table summarizes information about stock options outstanding at December 31, 2002:

Exercise Prices	Options Outstanding			Options Exercisable		
	Number Outstanding at 12/31/02	Weighted-Average Remaining Contractual Life	Weighted-Average Exercise Price	Number Exercisable At 12/31/02	Weighted-Average Exercise Price	
\$ 1.25	100,000	3.19	\$ 1.25	100,000	\$ 1.25	
1.39	125,000	4.41	1.39	93,750	1.39	
1.50	70,000	7.80	1.50	35,000	1.50	
2.10	30,000	0.00	2.10	30,000	2.10	
3.00	1,790,000	9.14	3.00	90,000	3.00	
3.67	425,750	8.21	3.67	421,813	3.67	
3.78	75,000	2.36	3.78	75,000	3.78	
3.80	75,000	3.35	3.80	75,000	3.80	
3.82	137,550	1.00	3.82	137,550	3.82	
4.00	55,000	7.31	4.00	42,500	4.00	
5.00	525,000	6.80	5.00	406,250	5.00	
7.63	281,650	3.05	7.63	281,650	7.63	
10.69	50,000	1.37	10.69	50,000	10.69	
15.20	26,200	4.90	15.20	26,200	15.20	
21.00	85,000	5.42	21.00	85,000	21.00	
	3,851,150	7.10	\$ 4.21	1,949,713	\$ 5.31	

The Company accounts for the Plans in accordance with the provisions of Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," and complies with the disclosure provisions of Statement of Financial Accounting Standards ("SFAS") No. 123, "Accounting for Stock-Based Compensation." Under APB Opinion No. 25, compensation expense is based on the difference, if any, on the date of grant, between the fair value of the Company's common stock and the exercise price of the option. For disclosure purposes, to measure stock-based compensation in accordance with SFAS No. 123, "Accounting for Stock-Based Compensation", the fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The fair value of each option grant will be amortized as pro forma compensation expense over the vesting

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period of the options. The following table sets forth the assumptions used and the pro forma net loss and loss per share resulting from applying SFAS No. 123.

	Year Ended, December 31, 2002	Year Ended, December 31, 2001	Year Ended, December 31, 2000
Net Loss as reported	\$ 39,591,344	\$ 62,301,511	\$ 48,911,605
Deduct: Stock-based employee compensation expense included in reported net loss, net of tax			
Add: Total stock-based employee compensation determined under fair value based method for all awards net of tax	\$ 2,136,323	\$ 2,635,623	\$ 960,931
Pro forma net loss	\$ 41,727,667	\$ 64,937,134	\$ 49,872,536
Net loss per common share			
As reported	\$ 0.29	\$ 0.56	\$ 0.48
Pro forma	0.31	0.58	0.49
Weighted average risk-free interest rate	4.54%	5.06%	5.40%
Weighted average expected life in years	9.6	7.9	4.0
Volatility	182%	113%	139%
Weighted average fair value of options granted during the year	\$ 0.99	\$ 2.69	\$ 3.25

**Stock Warrants**

On June 7, 1996, in consideration of a \$3,000,000 line of credit financing arrangement, the Company issued a warrant which entitled the lender to purchase common shares equal to \$150,000 divided by the price per share of the Company's common stock in the initial public offering of \$21 per share. The warrant was not exercised and expired on June 7, 2001.

On November 15, 1996, the line of credit was increased to \$9,000,000 and an additional warrant was issued which entitled the lender to purchase 19,480 shares of common stock for \$23.10 per share. This warrant expires on November 15, 2003.

On October 6, 1997, the line of credit was increased to \$13,000,000 and an additional warrant was issued which entitled the lender to purchase \$250,000 in common stock at a price per share equal to 110% of the initial public offering price. This warrant expires on October 6, 2004.

On December 31, 1997, the line of credit was increased to \$14,000,000 and an additional warrant was issued which entitled the lender to purchase \$50,000 in common stock at a price per share equal to 110% of the initial public offering price. This warrant expires on December 31, 2004. The warrants issued in 1997 were valued at \$59,898 based upon an option pricing model.

On October 26, 2000, as partial consideration for a financing agreement where the minimum trading prices were below \$3.00 per share, the Company issued warrants to purchase 830,234 shares of common stock at an exercise price of 115% of the purchase price per share of the common stock issued and sold in respect of such drawdown period. During 2001, 20,000 warrants were exercised at a price of \$1.444 per common share in respect to the warrants described. On March 20, 2002 the Company terminated this financing agreement and reduced the warrant exercise prices in consideration. The exercise price of the remaining 810,234 warrants were re-priced to \$0.25 per share and were subsequently exercised during 2002.

On April 5, 2002, the Company entered into a common stock purchase agreement (the "Purchase Agreement") with certain investors (the "Purchasers") for an aggregate of 3.5 million shares of

EarthShell common stock for aggregate consideration of \$4,025,000. Under the Purchase Agreement, the Purchasers were issued warrants to purchase up to an additional 1,750,000 shares of the Company's common stock at a price equal to \$1.15 per share during the thirty day period following the closing of the Purchase Agreement. This warrant has expired.

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In connection with the issuance of the convertible debentures on August 12, 2002 (see *Convertible Debentures*), the Company issued to the debenture holders warrants to purchase 2.5 million shares of the Company's common stock at \$1.20 per share. A value of \$1,521,046 was ascribed to the warrants and recorded as an original issue discount based on the Black-Scholes method of valuation. The exercise price and number of common shares issuable upon exercise of the warrants are subject to adjustment under certain circumstances, such as the occurrence of stock dividends and splits, distributions of property or securities other than common stock, equity issuances for less than the warrant exercise price and a change in control of the Company. Simultaneously with any adjustment to the warrant exercise price, the number of shares issuable will be increased or decreased such that the aggregate exercise price remains fixed at \$3,000,000. As of December 31, 2002 4,285,714 shares of common stock were issuable upon exercise of the warrants for \$0.70 per share. In March 2003, in connection with the issuance of the 2006 Debentures, the exercise price was reduced to \$0.50 per share. The warrants expire on August 12, 2007.

On March 5, 2003, the Company issued to EKI a warrant to purchase one million shares at \$0.50 per share in connection with the subordination of loans of \$2.755 million made to the Company and the elimination of the conversion feature. The warrants expire on March 4, 2010.

### Income Taxes

Deferred income tax assets and liabilities are computed annually for differences between the financial statement and income tax bases of assets and liabilities. Such deferred income tax asset and liability computations are based on enacted tax laws and rates applicable to periods in which the differences are expected to reverse. Valuation allowances are established, when necessary, to reduce deferred income tax assets to the amounts expected to be realized. Income tax expense is the tax payable or refundable for the period plus or minus the change during the period in deferred income tax assets and liabilities.

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Deferred income taxes result from temporary differences in the recognition of revenues and expenses for financial and tax reporting purposes. At December 31, 2002 and 2001, deferred income tax assets were comprised primarily of the following:

	2002	2001
<b>Federal:</b>		
Capitalized operating expenses	\$ 6,480,950	\$ 8,577,020
Depreciation	5,335,487	(395,165)
Accrued purchase commitment	1,190,000	
Deferred compensation	1,091,917	1,091,917
Deferred contributions	360,955	360,683
Accrued vacation	141,408	161,772
Other reserves	33,442	
Net operating loss carryforward	82,550,118	75,062,976
	<u>97,184,277</u>	<u>84,859,203</u>
<b>State:</b>		
Capitalized research and development	9,633,296	5,360,317
Depreciation	1,552,355	(89,631)
Capitalized operating expenses	576,499	201,715
Accrued purchase commitment	346,229	
Deferred compensation	317,692	247,669
Deferred contributions	105,020	81,810
Accrued vacation	41,142	36,693
Other reserves	9,730	
Net operating loss carryforward	10,156,366	8,701,329

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	2002	2001
	22,738,329	14,539,902
Deferred tax asset	119,922,606	99,399,105
Valuation allowance	(119,922,606)	(99,399,105)
Net deferred tax asset	\$	\$

The valuation allowance increased by \$20,523,501, \$8,014,321, and \$30,938,362 during the years ended December 31, 2002, 2001, and 2000, respectively, as a result of changes in the components of the deferred income tax items.

For federal income tax purposes, the Company has net operating loss carryforwards of \$242,794,464 as of December 31, 2002 that expire through 2022. For state income tax purposes, the Company has California net operating loss carryforwards of \$32,762,205 as of December 31, 2002 that expire through 2013, and Maryland net operating loss carryforwards of \$103,716,964 that follow the federal treatment and expire through 2022.

Income tax expense for 2002, 2001, and 2000 consists of the minimum state franchise tax.

### Subsequent Events

In March 2003, the Company issued and sold \$10.55 million in aggregate principal amount of convertible debentures, due March 2006, and 5,650,000 shares of common stock to a group of institutional investors for net proceeds of approximately \$9.0 million. The Company's use of these proceeds is subject to a number of restrictions, including a restriction not to use more than \$4.0 million of the proceeds to pay existing accounts payable.

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In connection with the 2006 Debentures transaction, the Company prepaid \$5.2 million of the 2007 Debentures (see *Convertible Debentures*), resulting in a prepayment penalty of \$208,000. Also in connection with the 2006 Debentures, one of the holders of the 2007 Debentures exchanged \$2.0 million aggregate principal amount of the 2007 Debentures for \$2.0 million aggregate principal amount of the 2006 Debentures and 947,867 shares of common stock. The prepayment and debenture exchange resulted in the release to the Company of \$2.0 million of cash restricted under the related 2007 Debentures.

The issuance of the 2006 Debentures, prepayment of the 2007 Debentures and the debenture exchange provided the Company with aggregate net proceeds of approximately \$11.0 million.

The 2006 Debentures were initially convertible into common stock for \$0.50 per share.

In April 2003 a default occurred with respect to the 2007 Debentures upon the Company's independent auditors issuing a report on the Company's financial statements for the year ended December 31, 2002 that included an explanatory paragraph relating to the Company's ability to continue as a going concern. As a result of this default the Company may be required to repurchase the remaining \$1.0 million principal amount of 2007 Debentures for an amount equal to the greater of 115% of principal, plus accrued interest, or 115% of the then market value of the 2,000,000 shares into which the outstanding debentures are convertible. The Company believes that the potential amount payable to the holders of the outstanding \$1.0 million principal amount of 2007 Debentures resulting from this default is not significantly more than the amount payable under the terms of the debentures that existed prior to the default.

### Quarterly Financial Information (Unaudited)

	First	Second	Third	Fourth	Total Year
2002	\$ 300,000	\$ 468,313	\$ 300,000	\$ 419,757	\$ 1,488,070

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	First	Second	Third	Fourth	Total Year
Related party research and development					
Other research and development	6,667,159	3,809,063	2,941,860	11,983,787	25,401,869
General and administrative	2,471,363	2,116,286	2,366,377	2,660,011	9,614,037
Net loss common shareholders	\$ 10,212,738	\$ 7,159,409	\$ 6,785,374	\$ 15,433,823	\$ 39,591,344
Basic and diluted loss per common share	\$ 0.08	\$ 0.05	\$ 0.05	\$ 0.11	\$ 0.29
Weighted average common shares outstanding	124,377,736	133,773,696	138,500,013	143,295,667	135,326,037
<b>2001</b>					
Related party research and development	\$ 326,307	\$ 367,694	\$ 401,055	\$ 370,194	\$ 1,465,250
Other Research and development	4,420,431	4,007,152	6,756,532	30,499,050	45,683,165
General and administrative	2,184,906	3,893,262	2,367,682	1,212,266	9,658,116
Net loss common shareholders	\$ 8,097,515	\$ 9,408,304	\$ 10,568,727	\$ 34,226,965	\$ 62,301,511
Basic and diluted loss per common share	\$ 0.08	\$ 0.08	\$ 0.09	\$ 0.29	\$ 0.56
Weighted average common shares outstanding	106,982,760	111,009,853	114,169,194	116,637,560	112,231,689

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