

# GSE SYSTEMS INC

## FORM 10-K (Annual Report)

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Conformed

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549  
**FORM 10-K**

(Mark One)

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

For the fiscal year ended December 31, 2003

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

*Commission File Number 0-26494*

## GSE Systems, Inc.

(Exact name of registrant as specified in its charter)

Delaware  
(State of incorporation)

52-1868008  
(I.R.S. Employer Identification Number)

9189 Red Branch Road, Columbia, Maryland  
(Address of principal executive offices)

21045  
(Zip Code)

Registrant's telephone number, including area code: (410) 772-3500

### SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class Name of each exchange on which registered  
Common Stock, \$.01 par value American Stock Exchange

### SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE

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

Indicate by check mark 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.

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

The aggregate market value of Common Stock held by non-affiliates as of June 30, 2003 was \$9,931,577 based on the closing price of such stock on that date of \$1.65.

Number of shares of Common Stock outstanding as of March 1, 2004: 8,949,706

### DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates certain information by reference from the Registrant's definitive proxy statement to be filed for its 2004 Annual Meeting of Shareholders.

**GSE SYSTEMS, INC.**  
**FORM 10-K**  
**For the Year Ended December 31, 2003**

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\* to be incorporated by reference from the Proxy Statement for the registrant's 2004 Annual Meeting of Shareholders.

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## Cautionary Statement Regarding Forward-Looking Statements.

This report contains certain forward-looking statements. Any statements contained herein that are not statements of historical facts may be deemed forward-looking statements. These statements are based on management's current beliefs and expectations and are subject to numerous risks and uncertainties and changes in circumstances. Actual results may differ materially from these forward-looking statements due to changes in global, economic, business, governmental, technical, competitive, market and regulatory factors.

### PART I

#### ITEM 1. BUSINESS.

GSE Systems, Inc. ("GSE Systems", "GSE" or the "Company") is a world leader in real-time power plant simulation. The Company provides simulation solutions and services to the nuclear and fossil electric utility industry, as well as the chemical and petrochemical industries. In addition, the Company provides plant monitoring, security access and control, and signal analysis monitoring and optimization software primarily to the power industry.

The Company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports will be made available free of charge through the Investor Relations section of the Company's Internet website (<http://www.gses.com>) as soon as practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission.

#### Recent Developments.

In September 2003, the Company completed the sale of substantially all of the assets of GSE Process Solutions, Inc. (Process) to Novatech, LLC (Novatech) pursuant to an Asset Purchase Agreement, effective as of September 25, 2003, by and between the Company, Process and Novatech. The Company received \$5.5 million in cash, subject to certain adjustments. The operating results of the Company's Process business have been classified as discontinued operations in the Consolidated Statements of Operations for all periods presented. With the sale of the Process business, the Company now has only one reportable segment, Power Simulation.

On October 23, 2003, ManTech International Corp. (ManTech) converted its preferred stock to common stock and sold all of its GSE common stock and its \$650,000 unsecured subordinated promissory note to GP Strategies Corporation. The terms of the subordinated note were amended to allow the conversion of the subordinated debt by GP Strategies to GSE common stock. As a result of these transactions, GP Strategies currently owns approximately 58% of GSE. In December 2003, John Moran, a GP Strategies executive with experience in both the power industry and simulation technology, was elected Chief Executive Officer of GSE by the Company's Board of Directors.

#### Power Simulation Business

The Company's Power Simulation Business had a strong order year, with the receipt of several significant international simulation projects. Additionally, the US upgrade market was stronger in 2003 than in the prior year, with the Company receiving several multi-million dollar upgrade or simulator replacement contracts. Total orders for the year exceeded \$35 million, a 26% increase over 2002, and backlog increased 59% to \$30.4 million. Although the Company's 2003 revenue increased 23.7% over the prior year and gross profit increased from 17.6% in 2002 to 23.4% in 2003, the Company still incurred an operating loss of \$1.0 million for the year ended December 31, 2003. Thus, in conjunction with the divestiture of the Process Automation business at the end of the third quarter, the Company restructured its Power Simulation Business in order to reduce expenses and focus on business development. Several operating personnel were terminated in the fourth quarter, and the Company entered into a Management Services Agreement with GP Strategies effective January 1, 2004 in which the Company outsourced most of its corporate functions (accounting, human resources, etc.) and terminated most of its corporate staff. The Company recognized \$256,000 of severance expense in the fourth quarter 2003. The Company reorganized, creating a dedicated worldwide business development organization under the direction of one manager, and consolidating all of its operations in Columbia, Maryland, St. Mary's, Georgia and Nykoping, Sweden under another manager. To maintain its capability to fulfill customer orders, the Company strengthened and expanded its relationships with international partners to provide the necessary workforce augmentation.

The Company is positioning itself to take advantage of emerging trends in the power industry. The operating licenses for numerous nuclear power plants will expire over the next several years. Fourteen plants have already received license extensions, and sixteen more have applications pending. Many plants are also planning significant upgrades to the physical equipment and control room technology in conjunction with the license extensions. Both will result in the need to modify or replace the existing plant control room simulators. The Company, having the largest installed base of existing simulators, is well positioned to capture the majority of this business.

To address the varying levels of technology that exists across the Company's installed base, the Company has developed a Java-based graphical overlay technology called JADE (Java Application Development Environment). JADE provides a common look and feel to the Company's various simulation tools regardless of whether the underlying technology is UNIX, LINUX or Microsoft Windows XP. JADE also works with all of the Company's tools for building electrical, logic and control, and flow system models for plants.

The Company continues to focus on the fossil power segment of the power industry. Several fossil plant simulator projects were awarded in 2003, expanding the Company's presence in the market and establishing key strategic relationships with power industry DCS providers. The Company expects continued growth in this market segment and is focusing on second time simulation buyers that now demand the more

sophisticated and realistic simulation models offered by the Company. Sales and marketing resources have been expanded for the fossil power industry.

While GSE simulators are primarily utilized for power plant operator training, the uses are expanding to include engineering analysis, plant modification studies, and operation efficiency improvements for both nuclear and fossil utilities. During plant construction, simulators are used to test control strategies and ensure on-time start-up. After commissioning, the same tools can be used to increase plant availability and optimize plant performance for the life of the facility. In 2003, the Company demonstrated its ability to link its simulation models to plant optimization tools of third parties to provide a unique and broad based optimization solution. The Company and its partners will be bringing these new products to market in 2004.

The Company has targeted the Process simulation business as an area with a significant potential for growth. The process industries, particularly oil and gas and chemical, are expanding worldwide and are faced with the challenges of performance improvement at existing facilities and training of personnel to staff new and upgraded facilities. The Company's SimSuite Pro product and experience in the process industries provide the Company with excellent capabilities to service these needs. Dedicated sales and marketing resources have been assigned to Process simulation to facilitate this initiative.

In 2003, the Company continued to expand the sale of its plant optimization tools based on advanced signal analysis technology. The Company's Pegasus Plant Surveillance and Diagnosis System helps improve plant availability, safety and economy. Pegasus is a software package for semi-automatic plant surveillance and diagnostics and enables site engineers to perform detailed analysis for specified component faults, allowing the identification of degraded performance and replacement of components before they fail. SensBase provides comprehensive sensor test services, thus ensuring that changes in transmitters and other instruments do not jeopardize the function of the nuclear plant protection systems. BRUS, a noise analysis program package, is a collection of signal analysis tools which allow users to detect developing abnormalities in the plant. The Company's worldwide reputation for boiling water reactor stability training lead to an increase in sales of both stability training courses and the Company's SIMON Stability Monitoring equipment. The Company has been very successful in selling this technology to European and Asian customers and is investigating its viability in the US market.

The acquisition by GP Strategies of controlling interest in GSE has led to further cooperation between the companies. In addition to cooperating in the marketing of individual products, the companies will combine some of General Physics' extensive training materials and programs with GSE's power plant simulation models to provide truly interactive and adaptive total training solutions. Cooperative marketing activities between General Physics and GSE will enable the Company to extend simulation capabilities into industries beyond Power and Process and to expand the range of products and services offered to customers.

In 2003, the Company began to aggressively market its access control and intrusion detection system to the nuclear and process industries, however, the market has been slow to develop. The nuclear industry security focus has been on investing in technology to detect the approach of intruders farther away from the plant perimeter. As a result, much of the anticipated sales of the Company's GAARDS system have failed to materialize. At the end of 2003, the Company made the decision to reduce its investment in this market segment until the market rebounds.

In lieu of pursuing physical security system projects, the Company has turned its attention to opportunities for simulation in disaster recovery and terrorist threat response. In 2003, the Company modified its simulation technology to simulate the operation of Emergency Operations Centers (EOC) run by municipal and state governments. REMITS is a Real-time Emergency Management Interactive Training System designed to simulate emergency situations and enable EOC staffs to train without requiring human participation in the field. REMITS enables the EOC staff to stay current with the technology and enables instructors to introduce new problems and challenges during the exercise to test the EOC staff response to changing situations. As the Federal Government spends billions in emergency response training, the Company believes its REMITS product will find a large market in the developing field of training for disaster recovery and terrorist threat response.

## **Research and Development**

The Company's R&D expenditures in 2003 were related to:

\* The completion of JADE 1.0 (Java Applications & Development Environment), a Java-based application that provides a window into the simulation instructor station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run simulation scenarios from anywhere they have access to the web. JADE version 1.0 was released for sale on March 31, 2003.

\* Additional enhancements to JADE that were released in version 2.0, including implementing XML file structure in JADE for pagination, adding wireless PDA for JStation applications, multi-language support, and adding a two phase object oriented flow network. JADE version 2.0 was released at the end of 2003.

## **Background.**

GSE Systems was formed on March 30, 1994 to consolidate the simulation and related businesses of S3 Technologies, General Physics International Engineering & Simulation and EuroSim, each separately owned and operated by ManTech International Corporation, GP Strategies Corporation and Vattenfall AB, respectively. On December 30, 1994, GSE Systems expanded into the process control automation and supply chain management consulting industry through its acquisition of the process systems division of Texas Instruments Incorporated, which the Company operated as GSE Process Solutions, Inc. ("Process").

In December 1997, the Company acquired 100% of the outstanding common stock of J.L. Ryan, Inc. ("Ryan"), a provider of engineering modifications and upgrade services to the power plant simulation market. The combination of the Company's pre-existing technology with the technical staff of the acquired Ryan business positioned the Company to be more competitive for modifications and upgrade service projects within the nuclear simulation market.

During 2002, the Company invested in RedStorm Scientific Inc., an emerging biotechnology company utilizing a proprietary (patent pending) computational technology for protein analysis called Fyrestar. RedStorm Scientific Inc. needed a software development and operating environment to optimize the Fyrestar code. The Company customized its eSMART (engineering, Simulation, Management and Real-Time) product. In addition to the potential growth of RedStorm Scientific Inc., the Company proved that eSMART is a viable product to help companies, laboratories and educational institutions optimize their large, complex and often inefficient computer codes. At December 31, 2003 the Company owned 10.2% of RedStorm.

In October 2002, GSE purchased the stock of ManTech Automation Systems (Beijing) Company Ltd, from ManTech International Corp. The Chinese company, which has seven employees, was renamed GSE Systems Engineering (Beijing) Company Ltd. This acquisition gave the Company a much needed base in China to pursue and implement simulation projects in that emerging market.

In September 2003, the Company completed the sale of substantially all of the assets of GSE Process Solutions, Inc. to Novatech, LLC (Novatech) pursuant to an Asset Purchase Agreement, effective as of September 25, 2003, by and between the Company, Process and Novatech. The Company received \$5.5 million in cash, subject to certain adjustments.

### **Simulation Business.**

The Company is comprised of three divisions: Power Simulation, Process Simulation and Emergency Management Simulation.

#### **Power Simulation.**

##### **Industry**

The real-time simulation industry grew from the need to train people on complex and potentially dangerous operations, without placing life or capital assets at risk. Real-time simulation has been used for the training of plant operators for the power industry, including both nuclear power plants and conventional fossil fuel power plants (i.e., coal, oil, and natural gas), since the early 1970s. Real-time simulation usage has traditionally centered on initial training of operators and follow-on training of operators in emergency conditions that can best be achieved through simulation replicating actual plant operations.

In the nuclear power industry, use of a simulator that accurately reflects the current actual plant design is mandated by the U.S. Nuclear Regulatory Commission. This mandate resulted from the investigation of the accident at the Three Mile Island nuclear plant in 1979, which was attributed, at least in part, to operator error. The NRC requires nuclear plant operators to earn their licenses through simulator testing. Each nuclear plant simulator must pass a certification program to ensure that the initial plant design and all subsequent changes made to the actual plant control room or plant operations are accurately reflected in the simulator. Plant operating licenses are tied to simulator certification.

Full scope power plant simulators are a physical representation of the entire plant control room. The control panels are connected to an input/output (I/O) system, which converts analog electrical signals to digital signals understood by the simulation computer. The simulation computer houses the mathematical models, which simulate the physical performance of the power plant's systems such as the reactor core, steam boiler, cooling water, steam turbine, electrical generator, plant system controls and electrical distribution systems. Partial scope simulators can be viewed as a subset of a full scope simulator. Instead of simulating the entire performance of the power plant, a partial scope simulator might represent one or two critical systems such as the steam turbine and/or electrical generator operation.

In the past, training simulators had to strike a delicate balance between providing an accurate engineering representation of the plant, while still operating in "real-time" in order to provide effective training. As computing power has increased, so too has the capacity of simulators to provide more accurate plant representations in real-time based upon simulation models developed from engineering design codes.

Simulation also is used to validate proposed plant equipment changes to confirm the results of such changes, prior to making the change in the plant, which can save time and money, as well as reduce the risk of unsafe designs, for the utility.

Demand for new simulators in the nuclear power industry shifted to the international market in the 1990s, as the domestic market was limited to upgrades and replacement of existing simulators. However, the Company believes that the economics and importance of nuclear power to the U.S. energy supply may result in the extension of the useful lives of U.S. nuclear power plants. Any service life extension of a nuclear power plant is likely to require major upgrades to the plant's equipment and technology, including its simulator.

Fossil fuel plant simulators are not required by law or regulation, but are justified as a cost-effective approach to train operators on new digital control systems being implemented at many fossil fuel power plants. The size, complexity and price of a fossil plant simulator are much lower than for simulators used for nuclear plants. Fossil plant simulators have traditionally used lower fidelity (less sophisticated) mathematical models to provide an approximate representation of plant performance. The demand for highly accurate models did not exist in the early market for fossil simulators since the main use of the simulator was to train operators on the functionality of distributed control systems for plant start-

up activities.

The deregulation of the power industry has forced utilities to view their assets differently. Power plants must now be profit centers, and gaining the maximum efficiency from the plant to become, or remain, competitive is a paramount issue. The mindset of the operator has shifted, as plant operators now must perform within narrower and narrower performance margins while still maintaining safe operations. GSE believes its fossil fuel plant customers are now recognizing the benefits of high fidelity simulation models that provide highly accurate representations of plant operations to help plant operators and management determine optimal performance conditions.

Despite the recent down-turn in the domestic power plant development market, the Company sees two trends which may indicate the need for more simulation products and services. First, the license extension process in the nuclear industry may result in significant changes in plant equipment and control room technology. Based upon US Nuclear Regulatory Commission regulations, each training simulator is required to reflect all changes that are made in the actual plant, thus when changes in plant equipment and control room technology are made, the nuclear power plants must either upgrade existing simulators or purchase brand new simulators. Second, the aging of the nuclear and fossil plant operator workforce will result in the need for simulation to train the next generation of plant operators.

Therefore, the Company believes that these trends, if they come to fruition in whole or even in part, represent a market opportunity for its real-time simulation, plant optimization, asset management and condition monitoring products and services.

#### GSE's solution

The Company's Power Simulation business is a leader in the development, marketing and support of high fidelity, real-time, dynamic simulation software for the electric utility industry. The Company has built or modified about 65 of the approximately 75 full-scope simulators serving about 103 operating nuclear power plants in the United States. Outside the United States, GSE has built or modified about 73 of the approximately 167 full-scope simulators serving approximately 329 operating nuclear power plants.

In addition to operator training, the Company's simulation products and services permit plant owners and operators to simulate the effects of changes in plant configuration and performance conditions to optimize plant operation. These features allow the Company's customers to understand the cost implications of replacing a piece of equipment, installing new technology or holding out-of-service assets. GSE has also developed a suite of tools based on sophisticated signal analysis and simulation techniques to help its customers manage their assets by determining equipment degradation before it severely impacts plant performance.

The Company has also focused on upgrading older technology used in power plants to new technology upgrades for plant process computers, safety parameter display systems, and plant access security systems. As nuclear plants in the U.S. continue to age, the Company will seek more business in this upgrade market.

GSE provides both turnkey solutions, including simulated hardware and proprietary software, to match a specific plant, and discrete simulation technology for specific uses throughout a plant. Its substantial investment in simulation technology has led to the development of proprietary software tools. These tools significantly reduce the cost and time to implement simulation solutions and support long-term maintenance. The Company's high fidelity, real-time simulation technology for power plant fluid, logic and control, electrical systems and associated real time support software, JADE, is available for use primarily on UNIX and Linux computer platforms. The Company's eXtreme tools were designed for the Windows environment. Both technologies were specifically designed to provide user friendly graphic interfaces to the Company's high fidelity simulator.

In addition to the simulator market, the Company offers products aimed at improving performance of existing plants by reducing the number of unplanned outages due to equipment failure. Using advanced signal analysis techniques, the Company's tools can predict when certain plant equipment needs to be replaced. Replacement of critical equipment prior to failure permits effective planning and efficient use of maintenance time during scheduled off-line periods.

Other products of the Power Simulation business include:

--Java Applications & Development Environment (JADE), a Java-based application that provides a window into the simulation instructor station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run simulation scenarios from anywhere they have access to the web. JADE includes the following software modeling tools:

- \* Jflow, a modeling tool that generates dynamic models for flow and pressure networks.
- \* Jcontrol, a modeling tool that generates control logic models from logic diagrams.
- \* Jlogic, a modeling tool that generates control logic models from schematic diagrams.
- \* Jelectric, a modeling tool that generates electric system models from schematic and one-line diagrams.
- \* Jtopmeret, a modeling tool that generates two phase network dynamic models.
- \* Jdesigner, a JADE based intuitive graphic editor for all JADE tools.
- \* Jstation, a JADE based web-enabled Instructor Station.

--eXtreme Tools is a suite of software modeling tools developed under the Microsoft Windows environment. It includes:

- \* XtremeFlow, a modeling tool that generates dynamic models for flow and pressure networks.
- \* XtremetControl, a modeling tool that generates control logic models from logic diagrams.
- \* XtremeLogic, a modeling tool that generates control logic models from schematic diagrams.
- \* Xtreme Electric, a modeling tool that generates electric system models from schematic and one-line diagrams.

--SimExec, and OpenSim are real-time simulation executive systems that control all real-time simulation activities and allows for an off-line software development environment in parallel with the training environment. OpenSim is targeted for users of Microsoft Windows operating systems, while SimExec is targeted for users of Microsoft Windows, UNIX and LINUX operating systems.

--SmartTutor, complementary software for instructor stations. It provides new capabilities to help improve training methodologies and productivity. Using Microsoft ActiveX controls, SmartTutor allows the control of the simulator software directly from Microsoft Office products. The user can run training scenarios directly from a Microsoft Word document, or he can plot and show transients live within a Microsoft PowerPoint slide.

--eXtreme I/S, a Microsoft Windows based Instructor Station that allows the use of Microsoft Word and PowerPoint to control the real-time simulation environment. eXtreme I/S is a user-friendly tool for classroom training and electronic report generation. It provides real-time plant performance directly from the simulator during classroom training, which drastically increases learning efficiency.

--Pegasus Surveillance and Diagnosis System, a software package for semi-automatic plant surveillance and diagnostics, incorporates sophisticated signal processing and simulation techniques to help operators evaluate the condition and performance of plant components. Pegasus permits plant management to identify degraded performance and replace components before they fail.

--SIMON, a computer workstation system used for monitoring stability of boiling water reactor plants. SIMON assists the operator in determining potential instability events, enabling corrective action to be taken to prevent unnecessary plant shutdowns.

--Vista PIN, a PC-based plant information system, provides unparalleled flexibility usefulness and ease of maintenance while decreasing the cost of ownership. Vista PIN provides real-time display of process parameters, trends, alarm status, and historical data archiving with on-line retrieval.

The Power Simulation business also provides consulting and engineering services to help users plan, design, implement, and manage/support simulation and control systems. Services include application engineering, project management, training, site services, maintenance contracts and repair.

### **Strategy**

The goal of the Power Simulation business is to expand its business on three fronts. First, it intends to continue serving its traditional customer base and to be prepared to meet increased demand if traditional simulation use grows in relation to increased electric capacity in the United States. Second, it intends to market its existing and upgraded simulation products and its newly developed signal analysis products as plant optimization, asset management and condition monitoring tools. And, third, it intends to leverage its existing engineering staff to provide additional services to domestic and international clients.

Traditional Simulation Market. Nuclear power currently accounts for about 20% of the electrical power grid capacity in the United States and this percentage will likely remain the same even as total capacity increases. Any new nuclear power plants will likely be of the advanced reactor designs created by Emerson-Westinghouse, General Electric and Siemens. These new designs require new simulators and training programs, as they are different from the nuclear power plant designs currently in operation. In addition to new power plants, existing nuclear power plants will likely be required to remain on-line for a longer period than originally expected. In order to stay in operation, many plants will require life extension modifications. Since all existing U.S. nuclear power plants went on-line before 1979, their designs and technology can also benefit from the substantial advances in plant design and technology developed over the past 20 years. For example, several of the Company's U.S. utility customers are considering replacing their existing hard panel control rooms with modern distributed control systems (DCS) as are common in fossil fuel plants, and which have been implemented in Europe for several years. Significant changes to control room instrumentation and overall control strategy from hard panel to DCS generally require modification or replacement of the plant simulator. With the largest installed base of nuclear plant simulators in the world, the Company believes it is uniquely positioned to serve this market segment with new simulation products and services.

As plants extend their useful life, many plan to "up-rate" the existing capacity to increase electrical yield. By changing the capacity of certain equipment in a plant, the utility can gain upwards of a 10%-15% increase in output. Again, any such changes must be reflected in the control room simulator, and operators must be trained on the new equipment before implementation.

In addition to the United States markets, several emerging regions of the world are expanding their electrical capacity with both nuclear and fossil fuel power plants. The Company believes this expansion includes the need for integrated simulation and training programs and has developed products that will enable it to exploit the fossil fuel simulation marketplace. GSE is increasing its marketing efforts in this area.

Classroom Simulation. In recent years the Company has upgraded numerous training simulators to utilize standard PC technology. As an extension of the PC-based simulator technology, the Company has developed tools which will allow the training simulator to be used in a

classroom setting, replacing the actual control room panels with "soft-panel" graphics.

Increased training requirements and demands for performance improvement have resulted in simulator training time becoming scarce. By providing the actual training simulator models in a classroom setting, the value of the simulator is increased by allowing more personnel the training advantages of interactive, dynamic real time simulation.

The Company pioneered the technology to run a simulator on a PC several years ago. However, the technology remains complex, which prevented wide deployment of the simulator in classrooms. The Company has developed unique software which allows simulator-based training lessons to be easily developed and deployed in a classroom setting. The Company is currently engaged in a cooperative effort with a major U.S. utility to refine this capability. It is expected that this technology will become commercially available in 2004.

**Simulation Beyond Training.** In addition to operator training, the Company's simulation products can meet this increased need for efficiency by assisting plant operators in understanding the cost implications of replacing equipment, installing new technology and maintaining out-of-service assets. In order to exploit this potential, the Company has increased the fidelity of its simulation products and is marketing its services to increase the fidelity of simulators that are already in operation.

As computing power and networking technologies improve, several of the Company's customers have started to migrate simulation technology from the training organization to the engineering organization. The same full scope simulation software that drives the simulated control room panels in a simulator can be used with graphical representations of the panels so engineers can test design changes and see how the balance of the plant will react to such changes. GSE has developed a Java-based application to allow customers easier access to, and use of, the simulation capabilities across the organization through network communication.

**Optimize Existing Engineering Resources.** GSE's Power domestic service organization focuses on simulator upgrades and retrofits. This group employs over 20 engineers, and in addition, the Company employs over 60 engineers at the Columbia, Maryland headquarters capable of servicing the upgrade/retrofit and new simulator market. In addition to domestic resources, GSE has developed a network of trained engineers in Russia, Ukraine, Czech Republic, Bulgaria, India and China. These foreign resources provide low cost engineering and software development capabilities and are readily available to supplement the United States engineering staff as necessary.

In addition, the Power Simulation business has grown through acquisitions and will continue to pursue acquisitions and investment opportunities that will create value and enhance cash flow. The Company targets acquisitions and investments that provide:

- \* Cost savings opportunities
- \* Enhanced positioning in existing markets
- \* Entry into new geographic and industry markets
- \* Turnaround opportunities for under-performing businesses

### **Strategic Alliances**

Power's strategic alliances have enabled the Company to penetrate regions outside the United States by combining the Company's technological expertise with the regional presence and knowledge of local market participants. These strategic alliances have also permitted the reduction of research and development and marketing costs by sharing such costs with other companies.

In recent years, an increasing amount of the Company's international business has come from contracts in Eastern Europe, including the republics of the former Soviet Union, the Pacific Rim and India. In order to acquire and perform these contracts, the Company entered into strategic alliances or partnerships with various entities including Automation Systems Co. Inc., a subsidiary of Beijing Jihang Automation (China); All Russian Research Institute for Nuclear Power Plant Operation (Russia); Kurchatov Institute (Russia); Macmet Ltd. (India); PowerGen (England); Risk Engineering Ltd. (Bulgaria); Samsung Electronics (Korea); Toyo Engineering Corporation (Japan); and the Institute for Information Industry (Taiwan).

In addition to traditional partners, GSE has developed a marketing cooperation arrangement with the Power Technology group of PowerGen, the UK's largest power company. This relationship gives GSE access to the European fossil simulation market, as well as the tools necessary to simulate the Siemens Teleperm control system, one of the more popular control systems being offered to U.S. nuclear power plants.

### **Competition**

The Power Simulation business encounters intense competition. In the nuclear simulation market, GSE competes directly with larger firms primarily from Canada and Germany, such as Canadian Aerospace & Electronics (CAE), and STN Atlas. The fossil simulation market is represented by smaller companies in the U.S. and overseas. Several of the Company's competitors have greater capital and other resources than it has, including, among other advantages, more personnel and greater marketing, financial, technical and research and development capabilities. Customer purchasing decisions are generally based upon price, the quality of the technology, experience in related projects, and

the financial stability of the supplier.

### **Customers**

The Power Simulation business has provided approximately 200 simulation systems to an installed base of over 75 customers worldwide. In 2003, approximately 70% of the Company's revenue was generated from end users outside the United States. Customers include, among others, Ameren, Arizona Public Service, Carolina Power and Light Company, Commonwealth Edison Company, Eskom South Africa, Karnarft Sakerhet & Utbildning AB, Korean Electric Power Company, Nationalina Elecktrischecka Kompania, Orgrez SC, Battelle's Pacific Northwest National Laboratory, Taiwan Power Company, and West Bengal Development Corp.

For the years ended December 31, 2003, 2002, and 2001 one Power Simulation customer (Battelle's Pacific Northwest National Laboratory) accounted for approximately 29%, 23%, and 33%, respectively, of GSE's consolidated revenue. The Pacific Northwest National Laboratory is the purchasing agent for the Department of Energy and the numerous projects GSE performs in Eastern and Central Europe.

### **Sales and Marketing**

The Company markets its Power Simulation products and services through a network of direct sales staff, agents and representatives, systems integrators and strategic alliance partners. A direct sales force is employed in the continental United States. Market-oriented business and customer development teams define and implement specific campaigns to pursue opportunities in the power marketplace.

The Company's ability to support its multi-facility, international and/or multinational Power Simulation clients is facilitated by its network of offices and strategic partners in the U.S. and overseas. Power Simulation offices are maintained in Maryland and Georgia, and outside the U.S., in Sweden, China and Japan. In addition to the offices located overseas, the Company's ability to conduct international business is enhanced by its multilingual and multicultural work force. GSE has strategic relationships with systems integrators and agents representing its interests in:

Russia	South Africa
Germany	Mexico
Bulgaria	Brazil
Spain	Taiwan
Czech Republic	South Korea
India	Japan
United Kingdom	People's Republic of China
Ukraine	

### **Process Simulation.**

#### **Industry**

Throughout the process industries there is continuing competitive pressure and a reduction of technical resources, which is forcing process manufacturers to turn to advanced technologies for real-time optimization, training, and advanced process control. Operational efficiency is vital for companies to remain competitive where many of the manufacturing industries operate on very thin margins. There are only one or two advanced technology companies that offer services fully across this spectrum, and GSE offers dynamic real-time simulation capabilities for operator training into this segment.

#### **GSE's Solution**

The SimSuite Pro product was developed by GSE specifically for operator training, and the GSE culture and expertise is one of customized project execution and delivery. This marketplace places a high value on experience, both company-wide and for the individuals on the project teams, so GSE promotes its long history in training simulators, while also seeking new applications. The SimSuite Pro package continues to be enhanced with features applicable not just to the execution of professional training techniques, but also to the recording and validating of process operator performance for potential certification.

#### **Strategy**

The core concepts of process simulation make the technology a basis for other potential process improvement activities, such as Advanced Process Control and Process Optimization, which is where some of the major GSE competition has more business focus than for operator training. GSE will continue to emphasize its operator training focus and strengths, as well as the application of the process simulator for change management, where changes in the process, control strategy, or operating procedures can be evaluated in real time before they are applied to the actual process units. On-stream time is an important economic factor, and there is recognizable value in avoiding the risk of unplanned process disturbances from invalidated changes. Combining the training expertise in chemical process and manufacturing industries from General Physics, the Company will have access to more potential customers to offer a Total Training Solution which includes both a simulator from GSE and a training program from General Physics.

### **Competition and Competitive Advantage**

GSE's competitors are a varied group. There are major corporations offering a wide range of products and services that include operator training simulators. There are also companies focused on Process Technology and manufacturing enhancement, such as ABB and Honeywell who are DCS distributors to the refining industry and provide operator simulation as part of their DCS offering. There is a collection of companies with specific industry niches that enables them to compete in operator training simulation, such as Invensys and AspenTech. There are also the smaller training companies that compete at the lower cost levels of Computer Based Training (CBT) or simple simulations close to CBT.

The GSE focus on training simulation is a business strength, and its vendor independence, with the ability to integrate to different vendor's process control systems, is also a value which is appreciated by customers. GSE can be seen as a best-of-breed type of supplier because it is not tied to a major control system, nor is it providing simulation software for engineering and business management with high annual license fees.

### **Sales and Marketing**

The Company will market its Process Simulation technologies through a combination of techniques including its existing direct sales channel, sales agents, and strategic alliance partners. Sales and marketing resources for Process Simulation have been increased for 2004.

### **Emergency Management Simulation**

#### **Industry**

With the increasing demand to improve Homeland Security, all levels of government and civil emergency management personnel need to be trained in responding to manmade or natural disasters. Since an Emergency Operations Center (EOC) is not permanently staffed, there is a significant loss of proficiency between disasters. When a disaster happens, the staff must assimilate many streams of data at once and make decisions based upon the facts presented to them.

Today, training is accomplished in one of two ways. First is the tabletop exercise, where the EOC staff sits around a table and a scenario is presented to them and they must think through the steps to take and articulate a response. Experts are there to record the exercise and provide after action analysis. The second is a very costly exercise utilizing civil authorities and support organizations such as fire, police, civil works, hospitals, National Guard etc. These are extremely expensive and time consuming exercises in terms of manpower resources and after action analysis.

The US Government is expected to request funding of \$3.5 billion in 2004 for First Responders. There are EOC facilities at the municipal, state and federal level.

#### **GSE's Solution**

GSE has utilized its over 30 years of experience in real-time simulation modeling and operations personnel training to produce the Real-time Emergency Management Interactive Training System (REMITS). REMITS is a PC-based real-time simulation software for training EOC staff for emergency response. It is modular in design, versatile and scalable to the specific training objectives. It can interface with emergency management software such that the REMITS training environment will be identical to the actual EOC, thus allowing the emergency staff to use and train on the actual systems they will use in the event of a disaster. This provides the same level of stress and intensity as experienced in a real emergency scenario. REMITS can perform Individual Skills Training in the familiarization of EOC equipment and procedures for different emergency scenarios. Leadership training can be accomplished to teach effective command and control over available assets. Finally, Team Collaboration Training enables the staff to train on effective communications, moving resources and working with constrained equipments and assets.

#### **Strategy**

GSE is working closely with General Physics to develop new business in the Homeland Security industry. General Physics has over 12 years of experience in training corporate and public sector HAZMAT First Responders nationwide, 20 years of operations/training support to the Army's Chemical Weapons Disposal Program, 15 years performing environmental compliance and biological/chemical remediation and five years support to the Department of Homeland Security (DHS), Office of Domestic Preparedness (ODP) Equipment and Training Programs. Combining the Homeland Security related expertise of General Physics and GSE's EOC simulator product REMITS, the Company is aggressively pursuing business in the government sector, local, state and federal.

#### **Competition**

GSE's competitors are unclear at this time. There are similar products being developed for the market but most of them are either designed for military usage or do not provide the extensive training features for civilian emergency response training exercises.

### **Sales and Marketing**

GSE will market its product in the US Homeland Security industry through the existing sales channels of General Physics and foreign markets

through existing power simulation partners and agents.

### **Competitive Advantages.**

The Company believes that it is in a strong position to compete in the Simulation markets based upon the following strengths:

--Technical and Applications Expertise. GSE is a leading innovator and developer of real-time software with more than 30 years of experience producing high fidelity real-time simulators. As a result, the Company has acquired substantial applications expertise in the energy and industrial process industries. The Company employs a highly educated and experienced multinational workforce of 146 employees, including approximately 84 engineers and scientists. Approximately 60% these engineers and scientists have advanced science and technical degrees in fields such as chemical, mechanical and electrical engineering, applied mathematics and computer sciences.

--Proprietary Software Tools. GSE has developed a library of proprietary software tools including auto-code generators and system models that substantially facilitate and expedite the design, production and integration, testing and modification of software and systems. These tools are used to automatically generate the computer code and systems models required for specific functions commonly used in simulation applications, thereby enabling it or its customers to develop high fidelity real-time software quickly, accurately and at lower costs.

--Open System Architecture. GSE's software products and tools are executed on standard operating systems with third-party off-the-shelf hardware. The hardware and operating system independence of its software enhances the value of its products by permitting customers to acquire less expensive hardware and operating systems. The Company's products work in the increasingly popular Microsoft operating environment, allowing full utilization and integration of numerous off-the-shelf products for improved performance.

--International Strengths. Approximately 70% of the Company's 2003 revenue was derived from international sales of its products and services. GSE has a multinational sales force with offices located in Beijing, China, Nykoping, Sweden, and Tokyo, Japan and agents and representatives in 22 other countries. To capitalize on international opportunities and penetrate foreign markets, the Company has established strategic alliances and partnerships with several foreign entities.

### **Intellectual Property.**

The Company depends upon its intellectual property rights in its proprietary technology and information. GSE maintains a portfolio of patents, trademarks (both registered and unregistered), copyrights (both registered and unregistered), and licenses. While such patents, trademarks, copyrights and licenses as a group are of material importance to the Company, it does not consider any one patent, trademark, copyright, or license to be of such importance that the loss or expiration thereof would materially affect any segment or the Company as a whole. The Company relies upon a combination of trade secrets, copyright, patent and trademark law, contractual arrangements and technical means to protect its intellectual property rights. GSE distributes its software products under software license agreements that grant customers nonexclusive licenses for the use of its products, which are nontransferable. Use of the licensed software is restricted to designated computers at specified sites, unless the customer obtains a site license of its use of the software. Software and hardware security measures are also employed to prevent unauthorized use of the Company's software, and the licensed software is subject to terms and conditions prohibiting unauthorized reproduction of the software.

The Company has several U.S. patents that were issued in the 1996 timeframe, none of which (individually or collectively) have a significant role in the Company's current business operations. In accordance with Title 35 U.S. Code Section 154, these patents have a duration of 20 years from the filing date of the application, subject to any statutory extension, provided they are properly maintained. The Company believes that all of the Company's trademarks (especially those that use the phrase "GSE Systems") are valid and will have an unlimited duration as long as they are adequately protected and sufficiently used. The Company's licenses are perpetual in nature and will have an unlimited duration as long as they are adequately protected and the parties adhere to the material terms and conditions.

GSE has one registered U.S. trademark: RETACT. Registration is pending or is being considered for other relevant trademarks, including JADE, SmartTutor, eSmart, and GAARDS. Some of these trademarks have also been registered in foreign countries. The Company also claims trademark rights to SimSuite Power, SimSuite Pro, SimExec, eXtreme I/S, RACS, PEGASUS Plant Surveillance and Diagnosis System, SIMON, and Vista PIN.

In addition, the Company maintains federal statutory copyright protection with respect to its software programs and products, has registered copyrights for some of the documentation and manuals related to these programs, and maintains trade secret protection on its software products.

Despite these protections, the Company cannot be sure that it has protected or will be able to protect its intellectual property adequately, that the unauthorized disclosure or use of its intellectual property will be prevented, that others have not or will not develop similar technology independently, or, to the extent it owns patents, that others have not or will not be able to design around those patents. Furthermore, the laws of certain countries in which the Company's products are sold do not protect its products and intellectual property rights to the same extent as the laws of the United States.

## Industries Served.

The following chart illustrates the approximate percentage of the Company's 2003, 2002, and 2001 revenues by industries served:

	2003	2002	2001
Nuclear power industry	89%	86%	76%
Fossil power industry	9%	12%	22%
Other	2%	2%	2%
Total	100%	100%	100%

## Contract Backlog.

The Company does not reflect an order in backlog until it has received a contract that specifies the terms and milestone delivery dates. As of December 31, 2003, the Company's aggregate contract backlog totaled approximately \$30.4 million. Approximately \$19.5 million or 64.1% of the backlog is expected to be converted to revenue by December 31, 2004. As of December 31, 2002, the Company's aggregate contract backlog totaled approximately \$19.1 million.

## Employees.

As of December 31, 2003, the Company had 146 employees, a 39% decrease from December 2002. The reductions were primarily associated with the sale of the Process business and the outsourcing of the corporate functions to General Physics Corporation, a wholly owned subsidiary of GP Strategies.

## Segment Information.

Following the disposition of the Process business, the Company operates in one business segment.

## RISK FACTORS.

The Company's expense levels are based upon its expectations as to future revenues, so it may be unable to adjust spending to compensate for a revenue shortfall. Accordingly, any revenue shortfall would likely have a disproportionate effect on the Company's operating results.

The Company's operating results have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of new products and enhancements by the Company and its competitors, and fluctuating foreign economic conditions. Since the Company's expense levels are based in part on its expectations as to future revenues, the Company may be unable to adjust spending in a timely manner to compensate for any revenue shortfall and such revenue shortfalls would likely have a disproportionate adverse effect on operating results. The Company believes that these factors may cause the market price for its common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations.

## Risk of International Sales and Operations.

Sales of products and the provision of services to end users outside the United States accounted for approximately 70% of the Company's consolidated revenue in 2003. The Company anticipates that international sales and services will continue to account for a significant portion of its revenue in the foreseeable future. As a result, the Company may be subject to certain risks, including risks associated with the application and imposition of protective legislation and regulations relating to import or export (including export of high technology products) or otherwise resulting from trade or foreign policy and risks associated with exchange rate fluctuations. Additional risks include potentially adverse tax consequences, tariffs, quotas and other barriers, potential difficulties involving the Company's strategic alliances and managing foreign sales agents or representatives and potential difficulties in accounts receivable collection. The Company currently sells products and provides services to customers in emerging market economies such as Russia, Ukraine, Bulgaria, and the Czech Republic. Although end users in the Ukraine accounted for 28.7%, 22.8% and 33.2% of the Company's consolidated revenue in 2003, 2002 and 2001, respectively, GSE's customer for these projects was Battelle's Pacific Northwest National Laboratory, which is the purchasing agent for the U.S. Department of Energy. The DOE provides funding for various projects in Eastern and Central Europe. Accordingly, the Company is not subject to the political and financial risks that are normally faced when doing business in the Ukraine. The Company has taken steps designed to reduce the additional risks associated with doing business in these countries, but the Company believes that such risks may still exist and include, among others, general political and economic instability, lack of currency convertibility, as well as uncertainty with respect to the efficacy of applicable legal systems. There can be no assurance that these and other factors will not have a material adverse effect on the Company's business, financial condition or results of operations.

The Company relies on one customer for a substantial portion of its revenue. The loss of this customer would have a material adverse effect upon the Company's revenues and results of operations.

For the years ended December 31, 2003, 2002, and 2001, one Power Simulation customer (Battelle's Pacific Northwest National Laboratory) accounted for approximately 28.7%, 22.8%, and 33.2%, respectively, of the Company's consolidated revenue. The Pacific Northwest National Laboratory is the purchasing agent for the Department of Energy and the numerous projects the Company performs in Eastern and Central Europe. If the Company lost this customer, the Company's revenue and results of operations would be materially and adversely affected.

The Company's business is substantially dependent on sales to the nuclear power industry. Any disruption in this industry would have a material adverse effect upon the Company's revenue.

In 2003, 89% of GSE's revenue was from customers in the nuclear power industry. The Company will continue to derive a significant portion of its revenue from customers in the nuclear power industry for the foreseeable future. The Company's ability to supply nuclear power plant simulators and related products and services is dependent on the continued operation of nuclear power plants and, to a lesser extent, on the construction of new nuclear power plants. A wide range of factors affect the continued operation and construction of nuclear power plants, including the political and regulatory environment, the availability and cost of alternative means of power generation, the occurrence of future nuclear incidents, and general economic conditions.

The Company's debt agreement imposes significant operating and financial restrictions, which may prevent it from capitalizing on business opportunities.

GSE's debt agreement imposes significant operating and financial restrictions. These restrictions affect, and in certain cases limit, among other things, the Company's ability to:

- \* incur additional indebtedness and liens;
- \* make capital expenditures;
- \* make investments and acquisitions and sell assets;
- \* consolidate, merge or sell all or substantially all of its assets.

There can be no assurance that these restrictions will not adversely affect the Company's ability to finance its future operations or capital needs or to engage in other business activities that may be in the interest of stockholders.

The Company is dependent on product innovation and research and development, which costs are incurred prior to revenues for new products and improvements.

The Company believes that its success will depend in large part on its ability to maintain and enhance its current product line, develop new products, maintain technological competitiveness and meet an expanding range of customer needs. The Company's product development activities are aimed at the development and expansion of its library of software modeling tools, the improvement of its display systems and workstation technologies, and the advancement and upgrading of its simulation and process control technologies. The life cycles for software modeling tools, display system software, process control and simulation technologies are variable and largely determined by competitive pressures. Consequently, the Company will need to continue to make significant investments in research and development to enhance and expand its capabilities in these areas and to maintain its competitive advantage.

The Company relies upon its intellectual property rights for the success of its business; however, the steps it has taken to protect its intellectual property may be inadequate.

Although the Company believes that factors such as the technological and creative skills of its personnel, new product developments, frequent product enhancements and reliable product maintenance are important to establishing and maintaining a technological leadership position, the Company's business depends, in part, on its intellectual property rights in its proprietary technology and information. The Company relies upon a combination of trade secret, copyright, patent and trademark law, contractual arrangements and technical means to protect its intellectual property rights. The Company enters into confidentiality agreements with its employees, consultants, joint venture and alliance partners, customers and other third parties that are granted access to its proprietary information, and limits access to and distribution of its proprietary information. There can be no assurance, however, that the Company has protected or will be able to protect its proprietary technology and information adequately, that the unauthorized disclosure or use of the Company's proprietary information will be prevented, that others have not or will not develop similar technology or information independently, or, to the extent the Company owns patents, that others have not or will not be able to design around those patents. Furthermore, the laws of certain countries in which the Company's products are sold do not protect the Company's products and intellectual property rights to the same extent as the laws of the United States.

The industries in which GSE operates are highly competitive. This competition may prevent the Company from raising prices at the same pace as its costs increase.

The Company's businesses operate in highly competitive environments with both domestic and foreign competitors, many of whom have substantially greater financial, marketing and other resources than the Company. The principal factors affecting competition include price,

technological proficiency, ease of system configuration, product reliability, applications expertise, engineering support, local presence and financial stability. The Company believes that competition in the simulation fields may further intensify in the future as a result of advances in technology, consolidations and/or strategic alliances among competitors, increased costs required to develop new technology and the increasing importance of software content in systems and products. The Company believes that its technology leadership, experience, ability to provide a wide variety of solutions, product support and related services, open architecture and international alliances will allow it to compete effectively in these markets. As the Company's business has a significant international component, changes in the value of the dollar could adversely affect the Company's ability to compete internationally.

GSE will continue to pursue new acquisitions and joint ventures, and any of these transactions could adversely affect its operating results or result in increased costs or other problems.

The Company intends to continue to pursue new acquisitions and joint ventures, a pursuit which could consume substantial time and resources. Identifying appropriate acquisition candidates and negotiating and consummating acquisitions can be a lengthy and costly process. The Company may also encounter substantial unanticipated costs or other problems associated with the acquired businesses. The risks inherent in this strategy could have an adverse impact on the Company's results of operation or financial condition.

The nuclear power industry, the Company's largest customer group, is associated with a number of hazards which could create significant liabilities for the Company.

The Company's business could expose it to third party claims with respect to product, environmental and other similar liabilities. Although the Company has sought to protect itself from these potential liabilities through a variety of legal and contractual provisions as well as through liability insurance, the effectiveness of such protections has not been fully tested. Certain of the Company's products and services are used by the nuclear power industry primarily in operator training. Although the Company's contracts for such products and services typically contain provisions designed to protect the Company from potential liabilities associated with such use, there can be no assurance that the Company would not be materially adversely affected by claims or actions which may potentially arise.

The Company is controlled by the Company's principal stockholder, whose interests may not be aligned with those of the Company's other stockholders.

As of March 1, 2004, GP Strategies Corporation, owns approximately 58% of GSE's outstanding common stock. Accordingly, GP Strategies controls the Company's business and affairs, including the election of individuals to the board of directors, and the outcome of actions that require stockholder approval including mergers, sales of assets, and to prevent, or to cause, a change of control of the Company.

On January 1, 2004, the Company entered into a Management Services Agreement with GP Strategies Corporation in which GP Strategies agreed to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax. In addition, GSE will use General Physics' financial system. GSE will pay an annual fee to General Physics of \$685,000. The term of the agreement is one year, subject to earlier termination only upon the mutual consent of the parties to the agreement. The agreement can be renewed for successive one-year terms.

## **ITEM 2. PROPERTIES.**

The Company is headquartered in a facility in Columbia, Maryland (approximately 53,000 square feet). The lease for this facility expires in 2008.

In addition, the Company leases office space domestically in Georgia and internationally in China, Japan, and Sweden. The Company leases these facilities for terms ending between 2004 and 2007.

In September 2001, the Company entered into a sublease agreement with ManTech International, Inc. in which ManTech subleases 1,432 sq. feet of space in the Columbia, Maryland facility. The sublease is currently on a month to month basis.

In September 2001, the Company entered into a sublease agreement with MECx in which MECx subleases 2,088 sq. feet of space in the Columbia, Maryland facility. The sublease is currently on a month to month basis.

In May, 2003, the Company moved its Process Automation business to its Columbia, Maryland facility from the 34,000 square foot facility in Baltimore, Maryland where this business had been headquartered. The lease of this facility terminates in July, 2008. The Company entered into a sublease agreement with AlphaPharma USPD Inc. to sublease 29,000 square feet of this Baltimore, MD facility for a five-year period commencing on May 1, 2003. The subtenant may terminate the lease at the end of the second or third year of the agreement provided a six-month notice is given.

In conjunction with the sale of the Process business to Novatech LLC in September 2003, the Company entered into a sublease agreement with Novatech to sublease a portion of the Columbia, Maryland facility for a one-year period.

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

The Company is from time to time involved in legal proceedings incidental to the conduct of its business. The Company currently is not a party to legal proceedings that, in the opinion of management, are likely to have a material adverse effect on the Company's business, financial condition or results of operations.

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

No matter was submitted to a vote of security holders during the quarter ended December 31, 2003.

## PART II

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

The following table sets forth, for the periods indicated, the high and low sale prices for the Company's common stock reported by the American Stock Exchange:

2003		
Quarter	High	Low
First	\$1.62	\$1.05
Second	\$1.71	\$1.05
Third	\$2.13	\$1.25
Fourth	\$2.08	\$1.57

  

2002		
Quarter	High	Low
First	\$4.00	\$3.00
Second	\$4.00	\$ 2 5/7
Third	\$ 3 1/2	\$ 2 1/9
Fourth	\$ 2 1/4	\$6/7

The following table sets forth the equity compensation plan information for the year ended December 31, 2003:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plan approved by security holders	1,656,476	\$4.19	679,644
Equity compensation plan not approved by security holders	--	--	0
Total	1,656,476	\$4.19	679,644

The Company's common stock is listed on the American Stock Exchange, where it trades under the symbol "GVP".

There were approximately 34 holders of record of the common stock as of March 1, 2004. Based upon information available to it, the Company believes there are approximately 700 beneficial holders of the common stock. The Company has never declared or paid a cash dividend on its common stock. The Company currently intends to retain future earnings to finance the growth and development of its business and, therefore, does not anticipate paying any cash dividends in the foreseeable future on its common stock. In December 2001, the Company issued to ManTech International Corp. 39,000 shares of convertible preferred stock which accrued dividends at an annual rate of 6% payable quarterly. ManTech elected to convert the preferred stock to common stock in October 2003. The Company's credit facility restricts the Company from paying any dividends on the preferred stock, so accordingly, at December 31, 2003, the Company had accrued dividends payable to ManTech of \$366,000.

The Company believes factors such as quarterly fluctuations in results of operations and announcements of new products by the Company or by its competitors may cause the market price of the common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations. These factors may adversely affect the market price of the Company's common stock.

### ITEM 6. SELECTED FINANCIAL DATA.

Historical consolidated results of operations and balance sheet data presented below have been derived from the historical financial statements of the Company. This information should be read in connection with the Company's consolidated financial statements.

	Years ended December 31,				
(in thousands, except per share data)	2003	2002	2001	2000	1999

Contract revenue	\$ 25,019	\$ 20,220	\$ 25,509	\$ 30,507	\$ 32,061
Cost of revenue	19,175	16,660	19,744	21,708	21,513
Gross profit	5,844	3,560	5,765	8,799	10,548
Operating expenses:					
Selling, general and administrative	6,443	6,506	6,036	7,981	9,101
Depreciation and amortization	392	395	1,098	872	866
Total operating expenses	6,835	6,901	7,134	8,853	9,967
Operating income (loss)	(991)	(3,341)	(1,369)	(54)	581
Interest expense, net	(504)	(55)	(469)	(174)	10
Other income (expense), net	(273)	37	442	55	(37)
Income (loss) from continuing operations					
before income taxes	(1,768)	(3,359)	(1,396)	(173)	554
Provision (benefit) for income taxes	93	891	(153)	541	330
Income loss from continuing operations	(1,861)	(4,250)	(1,243)	(714)	224
Income (loss) from discontinued operations, net of income taxes	(1,409)	(1,693)	1,502	(8,100)	(123)
Loss on sale of discontinued operations	(262)	-	-	-	-
Income (loss) from discontinued operations	(1,671)	(1,693)	1,502	(8,100)	(123)
Net income (loss)	\$ (3,532)	\$ (5,943)	\$ 259	\$ (8,814)	\$ 101
Basic income (loss) per common share:					
Continuing operations	\$ (0.61)	\$ (0.76)	\$ (0.24)	\$ (0.14)	\$ 0.04
Discontinued operations	(0.26)	(0.29)	0.29	(1.56)	(0.02)
Net income (loss)	\$ (0.87)	\$ (1.05)	\$ 0.05	\$ (1.70)	\$ 0.02
Diluted income (loss) per common share:					
Continuing operations	\$ (0.61)	\$ (0.76)	\$ (0.24)	\$ (0.14)	\$ 0.04
Discontinued operations	(0.26)	(0.29)	0.29	(1.56)	(0.02)
Net income (loss)	\$ (0.87)	\$ (1.05)	\$ 0.05	\$ (1.70)	\$ 0.02
Weighted average common shares outstanding:					
-Basic	6,542	5,863	5,217	5,182	5,066
-Diluted	6,542	5,863	5,259	5,182	5,351

As of December 31,

	2003	2002	2001	2000	1999
Working capital	\$ 2,537	\$ 6,036	\$ 7,063	\$ 5,522	\$ 8,665
Total assets	16,536	28,894	33,674	35,949	43,027
Long-term liabilities	441	9,617	7,263	12,390	9,083
Stockholders' equity	5,679	8,111	13,852	8,713	17,170

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

In September 2003, the Company completed the sale of substantially all of the assets of GSE Process Solutions, Inc. (Process) to Novatech, LLC (Novatech) pursuant to an Asset Purchase Agreement, effective as of September 25, 2003, by and between the Company, Process and Novatech. The Company received \$5.5 million in cash, subject to certain adjustments. The operating results of the Company's Process business have been classified as discontinued operations in the Consolidated Statements of Operations for all periods presented. Following the sale of Process, the Company operates only in the Power business.

On September 29, 2003 the Company amended the ManTech Preferred Stock issuance agreement to revise the conversion rate from \$2.645 per share to \$1.5526 per share. The change in conversion rate increased the number of common shares available upon conversion from 1,474,480 to 2,511,915. On October 23, 2003 ManTech elected to convert all of its preferred stock to common stock and sold all of its GSE common stock and subordinated debt to GP Strategies. The additional common shares that ManTech received in the conversion due to the change in conversion rate have been recorded as a beneficial conversion premium, valued at \$1,950,000 based upon the closing market price per share (\$1.88) as of October 23, 2003, and a reduction in income attributable to common stockholders. The terms of the \$650,000 subordinated note were amended by the Company to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526 which was below the market rate (\$1.88) on the date the amendment was adopted. Accordingly, the Company recognized additional interest expense of \$137,000 reflecting the beneficial conversion premium. GP Strategies elected to convert the note on October 23, 2003 and received 418,653 shares of GSE common stock. As a result of these transactions, GP Strategies owns approximately 58% of the total outstanding common stock of GSE at December 31, 2003.

The Company enters 2004 with no bank debt, only \$42,000 of other notes payable, and backlog that is at a five year high. The Company expects to return to profitability in 2004 and the Company's cash flow is expected to be sufficient for its operating needs during 2004. However, the Company's liquidity can be affected by any of the following significant risk factors:

--The Company's business is substantially dependent on sales to the nuclear power industry (89% of revenue in 2003). Spending by companies in this targeted industry is subject to period-to-period fluctuations as a consequence of industry cycles, economic conditions, political and regulatory environments and other factors.

--The Company relies on one customer, Battelle's Pacific Northwest National Laboratory (29% of revenue in 2003) for a substantial portion of its revenues. The loss of this customer would have a material adverse effect upon the Company's liquidity.

--Sales of products and the provision of services to end users outside the United States accounted for approximately 70% of the Company's revenue in 2003. Thus, the Company is subject to risks associated with the application and imposition of protective legislation and regulations relating to import or export or otherwise resulting from trade or foreign policy.

### **Critical Accounting Policies and Estimates.**

As further discussed in Note 2 to the consolidated financial statements, in preparing the Company's financial statements, management makes several estimates and assumptions that affect the Company's reported amounts of assets, liabilities, revenues and expenses. Those accounting estimates that have the most significant impact on the Company's operating results and place the most significant demands on management's judgment are discussed below. For all of these policies, management cautions that future events rarely develop exactly as forecast, and the best estimates may require adjustment.

**Revenue Recognition on Long-Term Contracts.** The Company uses the percentage-of-completion revenue recognition methodology to record revenue under its long-term fixed-price contracts in accordance with the AICPA Statement of Position 81-1, "Accounting for Performance of Construction-Type and Certain Production-Type Contracts." This methodology recognizes income as work progresses on the contract and is based on an estimate of the income earned to date, less income recognized in earlier periods. The Company bases its estimate of the degree of completion of the contract by reviewing the relationship of costs incurred to date to the expected total costs that will be incurred on the project. The Company's project managers are responsible for estimating the costs to be incurred at the beginning of each project and are responsible for updating the estimate as the project progresses. Management reviews the status of each project periodically with the project managers and determines whether the cost estimates are reasonable. If changes in the estimated costs to complete the projects are required, the cumulative impact on the percentage of completion revenue calculation is recognized in the period identified. Whenever evidence indicates that the estimated total cost of a contract will exceed its total contract value, the Company's operating results are charged for the full amount of the estimated losses immediately. Uncertainties inherent in the performance of contracts include labor availability and productivity, material costs, change order scope and pricing, software modification and customer acceptance issues. The reliability of these cost estimates is critical to the Company's revenue recognition as a significant change in the estimates can cause the Company's revenue and related margins to change significantly from the amounts estimated in the early stages of the project.

**Capitalization of Computer Software Development Costs.** In accordance with Statement of Financial Accounting Standards (SFAS) No. 86 "Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed," the Company capitalizes computer software development costs incurred after technological feasibility has been established, but prior to the release of the software product for sale to customers. Once the product is available to be sold, the Company begins to amortize the costs over the estimated useful life of the product, which normally ranges from three to five years. At December 31, 2003, the Company has net capitalized software development costs of \$946,000. On an annual basis, the Company assesses the recovery of the unamortized software computer costs by estimating the net undiscounted cash flows expected to be generated by the sale of the product. If the undiscounted cash flows are not sufficient to recover the

unamortized software costs the Company will write-down the investment to its estimated fair value based on future discounted cash flows. The excess of any unamortized computer software costs over the related net realizable value is written down and charged to income. Significant changes in the sales projections could result in an impairment with respect to the capitalized software that is reported on the Company's consolidated balance sheet.

Deferred Income Tax Valuation Allowance. Deferred income taxes arise from temporary differences between the tax bases of assets and liabilities and their reported amounts in the financial statements. As required by SFAS No. 109 "Accounting for Income Taxes," management makes a periodic assessment of the realizability of the Company's deferred tax assets. In making this assessment, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities and projected future taxable income of the Company in making this assessment. A valuation allowance is recorded to reduce the total deferred income tax assets to its net realizable value. At December 31, 2003, the Company's deferred tax assets related primarily to a U.S. net operating loss carryforward of \$15.9 million which expire in various amounts over the next twenty years. The amount of loss carryforward which can be used by the Company may be limited to approximately \$500,000 annually. The recovery of the net deferred tax asset could not be substantiated by currently available objective evidence and, accordingly, the Company has established a full valuation allowance for the balance of its deferred tax assets of \$8.6 million. If the Company is able to realize taxable income in the future the valuation allowance will be reduced.

### Results of Operations.

The following table sets forth the results of operations for the periods presented expressed in thousands of dollars and as a percentage of revenues.

	Years ended December 31,					
	2003	%	2002	%	2001	%
Contract revenue	\$ 25,019	100.0 %	\$ 20,220	100.0 %	\$ 25,509	100.0 %
Cost of revenue	19,175	76.6 %	16,660	82.4 %	19,744	77.4 %
Gross profit	5,844	23.4 %	3,560	17.6 %	5,765	22.6 %
Operating expenses:						
Selling, general and administrative	6,443	25.8 %	6,506	32.2 %	6,036	23.7 %
Depreciation and amortization	392	1.6 %	395	1.9 %	1,098	4.3 %
Total operating expenses	6,835	27.4 %	6,901	34.1 %	7,134	28.0 %
Operating loss	(991)	(4.0)%	(3,341)	(16.5)%	(1,369)	(5.4)%
Interest expense, net	(504)	(2.0)%	(55)	(0.3)%	(469)	(1.8)%
Other income (expense), net	(273)	(1.1)%	37	0.2 %	442	1.7 %
Loss from continuing operations before income taxes	(1,768)	(7.1)%	(3,359)	(16.6)%	(1,396)	(5.5)%
Provision (benefit) for income taxes	93	0.3 %	891	4.4 %	(153)	(0.6)%
Loss from continuing operations	(1,861)	(7.4)%	(4,250)	(21.0)%	(1,243)	(4.9)%
Income (loss) from discontinued operations, net of income taxes	(1,409)	(5.6)%	(1,693)	(8.4)%	1,502	5.9%
Loss on sale of discontinued operations	(262)	(1.1)%	-	0.0 %	-	0.0%
Income (loss) from discontinued operations	(1,671)	(6.7)%	(1,693)	(8.4)%	1,502	5.9%
Net income (loss)	\$ (3,532)	(14.1)%	\$ (5,943)	(29.4)%	\$ 259	1.0%

### Comparison of 2003 to 2002.

Contract Revenue. Total contract revenue increased 23.7% as compared to the prior year, from \$20.2 million for the year ended December 31, 2002 to \$25.0 million for the year ended December 31, 2003. The increase reflects the receipt of several large international simulator contracts in 2003 which had been delayed in 2002. The Company's backlog increased from \$19.1 million at December 31, 2002 to \$30.4 million at December 31, 2003.

\$9.1 million of the December 31, 2002 backlog related to one project which was logged in late December 2002.

Gross Profit. Gross profit totaled \$5.8 million (23.4% of revenue) for the year ended December 31, 2003, as compared with \$3.6 million (17.6% of revenue) for the year ended December 31, 2002. The increase in gross margin reflects higher margins on the Company's fossil utility training simulator projects in 2003 and a higher volume of license sales.

**Selling, General and Administrative Expenses.** Selling, general and administrative ("SG&A") expenses totaled \$6.4 million in 2003 (25.8% of revenue), a slight decrease from the \$6.5 million (32.2% of revenue) for 2002. The Company reduced its bidding and proposal costs in 2003 as compared to the prior year. Included in 2003 SG&A was \$264,000 of severance, of which \$213,000 had not yet been paid at December 31, 2003 while \$291,000 of severance expense was included in 2002 SG&A. The Company increased its net research and product development expenditures ("R&D") in 2003, as discussed below.

Gross R&D, including software development costs, totaled \$856,000 in 2003 versus \$763,000 in 2002; capitalized software development costs totaled \$542,000 in 2003 versus \$555,000 in 2002; and net R&D, expensed and included in SG&A, was \$314,000 in 2003 versus \$208,000 in 2002.

The increase in the Company's capitalized software development expenditures was related to:

--The completion of JADE 1.0 (Java Applications & Development Environment), a Java-based application that provides a window into the simulation instructor station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run simulation scenarios from anywhere they have access to the web. JADE version 1.0 was released for sale on March 31, 2003.

--Additional enhancements to JADE that were released in version 2.0, including implementing XML file structure in JADE for pagination, adding wireless PDA for JStation applications, multi-language support, and adding a two phase object oriented flow network. JADE version 2.0 was release at the end of 2003.

In 2004, the Company expects to reduce its gross R&D spending to approximately \$600,000. The Company's research and development efforts will focus on the release of JADE 3.0 to incorporate requested enhancements to the Java-based simulation tools. In addition, the Company will enhance its Xtreme tools to include more sophisticated modeling tools for Microsoft Windows customers. With the closer working relationship with General Physics, the Company will be integrating its simulation capability into the various training programs offered by General Physics to create a unique interactive classroom training solution. Refinements will also be made to the Emergency Operations Center simulator platform REMITS to integrate more third party emergency management software packages. Finally, the Company will continue to integrate its simulation platform with third party thermal performance optimization tools to create a plant-wide optimization tool for the power industry.

**Depreciation and Amortization.** Depreciation expense amounted to \$392,000 and \$395,000 during the years ended December 31, 2003 and 2002, respectively.

**Operating Loss from Continuing Operations.** The Company had an operating loss from continuing operations of \$1.0 million (4.0% of revenue) for the year ended December 31, 2003 as compared with operating loss of \$3.3 million (16.5% of revenue) for the year ended December 31, 2002.

**Interest Expense, Net.** Net interest expense increased 816% from \$55,000 for the year ended December 31, 2002 to \$504,000 in 2003.

In September 2003, the Company paid off its outstanding bank debt from the cash proceeds of the sale of the Process business. The interest expense incurred on the outstanding bank debt in 2003 prior to the pay down and in 2002 has been included in the costs of the discontinued business.

In March, 2003, GP Strategies extended their \$1.8 million limited guarantee of the Company's bank facility for a one-year period. In consideration for the extension of the guarantee, the Company issued 150,000 shares of its common stock to GP Strategies. The number of shares was calculated based upon a 10% fee divided by the closing price of GSE's common shares on March 21, 2003. The cost of the guarantee is being amortized over the one year period; GSE recognized \$135,000 of interest expense in 2003.

The fees paid to the Company's financial institution as consideration for the extension of the Company's credit facility are being amortized over the life of the credit facility. In 2003, the Company recognized \$81,000 of interest expense.

On October 23, 2003, ManTech sold their subordinated promissory note to GP Strategies. The terms of the subordinated note were amended to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526 which was below the market rate (\$1.88) on the date the amendment was adopted. The Company recognized additional interest expense of \$137,000 reflecting the beneficial conversion premium.

In 2002, the Company had received \$23,000 of interest income related to a Federal income tax refund.

**Other Income (Expense), Net.** In 2003, the Company wrote off the balance of its investment in RedStorm Scientific Inc. (\$279,000) as the Company deemed the decline in the estimated fair value to be other than temporary. In 2002 the Company had recognized an equity loss of \$59,000 on its investment in RedStorm. These losses were offset by foreign currency gains in both years, and royalty income in 2002.

**Provision for Income Taxes.** In 2003, the Company recorded an income tax provision of \$93,000. The provision is comprised of foreign and state income taxes. The Company has a full valuation allowance on its deferred income tax assets. The difference between the statutory U.S. tax rate and the Company's effective rate for 2003 was primarily due to an increase in the deferred tax asset valuation reserve and foreign taxes.

The Company recorded an income tax provision of \$891,000 in 2002. This provision is mainly the result of an increase in the valuation allowance for the Company's deferred income tax assets. The Company established a full valuation allowance since recovery of the deferred tax asset could not be substantiated by currently available objective evidence. The difference between the statutory U.S. tax rate and the Company's effective rate for 2002 was primarily due to the change in the deferred tax asset valuation reserve and foreign taxes.

**Loss from Discontinued Operations.** For the year ended December 31 2003, the Company had an operating loss from discontinued operations of \$1.7 million. The Company's Process business was sold on September 25, 2003. For the nine months ended September 30, 2003, the Process business had a 27% decrease in revenue as compared to the same period in the prior year (\$13.7 million vs \$18.7 million, respectively). The decrease was mainly attributable to a reduction in orders received from the business' major customer, Westinghouse Savannah River Company. Included in the 2003 operating loss was a \$262,000 loss on the sale of the Process business and a \$115,000 write down of the Company's investment in Avantium International BV.

For the year ended December 31, 2002, the Company had an operating loss from discontinued operations of \$1.7 million. Included in this loss was \$2.8 million from the write down of the Company's investment in Avantium International BV.

### **Comparison of 2002 to 2001.**

**Contract Revenue.** Total contract revenue was \$20.2 million and \$25.5 million for the years ended December 31, 2002 and 2001, respectively.

Although there was increased activity in the U.S. simulator upgrade market in 2002 as compared to the prior year, international revenue decreased due to the completion of several large, multi-year projects. In addition, there were several very large full scope international simulator orders that were delayed throughout 2002 which negatively impacted the Company's 2002 revenue. One of these orders, a \$9.1 million simulator for Unit 3 of the Zaporizhya Nuclear Power Station in eastern Ukraine, was received by the Company in late December 2002. The contract was awarded to GSE through Battelle's Pacific Northwest National Laboratory and is part of the Department of Energy's International Nuclear Safety Program.

**Gross Profit.** Gross profit totaled \$3.6 million (17.6% of revenue) for the year ended December 31, 2002, as compared with \$5.8 million (22.6% of revenue) for the year ended December 31, 2001. During 2002, the Power business reduced operations personnel by 14 employees. Despite this reduction in the Company's overhead costs, gross profit as a percentage of revenue decreased as the overhead costs incurred were spread over a lower revenue base.

**Selling, General and Administrative Expenses.** Selling, general and administrative ("SG&A") expenses totaled \$6.5 million in 2002 (32.2% of revenue), a 7.8% increase from the \$6.0 million (23.7% of revenue) for 2001. The Company had incurred higher bidding and proposal costs in the pursuit of new orders and from the addition of two marketing personnel hired for its security business in the beginning of 2002. In addition there were two staff reductions in 2002; SG&A expense reflected \$291,000 of severance expense, of which \$51,000 had not been paid at December 31, 2002. The Company decreased its net research and product development expenditures ("R&D"), as discussed below.

Gross R&D, including software development costs, totaled \$763,000 in 2002 versus \$605,000 in 2001; capitalized software development costs totaled \$555,000 in 2002 versus \$140,000 in 2001; and net R&D, expensed and included in SG&A, was \$208,000 in 2002 versus \$465,000 in 2001.

The increase in the Company's capitalized software development expenditures was related to:

--The replacement of the Graphic User Interfaces (GUI) for the Power GSuite and Topmeret tools with a Java based GUI, which provides platform independence and internet enabling. Version 1.0 of the new GUI, called JADE, was released for sale on March 31, 2003.

**Depreciation and Amortization.** Depreciation expense amounted to \$395,000 and \$574,000 during the years ended December 31, 2002 and 2001, respectively. The decrease in depreciation in 2002 as compared to 2001 is due to certain assets becoming fully depreciated.

Due to the Company's adoption of SFAS No. 142 "Goodwill and Other Intangible Assets" on January 1, 2002, goodwill is no longer amortized, but is subject to an annual test of impairment. Thus, the Company recognized \$524,000 of goodwill amortization in 2001 versus none in 2002.

**Operating Loss from Continuing Operations.** The Company had an operating loss from continuing operations of \$3.3 million (16.5% of revenue) for the year ended December 31, 2002 as compared with an operating loss of \$1.4 million (5.4% of revenue) for the year ended December 31, 2001.

**Interest Expense, Net.** Net interest expense decreased 88.3% from \$469,000 for the year ended December 31, 2001 to \$55,000 in 2002. This decrease is due to a reduction in the average balance outstanding on the Company's subordinated debt to ManTech (\$691,000 average for the year ended December 31, 2002 versus \$3.6 million average for the prior year) plus the pay down of various notes payable in 2001.

**Other Income (Expense), Net.** The Company had foreign currency gains (\$68,000) and royalty income (\$28,000) in 2002, which were partially offset by the recognition of a \$59,000 equity loss on the Company's investment in RedStorm Scientific Inc.

For the year ended December 31, 2001, other income (expense), net includes the receipt of a \$147,000 equity distribution from the Company's liquidated Joint Venture in China (this investment was written off in a prior year), foreign currency gains of \$253,000, and royalty income of \$42,000.

**Provision for Income Taxes.** The Company recorded an income tax provision of \$891,000 in 2002. This provision is mainly the result of an increase in the valuation allowance for the Company's deferred income tax assets. The Company established a full valuation allowance since recovery of the deferred tax asset could not be substantiated by currently available objective evidence. The difference between the statutory U.S. tax rate and the Company's effective rate for 2002 was primarily due to the change in the deferred tax asset valuation reserve and foreign taxes.

The Company recorded an income tax benefit of \$153,000 in 2001. This benefit was mainly the result of a decrease in the valuation allowance for the Company's deferred income tax assets. The allowance was decreased to adjust the net deferred tax asset to an amount that management believed was more likely than not to be realized. The difference between the statutory U.S. tax rate and the Company's effective rate for 2001 was primarily due to the change in the deferred tax asset valuation reserve and foreign taxes.

**Loss from Discontinued Operations.** For the year ended December 31, 2002, the Company had an operating loss from discontinued operations of \$1.7 million. The Process business unit's revenue was \$22.9 million in 2002 compared with \$25.0 million in 2001. The decrease in Process' revenue was mainly attributable to a reduction in revenue from Process' largest customer, Westinghouse Savannah River Corp. Included in this loss was a \$2.8 million write down of the Company's investment in Avantium International BV. For the year ended December 31, 2001, the Company had operating income from discontinued operations of \$1.5 million. Included in this operating income was a gain of \$3.3 million from the sale of the Company's VirtualPlant business technology and assets to Avantium and a loss of \$4.6 million from the write down of the Company's investment in Avantium.

### **Liquidity and Capital Resources.**

As of December 31, 2003, GSE had cash and cash equivalents of \$1.4 million versus \$1.6 million at December 31, 2002.

**Cash from operating activities.** Net cash provided by operating activities was \$1.4 million for the year ended December 31, 2003; \$506,000 was provided by continuing operations and \$883,000 by discontinued operations. Significant changes in the assets and liabilities of the Company in 2003 included:

--A \$3.0 million increase in contracts receivable. This increase reflects the higher revenue and backlog in 2003 and the completion of significant billing milestones at year-end. The Company's receivables continue to be collected on a timely basis without the need of significant reserves.

--A \$624,000 increase in prepaid expenses and other assets. The increase reflects an advance payment to a subcontractor by the Company on one of its projects and fees incurred in the issuance of project advance payment and performance bonds.

--A \$2.2 million increase in accounts payable, accrued compensation and accrued expenses. Due to the increased project activity in 2003, purchases of materials and subcontractor labor are at a higher level.

--A \$3.3 million increase in billings in excess of revenue earned. The increase reflects the receipt of an advance payment of \$1.3 million on one project in 2003 and the timing of milestone billings on several other projects.

Net cash used in operating activities was \$1.2 million for the year ended December 31, 2002; \$1.1 million was used in continuing operations and \$110,000 was used in discontinued operations. The \$1.6 million adjustment of the Company's deferred tax asset valuation allowance was a non-cash item. Significant changes in the assets and liabilities of the Company in 2002 included:

--A \$1.2 million reduction in contracts receivables, reflecting the lower project activity in 2002.

--A \$674,000 decrease in billings in excess of revenue earned. The decrease reflects the completion of work in 2002 on the full scope simulator at the Gorskomatom Rivne 2 unit in the Ukraine.

Net cash provided by operating activities was \$1.9 million for the year ended December 31, 2001; \$693,000 was used in continuing operations and \$2.6 million was provided by discontinued operations. Significant changes in the assets and liabilities of the Company in 2001 included:

--A \$3.4 million decrease in contracts receivable which was mainly related to the decline in overall revenues.

--A \$3.1 million reduction in accounts payable, accrued compensation and accrued expenses. Due to the Company's improved operating cash flow in 2001 and additional subordinated borrowings from ManTech, the Company was able to reduce its outstanding payables and was current with its vendors at December 31, 2001.

Cash provided by investing activities. Net cash used in investing activities for the year ended December 31, 2003 was \$3.7 million; \$4.2

million provided by continuing operations and \$506,000 used by discontinued operations.

The \$3.7 million provided by continuing operations included \$5.2 million proceeds from the sale of the Process business unit, net of transaction costs, offset by \$515,000 in cash payments of contingent consideration for a prior year acquisition, \$191,000 of capital expenditures, and \$542,000 of capitalized software development costs. Additionally, \$245,000 of cash collateralized stand-by letters of credit expired, and the cash collateral was released. Standby letters of credit are issued by the Company in the ordinary course of business through banks as required by certain contracts and proposal requirements.

For 2002, net cash used in investing activities for the year ended December 31, 2002 was \$3.2 million; \$1.2 million used in continuing operations and \$2.0 million used in discontinued operations. The \$983,000 used in continuing operations included \$45,000 in cash payments for an acquired business, \$170,000 of capital expenditures, and \$768,000 of capitalized software development costs. In addition, the Company issued three cash-collateralized stand-by letters of credit totaling \$243,000.

For 2001, net cash used in investing activities was \$2.3 million; \$2.3 million used in continuing operations and \$27,000 used in discontinued operations. The \$2.3 million used in continuing operations included \$1.1 million in cash payments for acquired businesses (\$599,000 of contingent consideration for a prior year acquisition and \$491,000 for notes payable related to two prior year acquisitions), \$591,000 of capital expenditures, and \$668,000 of capitalized software development costs. In 2001, \$29,000 of cash collateralized letters of credit expired, and the cash collateral was released.

Cash provided by financing activities. Cash used in financing activities was \$5.5 million, all of which was used in the continuing operations. The Company decreased its borrowings under its bank line of credit by \$5.4 million, and had no outstanding bank debt at December 31, 2003.

For the year ended December 31, 2002, the Company generated \$4.0 million net cash through financing activities; \$1.4 million was provided by continuing operations and \$2.6 million was provided by discontinued operations. The Company received \$1.3 million from its escrow agent in January 2002 from a fixed-price rights offering which was completed on December 21, 2001 and received \$263,000 for the exercise of employee stock options. The Company increased its borrowings under its bank line of credit by \$443,000 to a total of \$5.4 million, and decreased its borrowings from ManTech International Corporation by \$350,000 to a total of \$650,000.

Cash provided by financing activities was \$1.0 million for the year ended December 31, 2001; \$1.2 million was used in continuing operations and \$2.2 was provided by discontinued operations. GSE reduced its borrowings under its bank line of credit in 2001 by \$4.3 million to a total of \$5.0 million. However, in 2001 the Company amended its \$1.8 million subordinated promissory note to ManTech to increase the amount to \$3.9 million, and issued a second subordinated promissory note to ManTech for \$1.0 million. Accordingly, the Company increased its subordinated borrowings from ManTech by \$3.4 million in 2001 to a total of \$4.9 million. In December 2001, ManTech elected to convert the \$3.9 million subordinated promissory note into Series A preferred stock, as permitted by the note. The Company also generated \$33,000 from the conversion of employee stock options.

#### **Credit Facilities.**

The Company has a \$1.5 million bank line of credit. The credit facility provides for borrowings to support working capital needs and foreign letters of credit. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 85% of eligible accounts receivable and 50% of eligible unbilled receivables (up to a maximum of \$250,000). The interest rate on this line of credit is based on the bank's prime rate plus 1.00% (5.00% as of December 31, 2003), with interest only payments due monthly. At December 31, 2003, the Company's available borrowing base was \$1.5 million, none of which had been utilized. The current credit facility was scheduled to expire on May 31, 2004; but on March 30, 2004, the Company has entered into a new loan and security agreement with another financial institution.

In March, 2003, GP Strategies extended their \$1.8 million limited guarantee of the Company's bank facility. In consideration for the extension of the guarantee, the Company issued 150,000 shares of its common stock to GP Strategies. The number of shares was calculated based upon a 10% fee divided by the closing price of GSE's common stock on March 21, 2003.

In 2000, the Company issued a demand promissory note to ManTech that allowed the Company to borrow up to \$1.8 million at an interest rate of prime plus one percent. In addition, ManTech provided \$1.8 million in standby letters of credit to the Company's bank as additional collateral for the Company's credit facility. In April 2001, ManTech agreed to allow the Company's bank to draw upon ManTech's \$1.8 million letter of credit which supported the Company's credit facility, thus paying down a portion of the Company's bank debt in exchange for additional subordinated debt in the Company. Accordingly, the Company's promissory note to ManTech was amended to increase the amount to \$3.9 million. The amended note permitted ManTech to convert the principal amount of the note into GSE Series A convertible preferred stock at a conversion rate of \$100 per share. The Company determined that the conversion of this debt did not constitute a beneficial conversion. ManTech elected to convert its subordinated debt into preferred equity on December 5, 2001. The Series A convertible preferred stock had no voting rights and bore dividends at the rate of 6% per annum payable quarterly. Dividends accumulated if not paid quarterly and compounded interest accrued on any unpaid dividends. ManTech at its discretion had the right to convert each share of Series A convertible preferred stock into GSE common stock at a purchase price of \$2.645 per share at any time after a one-year holding period from the date of issuance. At the end of the third year from the date of issuance, the Series A convertible preferred stock would automatically convert into GSE common stock.

On June 25, 2001, the Company issued an additional unsecured promissory note to ManTech for \$1.0 million at an interest rate of prime plus one percent. The Company used the loan proceeds for working capital purposes. The note was subordinated to the Company's credit facility.

During 2002, the Company repaid ManTech \$350,000, plus \$247,000 of interest. In 2003, the Company paid \$35,000 of interest.

On September 29, 2003 the Company amended the ManTech Preferred Stock issuance agreement to revise the conversion rate from \$2.645 per share to \$1.5526 per share. The change in conversion rate increased the number of common shares available upon conversion from 1,474,480 to 2,511,915. On October 23, 2003 ManTech elected to convert all of its preferred stock to common stock and sold all of its GSE common stock and subordinated debt to GP Strategies. The additional common shares that ManTech received in the conversion due to the change in conversion rate have been recorded as a beneficial conversion premium, valued at \$1,950,000 based upon the closing market price per share (\$1.88) as of October 23, 2003, and a reduction in income attributable to common stockholders.

The terms of the \$650,000 subordinated note were amended by the Company to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526 which was below the market rate (\$1.88) on the date the amendment was adopted. Accordingly, the Company recognized additional interest expense of \$137,000 reflecting the beneficial conversion premium. GP Strategies elected to convert the note on October 23, 2003 and received 418,653 shares of GSE common stock. As a result of these transactions, GP Strategies owns approximately 58% of the total outstanding common stock of GSE at December 31, 2003.

On October 25, 2001, the Company filed a final registration statement with the SEC for a fixed price rights offering which became effective on October 29, 2001. In early November, the Company distributed to non-affiliated holders of its common stock, based on an October 26, 2001 record date, subscription rights to purchase additional shares of common stock at a subscription price of \$2.53 per share. Each non-affiliated holder of its common stock received .711 subscription right for each share held as of the record date. Shareholders had until the expiration date of December 21, 2001 to subscribe to the offering. Of the total 2,219,701 shares available, 522,611 shares were subscribed. The proceeds to GSE totaled \$1.3 million prior to fees and expenses related to the offering of approximately \$139,000. The Company received the cash proceeds from its escrow agent in January 2002. The proceeds were used for a partial repayment of the \$1 million loan from ManTech discussed above and working capital requirements.

Other. The following summarizes the Company's contractual cash obligations at December 31, 2003, and the effect these obligations are expected to have on its liquidity and cash flow in future periods:

Payments Due by Period (in thousands)					
Contractual Cash Obligations	Total	Less than 1 year	1-3 Years	4-5 Years	After 5 Years
Long Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -
Related Party Long Term Debt	\$ 42	\$ 33	\$ 9	\$ -	\$ -
Purchase Commitments	\$ 6,466	\$ 5,294	\$ 1,172	\$ -	\$ -
Net future minimum lease payments	\$ 5,616	\$ 827	\$ 2,784	\$ 2,005	\$ -
<b>Total Contractual Cash Obligations</b>	<b>\$12,124</b>	<b>\$ 6,154</b>	<b>\$ 3,965</b>	<b>\$ 2,005</b>	<b>\$ -</b>

The Company entered into a sublease agreement with Alpharma USPD Inc. to sublease 29,000 square feet of its Baltimore, MD facility for a five-year period commencing on May 1, 2003. The subtenant may terminate the lease at the end of the second or third year of the agreement provided a six month notice is given. The Company's lease for the space expires in July 2008.

In conjunction with the sale of the Process business to Novatech LLC in September, 2003, the Company entered into a sublease agreement with Novatech to sublease a portion of the Columbia, Maryland facility for a one-year period.

As of December 31, 2003, the Company was contingently liable for six letters of credit totaling \$502,000. All of these letters of credit represent payment bonds on contracts and have been cash collateralized. In addition, the Company was contingently liable at December 31, 2003 for approximately \$65,000 under a performance bond on one contract which was secured by a bank guarantee of the Company's foreign subsidiary.

Due to the Company's cash situation at the end of 2000, GSE experienced some difficulties in procuring supplies from its vendors for business operations. In January 2001, the Company entered into a purchasing arrangement with ManTech whereby ManTech dealt directly with some of the Company's vendors, ordered the supplies needed and had the products shipped per the Company's instructions. Purchases under this agreement totaled \$843,000 for the year ended December 31, 2001. This purchasing arrangement terminated in June 2001.

## Recent Developments.

General Physics Corporation is a wholly owned subsidiary of GP Strategies. On March 30, 2004, the Company was added as an additional borrower under the Financing and Security Agreement between General Physics Corporation and a financial institution. Under the terms of the agreement, \$1.5 million of General Physics' available credit facility has been carved out for use by GSE. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 80% of eligible accounts receivable and 80% of eligible unbilled receivables. The interest rate on this line of credit is based upon the LIBOR Market Index Rate plus 3%, with interest only payments due monthly. The credit facility expires on August 23, 2005.

On January 1, 2004, the Company entered into a Management Services Agreement with GP Strategies Corporation in which GP Strategies agreed to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax. In addition, GSE will use General Physics' financial system. GSE will pay an annual fee to General Physics of \$685,000. The term of the agreement is one year, subject to earlier termination only upon the mutual consent of the parties to the agreement. The agreement can be renewed for successive one-year terms.

#### **Foreign Exchange.**

A portion of the Company's international sales revenue has been and may be received in a currency other than the currency in which the expenses relating to such revenue are paid. When necessary, the Company enters into forward exchange contracts, options and swap agreements as hedges against certain foreign currency commitments to hedge its foreign currency risk.

#### **Off-balance Sheet Obligations.**

The Company has no off-balance sheet obligations as of December 31, 2003.

#### **New Accounting Standards.**

In June 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities. SFAS No. 146 requires that a liability for a cost associated with the exit or disposal activity be recognized when incurred at fair value. SFAS No. 146 eliminates the definition and requirements of EITF Issue 94-3. SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002 and may have an effect on the timing of future restructuring charges taken, if and when they occur. The Company implemented SFAS No. 146 on January 1, 2003. Adoption had no material impact on results for the year ended December 31, 2003.

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 addresses the disclosure requirements of a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. FIN 45 also requires a guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The liability recognition requirements of FIN 45 will be applicable prospectively to all guarantees issued or modified after December 31, 2002. The Company has not issued any such guarantees other than product warranties.

In December 2003, the FASB issued Interpretation No. 46R, Consolidation of Variable Interest Entities, which requires the consolidation of certain types of entities. The Company does not participate in any variable interest entities.

#### **Other Matters.**

To date, management believes inflation has not had a material impact on the Company's operations.

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

The Company's market risk is principally confined to changes in foreign currency exchange rates. During the year ended December 31, 2003, 4% and 11% of the Company's revenue was from contracts which permitted payments in a currency other than U.S. Dollars, principally Swedish Krona and Japanese Yen, respectively. For the year ended December 31, 2002, 5% of the Company's revenue was in Swedish Krona, 3% was in Japanese Yen. In addition, during the years ended December 31, 2003 and 2002, 13% and 9%, respectively, of the Company's expenses were incurred in Swedish Krona. The Company's exposure to foreign exchange rate fluctuations arises in part from inter-company accounts in which costs incurred in one entity are charged to other entities in different foreign jurisdictions. The Company is also exposed to foreign exchange rate fluctuations as the financial results of all foreign subsidiaries are translated into U.S. dollars in consolidation. As exchange rates vary, those results when translated may vary from expectations and adversely impact overall expected profitability.

The Company is also subject to market risk related to the interest rates on its existing line of credit. As of March 30, 2004, such interest rates are based on the prime rate plus 100 basis-points.

As of December 31, 2003, the Company did not have any outstanding debt that was subject to variable interest rates. However, for the debt that was outstanding earlier in 2003, a 100 basis-point change in such rates during the year ended December 31, 2003 would have increased the Company's annual interest expense by approximately \$37,000.

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

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## Independent Auditors' Report

The Board of Directors and Stockholders  
GSE Systems, Inc.:

We have audited the accompanying consolidated balance sheets of GSE Systems, Inc. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, comprehensive loss, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2003. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of GSE Systems, Inc. and subsidiaries as of December 31, 2003 and 2002, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2003 in conformity with accounting principles generally accepted in the United States of America.

The Company adopted the provisions of SFAS No. 142, Goodwill and Other Intangible Assets, on January 1, 2002.

/s/KPMG LLP

Baltimore, Maryland  
March 30, 2004

### PART I - FINANCIAL INFORMATION Item 1. Financial Statements

#### GSE SYSTEMS, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS (in thousands, except share data)

	December 31,	
	2003	2002
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 1,388	\$ 1,617
Restricted cash	473	608
Contract receivables	9,457	6,449
Prepaid expenses and other current assets	1,635	741
Current assets held for sale	-	7,787
Total current assets	12,953	17,202
Equipment and leasehold improvements, net	643	933
Software development costs, net	946	742
Goodwill, net	1,739	1,739
Other assets	255	667
Non-current assets held for sale	-	7,611
Total assets	\$ 16,536	\$ 28,894
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Current portion of long-term debt	\$ 33	\$ 30
Accounts payable	2,946	2,282
Accrued expenses	1,518	1,239
Accrued compensation and payroll taxes	1,752	997
Billings in excess of revenue earned	3,927	592
Other current liabilities	240	141
Other current liabilities held for sale	-	5,885
Total current liabilities	10,416	11,166
Long-term debt	9	6,123
Accrued warranty reserves	407	586
Other liabilities	25	2
Non-current liabilities held for sale	-	2,906
Total liabilities	10,857	20,783
Commitments and contingencies		
Stockholders' equity:		

Preferred stock \$.01 par value, 2,000,000 shares authorized, shares issued and outstanding 39,000 in 2002	-	-
Common stock \$.01 par value, 18,000,000 shares authorized, shares issued and outstanding 8,949,706 and 5,869,138 in 2003 and 2002, respectively	89	59
Additional paid-in capital	30,815	27,841
Accumulated deficit - at formation	(5,112)	(5,112)
Accumulated deficit - since formation	(19,162)	(13,490)
Accumulated other comprehensive loss	(951)	(1,187)
	-----	-----
Total stockholders' equity	5,679	8,111
	-----	-----
Total liabilities and stockholders' equity	\$ 16,536	\$ 28,894
	=====	=====

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

GSE SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF OPERATIONS  
(in thousands, except per share data)

	Years ended December 31,		
	2003	2002	2001
Contract revenue	\$ 25,019	\$ 20,220	\$ 25,509
Cost of revenue	19,175	16,660	19,744
Gross profit	5,844	3,560	5,765
Operating expenses			
Selling, general and administrative	6,443	6,506	6,036
Depreciation and amortization	392	395	1,098
Total operating expenses	6,835	6,901	7,134
Operating loss	(991)	(3,341)	(1,369)
Interest expense, net	(504)	(55)	(469)
Other income (expense), net	(273)	37	442
Loss from continuing operations before income taxes	(1,768)	(3,359)	(1,396)
Provision (benefit) for income taxes	93	891	(153)
Loss from continuing operations	(1,861)	(4,250)	(1,243)
Income (loss) from discontinued operations, net of income taxes	(1,409)	(1,693)	1,502
Loss on sale of discontinued operations	(262)	-	-
Income (loss) from discontinued operations	(1,671)	(1,693)	1,502
Net income (loss)	(3,532)	(5,943)	259
Preferred stock dividends and beneficial conversion premium	(2,140)	(234)	(17)
Net income (loss) attributed to common shareholders	\$ (5,672)	\$ (6,177)	\$ 242
Basic earnings (loss) per common share:			
Continuing operations	\$ (0.61)	\$ (0.76)	\$ (0.24)
Discontinued operations	(0.26)	(0.29)	0.29
Net income (loss)	\$ (0.87)	\$ (1.05)	\$ 0.05
Diluted earnings (loss) per common share			
Continuing operations	\$ (0.61)	\$ (0.76)	\$ (0.24)
Discontinued operations	(0.26)	(0.29)	0.29
Net income (loss)	\$ (0.87)	\$ (1.05)	\$ 0.05

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

GSE SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS  
(in thousands)

	Years ended December 31,		
	2003	2002	2001
Net income (loss)	\$ (3,532)	\$ (5,943)	\$ 259
Foreign currency translation adjustment	236	128	(413)
Comprehensive loss	\$ (3,296)	\$ (5,815)	\$ (154)

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

GSE SYSTEMS, INC, AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY  
(in thousands)

	Common Stock		Preferred Stock		Additional Paid-in Capital	Retained Earnings (Deficit)		Accumulated Other Comprehensive Loss	Total
	Shares	Amount	Shares	Amount		At Formation	Since Formation		
Balance, January 1, 2001	5,194	\$ 52	-	-	\$ 22,230	\$(5,112)	\$ (7,555)	\$ (902)	\$ 8,713
Fair value of options/warrants issued to non-employees	-	-	-	-	194	-	-	-	194
Common stock issued for options exercised	25	-	-	-	33	-	-	-	33
Conversion of subordinated debt to preferred stock	-	-	39	-	3,900	-	-	-	3,900
Rights offering	523	5	-	-	1,178	-	-	-	1,183
Preferred stock dividends declared and payable	-	-	-	-	-	-	(17)	-	(17)
Foreign currency translation adjustment	-	-	-	-	-	-	-	(413)	(413)
Net income	-	-	-	-	-	-	259	-	259
Balance, December 31, 2001	5,742	\$ 57	39	\$ -	\$ 27,535	\$(5,112)	\$ (7,313)	\$ (1,315)	\$ 13,852
Common stock issued for options exercised	128	2	-	-	261	-	-	-	263
Stock option compensation	-	-	-	-	45	-	-	-	45
Preferred stock dividends declared and payable	-	-	-	-	-	-	(234)	-	(234)
Foreign currency translation adjustment	-	-	-	-	-	-	-	128	128
Net loss	-	-	-	-	-	-	(5,943)	-	(5,943)
Balance, December 31, 2002	5,870	\$ 59	39	\$ -	\$ 27,841	\$(5,112)	\$ (13,490)	\$ (1,187)	\$ 8,111
Common stock issued to GP Strategies Corporation	150	1	-	-	179	-	-	-	180
Fair value of warrants issued to non-employees	-	-	-	-	86	-	-	-	86
Preferred stock dividends declared and payable	-	-	-	-	-	-	(190)	-	(190)
Stock dividend issued due to change in preferred stock conversion price	1,037	10	-	-	1,940	-	(1,950)	-	-
Conversion of preferred stock to common stock	1,474	15	(39)	-	(14)	-	-	-	1
Conversion of subordinated debt to common stock	419	4	-	-	783	-	-	-	787
Foreign currency translation adjustment	-	-	-	-	-	-	-	236	236
Net loss	-	-	-	-	-	-	(3,532)	-	(3,532)
Balance, December 31, 2003	8,950	\$ 89	-	\$ -	\$ 30,815	\$(5,112)	\$ (19,162)	\$ (951)	\$ 5,679

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

GSE SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(in thousands)

	Years ended December 31,		
	2003	2002	2001
Cash flows from operating activities:			
Net income (loss)	\$ (3,532)	\$ (5,943)	\$ 259
Income (loss) from discontinued operations	(1,409)	(1,693)	1,502
Loss on sale of discontinued operations	(262)	-	-
Loss from continuing operations	(1,861)	(4,250)	(1,243)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	731	653	1,537
Foreign currency transaction gain	(5)	(34)	(253)
Stock option compensation	-	45	-
Deferred income taxes	-	1,600	(476)
Changes in assets and liabilities:			
Contract receivables	(3,010)	1,248	3,407
Prepaid expenses and other assets	(624)	272	(464)
Accounts payable, accrued compensation and accrued expenses	2,160	230	(3,125)
Billings in excess of revenue earned	3,335	(674)	297
Accrued warranty reserves	(158)	(60)	85
Other liabilities	(26)	(61)	(390)
Income taxes payable	(36)	(64)	(68)
Net cash provided by (used in) continuing operations	506	(1,095)	(693)
Net cash provided by discontinued operations	883	(110)	2,603
Net cash provided by (used in) operating activities	1,389	(1,205)	1,910
Cash flows from investing activities:			
Proceeds from sale of Process business, net of transaction costs	5,245	-	-
Net cash paid for acquisition of businesses	(515)	(45)	(1,090)
Capital expenditures	(191)	(170)	(591)
Capitalized software development costs	(542)	(768)	(668)
Releases (restrictions) of cash as collateral under letters of credit, net	245	(243)	29
Other cash used in discontinued operations, net	(506)	(1,997)	(27)
Net cash provided by (used in) investing activities	3,736	(3,223)	(2,347)
Cash flows from financing activities:			
Proceeds from issuance of common stock	-	1,583	33
Proceeds from issuance of notes payable to related party	-	-	3,350
Repayment on note payable to related party	-	(350)	-
(Decrease) increase in borrowings under line of credit	(5,431)	443	(4,289)
Other financing repayments	(30)	(269)	(269)
Other cash provided by discontinued operations, net	-	2,589	2,198
Net cash provided by (used in) financing activities	(5,461)	3,996	1,023
Effect of exchange rate changes on cash	107	9	(11)
Net increase (decrease) in cash and cash equivalents	(229)	(423)	575
Cash and cash equivalents at beginning of year	1,617	2,040	1,465
Cash and cash equivalents at end of year	\$ 1,388	\$ 1,617	\$ 2,040

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

# GSE SYSTEMS, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS December 31, 2003, 2002, and 2001

### 1. Business and liquidity

GSE Systems, Inc. ("GSE Systems", "GSE" or the "Company") develops and delivers business and technology solutions by applying simulation software, systems and services to the energy industry worldwide. The Company's solutions and services assist customers in improving quality, safety and throughput; reducing operating expenses; and enhancing overall productivity.

The Company's operations are subject to certain risks and uncertainties including, among others, rapid technological changes, success of the Company's product development, marketing and distribution strategies, the need to manage growth, the need to retain key personnel and protect intellectual property, and the availability of additional financing on terms acceptable to the Company.

In September 2003, the Company completed the sale of substantially all of the assets of GSE Process Solutions, Inc. (Process) to Novatech, LLC (Novatech) pursuant to an Asset Purchase Agreement, effective as of September 25, 2003, by and between the Company, Process, and Novatech. The Company received \$5.5 million in cash, subject to certain adjustments. The operating results of the Company's Process business have been classified as discontinued operations in the Consolidated Statements of Operations for all periods presented.

On September 29, 2003 the Company amended the ManTech Preferred Stock issuance agreement to revise the conversion rate from \$2.645 per share to \$1.5526 per share. The change in conversion rate increased the number of common shares available upon conversion from 1,474,480 to 2,511,915. On October 23, 2003 ManTech elected to convert all of its preferred stock to common stock and sold all of its GSE common stock and subordinated debt to GP Strategies. The additional common shares that ManTech received in the conversion due to the change in conversion rate have been recorded as a beneficial conversion premium, valued at \$1,950,000 based upon the closing market price per share (\$1.88) as of October 23, 2003, and a reduction in income attributable to common stockholders. The terms of the \$650,000 subordinated note were amended by the Company to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526 which was below the market rate (\$1.88) on the date the amendment was adopted. Accordingly, the Company recognized additional interest expense of \$137,000 reflecting the beneficial conversion. GP Strategies elected to convert the note on October 23, 2003 and received 418,653 shares of GSE common stock. As a result of these transactions, GP Strategies owns approximately 58% of the total outstanding common stock of GSE at December 31, 2003.

### 2. Summary of significant accounting policies

#### Principles of consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated.

#### Accounting estimates

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

#### Revenue recognition

The majority of the Company's revenue is derived through the sale of uniquely designed systems containing hardware, software and other materials under fixed-price contracts. In accordance with Statement of Position 81-1 Accounting for Performance of Construction-Type and Certain Production-Type Contracts the revenue under these fixed-price contracts is accounted for on the percentage-of-completion method. This methodology recognizes income as work progresses on the contract and is based on an estimate of the income earned to date, less income recognized in earlier periods. The Company bases its estimate of the degree of completion of the contract by reviewing the relationship of costs incurred to date to the expected total costs that will be incurred on the project. Estimated contract earnings are reviewed and revised periodically as the work progresses, and the cumulative effect of any change in estimate is recognized in the period in which the change is identified. Estimated losses are charged against earnings in the period such losses are identified.

As the Company recognizes revenue under the percentage-of-completion method, it provides an accrual for estimated future warranty costs based on historical and projected claims experience. The Company's long-term contracts generally provide for a one-year warranty on parts, labor and any bug fixes as it relates to software embedded in the systems.

The Company's system design contracts do not provide for "post customer support service" (PCS) in terms of software upgrades, software enhancements or telephone support. In order to obtain PCS, the customers must purchase a separate contract. Such PCS arrangements are

generally for a one-year period renewable annually and include customer support, unspecified software upgrades, and maintenance releases. The Company recognizes revenue from these contracts ratably over the life of the agreements in accordance with Statement of Position 97-2 "Software Revenue Recognition".

Revenues from certain consulting or training contracts are recognized on a time-and-material basis. For time-and-material type contracts, revenue is recognized based on hours incurred at a contracted labor rate plus expenses.

#### Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and highly liquid investments with maturities of three months or less at the date of purchase.

#### Equipment and leasehold improvements, net

Equipment is recorded at cost and depreciated using the straight-line method with estimated useful lives ranging from three to ten years. Leasehold improvements are amortized over the life of the lease or the estimated useful life, whichever is shorter, using the straight-line method. Upon sale or retirement, the cost and related amortization are eliminated from the respective accounts and any resulting gain or loss is included in operations. Maintenance and repairs are charged to expense as incurred.

#### Software development costs

Certain computer software development costs are capitalized in the accompanying consolidated balance sheets. Capitalization of computer software development costs begins upon the establishment of technological feasibility. Capitalization ceases and amortization of capitalized costs begins when the software product is commercially available for general release to customers. Amortization of capitalized computer software development costs is included in cost of revenue and is provided using the straight-line method over the remaining estimated economic life of the product, not to exceed five years.

#### Research and development

Development expenditures incurred to meet customer specifications under contracts are charged to contract costs. Company sponsored research and development expenditures are charged to operations as incurred and are included in selling, general and administrative expenses. The amounts incurred for Company sponsored research and development activities relating to the development of new products and services or the improvement of existing products and services, were approximately \$856,000, \$763,000, and \$605,000, for the years ended December 31, 2003, 2002 and 2001, respectively.

#### Asset impairment

The Company periodically evaluates the recoverability of its long-lived assets by comparing the carrying value of the asset to management's best estimate of the expected future cash flows to be generated by the asset, undiscounted and without interest costs. Impairments are recognized in operating results to the extent that the carrying value exceeds fair value. No impairment losses were recognized in 2003, 2002 or 2001.

### Goodwill

On January 1, 2002, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 142, Goodwill and Other Intangible Assets, which requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead tested for impairment at least annually. As of the date of adoption of SFAS No. 142, the Company had unamortized goodwill in the amount of \$1.7 million. During 2002, the Company completed its analysis pursuant to the transitional provisions of SFAS No. 142 and determined that no impairment charge was necessary. On December 31, 2002 and 2003, the Company completed a further analysis of goodwill and determined no impairment charge was necessary.

Net income and net income per share for the year ended December 31, 2001, adjusted to eliminate historical amortization of goodwill and related tax effects, are as follows:

(in thousands, except for per share amounts)	December 31, 2001
Net income attributed to common stockholders, as reported	\$ 242
Add: goodwill amortization, net of taxes	602
Net income, as adjusted	\$ 844
Net income per share, as reported:	
Basic earnings (loss) per common share:	
Continuing operations	\$ (0.24)

Discontinued operations	0.29
Net income	\$ 0.05
=====	
Diluted earnings (loss) per common share	
Continuing operations	\$ (0.24)
Discontinued operations	0.29
Net income	\$ 0.05
=====	
Net income per share, as adjusted:	
Basic earnings (loss) per common share:	
Continuing operations	\$ (0.14)
Discontinued operations	0.30
Net income	\$ 0.16
=====	
Diluted earnings (loss) per common share	
Continuing operations	\$ (0.14)
Discontinued operations	0.30
Net income	\$ 0.16
=====	

Prior to the adoption of SFAS No. 142, goodwill was being amortized over periods from three to fifteen years on a straight-line basis. At each reporting date, the Company assessed the recoverability of goodwill by determining whether the amortization of goodwill over its remaining useful life could be recovered through undiscounted operating cash flows of the acquired operations. The amount of goodwill impairment, if any, was measured based on projected discounted future operating cash flows using a discount rate reflecting the Company's average costs of funds.

#### Foreign currency translation

Balance sheet accounts for foreign operations are translated at the exchange rate at the balance sheet date, and income statement accounts are translated at the average exchange rate for the period. The resulting translation adjustments are included in accumulated other comprehensive loss in stockholders' equity. Transaction gains and losses, resulting from changes in exchange rates, are included in other income (expense) in the Consolidated Statements of Operations in the period in which they occur. For the years ended December 31, 2003, 2002, and 2001, foreign currency transaction gains were approximately \$5,000, \$34,000, and \$253,000, respectively.

#### Warranties

As the Company recognizes revenue under the percentage-of-completion method, it provides an accrual for estimated future warranty costs based on historical experience and projected claims. The activity in the warranty accounts is as follows:

(in thousands)	For the years ended December 31,		
-	2003	2002	2001
	-----	-----	-----
Beginning balance	\$ 667	\$ 727	\$ 642
Current year provision	569	686	666
Current year claims	(628)	(746)	(581)
Ending balance	\$ 609	\$ 667	\$ 727
	=====	=====	=====

As of December 31, 2003 and 2002, \$407,000 and \$586,000, respectively, of the warranty reserve was recorded as a long-term liability with the balance recorded as a current liability.

#### Income taxes

Deferred income taxes are provided under the asset and liability method. Under this method, deferred income taxes are determined based on the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized. Provision is made for the Company's current liability for federal, state and foreign income taxes and the change in the Company's deferred income tax assets and liabilities. No provision has been made for the undistributed earnings of the Company's foreign subsidiaries as they are considered permanently invested. Amounts of undistributed earnings are not material to the overall consolidated

financial statements.

## Stock Compensation

The Company applies the intrinsic-value-based method of accounting prescribed by Accounting Principles Board (APB) Opinion No. 25, Accounting for stock issued to Employees, and related interpretations including FASB Interpretation No. 44, Accounting for Certain Transactions Involving Stock Compensation, and interpretation of APB Opinion No. 25, issued in March 2000, to account for its fixed-plan stock options. Under this method, compensation expense is recorded on the date of grant only if the current market price of the underlying stock exceeds the exercise price. SFAS No. 123, Accounting for Stock-Based Compensation, established accounting and disclosure requirements using a fair-value-based method of accounting for stock based employee compensation plans. As allowed by SFAS No. 123, the Company has elected to continue to apply the intrinsic-value-based method of accounting describe above, and has adopted only the disclosure requirements of SFAS No. 123. The following table illustrates the effect on net income if the fair-value-based method had been applied to all outstanding and unvested awards in each period.

(in thousands, except per share data)	Years ended December 31,		
	2003	2002	2001
Net income (loss) attributed to common stockholders, as reported	\$ (5,672)	\$ (6,177)	\$ 242
Add stock-based employee compensation expense included in reported net loss, net of tax	-	45	-
Deduct total stock-based employee compensation expense determined under fair-value-method for all awards, net of tax	(381)	(422)	(878)
Pro forma net loss	\$ (6,053)	\$ (6,554)	\$ (636)
Net income (loss) per share, as reported:			
Basic	\$ (0.87)	\$ (1.05)	\$ 0.05
Diluted	\$ (0.87)	\$ (1.05)	\$ 0.05
Proforma net loss per share:			
Basic	\$ (0.93)	\$ (1.12)	\$ (0.12)
Diluted	\$ (0.93)	\$ (1.12)	\$ (0.12)

The fair value of each option is estimated on the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumptions used for grants during the year ended December 31, 2001: expected volatility of 110%; dividend yield of 0%; risk-free interest rate of 4.0%; and expected lives of 4.5 years. The weighted-average fair value of options granted during 2001 was \$1.55 per share. There were no options granted during 2003 or 2002.

### Earnings (loss) per share

Basic earnings per share is based on the weighted average number of outstanding common shares for the period. Diluted earnings per share adjusts the weighted average shares outstanding for the potential dilution that could occur if stock options, warrants, or convertible preferred stock were exercised or converted into common stock. The number of common shares and common share equivalents used in the determination of basic and diluted earnings (loss) per share was as follows:

(in thousands, except for share and per share amounts)	Years ended December 31,		
	2003	2002	2001
Numerator:			
Net income (loss)	\$ (3,532)	\$ (5,943)	\$ 259
Stock dividend- beneficial conversion premium	(1,950)	-	-
Preferred stock dividends	(190)	(234)	(17)
Net income (loss) attributed to common stockholders	\$ (5,672)	\$ (6,177)	\$ 242
Denominator:			
Weighted-average shares outstanding for basic earnings per share	6,542,000	5,863,134	5,217,453
Effect of dilutive securities: Employee stock options, warrants and options outside the plan	-	-	41,563
Adjusted weighted-average shares outstanding			

and assumed conversions for diluted earnings per share	6,542,000	5,863,134	5,259,016
	=====	=====	=====
Shares related to dilutive securities excluded because inclusion would be anti-dilutive:	1,903,976	3,166,456	3,436,195
	=====	=====	=====

The difference between the basic and diluted number of weighted average shares outstanding for the year ended December 31, 2001 represents dilutive stock options and warrants to purchase shares of common stock computed under the treasury stock method, using the average market price during the period. The net income (loss) for the years ended December 31, 2003, 2002 and 2001 was decreased by preferred stock dividends and related charges of \$2,140,000, \$234,000 and \$17,000, respectively, in calculating the per share amounts. The preferred stock was converted into common stock on October 23, 2003. Conversion of the preferred stock was not assumed for the years ended December 31, 2002 and 2001 because the impact was anti-dilutive.

#### Concentration of credit risk

The Company is subject to concentration of credit risk with respect to contract receivables. Credit risk on contract receivables is mitigated by the nature of the Company's worldwide customer base and its credit policies. The Company's customers are not concentrated in any specific geographic region, but are concentrated in the energy industry. For the years ended December 31, 2003, 2002 and 2001, one customer accounted for approximately 29%, 23%, and 33%, respectively, of the Company's revenue. At December 31, 2003, the contracts receivable balance related to this significant customer was approximately \$2.5 million, or 26.8% of contract receivables, of which \$774,000 was unbilled at year-end.

#### Fair values of financial instruments

The carrying amounts of current assets, current liabilities, and long-term debt reported in the Consolidated Balance Sheets approximate fair value.

#### Off balance sheet risk and foreign exchange contracts

The Company utilizes various derivative financial instruments to manage market risks associated with the fluctuations in foreign currency exchange rates. It is the Company's policy to use derivative financial instruments to protect against market risk arising in the normal course of business. The criteria the Company uses for designating an instrument as a hedge include the instrument's effectiveness in risk reduction and one-to-one matching of derivative instruments to underlying transactions. The Company monitors its foreign currency exposures to maximize the overall effectiveness of its foreign currency hedge positions. Principal currencies hedged include the Euro and the Japanese yen. The Company's objectives for holding derivatives are to minimize the risks using the most effective methods to reduce the impact of these exposures. The Company minimizes credit exposure by limiting counterparties to nationally recognized financial institutions.

All derivatives, whether designated as hedging relationships or not, are required to be recorded on the balance sheet at fair value. If the derivative is designated as a fair value hedge, the changes in the fair value of the derivative and of the hedged item attributable to the hedged risk are recognized in earnings. If the derivative is designated as a cash flow hedge, the change in the fair value of the derivative and of the hedged item are recognized as an element of other comprehensive income.

At December 31, 2003, the Company had contracts for the sale of approximately \$81,000 and \$746,000 of Euros and Japanese Yen, respectively, at fixed rates. The contracts expire on various dates through June, 2004. The Company has not designated the contracts as hedges and, accordingly, has recorded the estimated fair value of the contracts of \$1,000 at December 31, 2003 as an other asset in the consolidated balance sheet and other income (expense) in the consolidated statement of operations.

#### Reclassifications

Certain reclassifications have been made to prior year amounts to conform with the current year presentation.

#### New Accounting Standards

In June 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities. SFAS No. 146 requires that a liability for a cost associated with the exit or disposal activity be recognized when incurred at fair value. SFAS No. 146 eliminates the definition and requirements of EITF Issue 94-3. SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002 and may have an effect on the timing of future restructuring charges taken, if and when they occur. The Company implemented SFAS No. 146 on January 1, 2003. Adoption had no material impact on results for the year ended December 31, 2003.

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 addresses the disclosure requirements of a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. FIN 45 also requires a guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The liability recognition

requirements of FIN 45 will be applicable prospectively to all guarantees issued or modified after December 31, 2002. The Company has not issued any such guarantees other than product warranties.

In December 2003, the FASB issued Interpretation No. 46R, Consolidation of Variable Interest Entities, which requires the consolidation of certain types of entities. The Company does not participate in any variable interest entities.

### 3. Discontinued Operations

In September 2003, the Company completed the sale of substantially all of the assets of GSE Process Solutions, Inc. (Process) to Novatech, LLC (Novatech) pursuant to an Asset Purchase Agreement, effective as of September 25, 2003, by and between the Company, Process and Novatech. The Company received \$5.5 million in cash, subject to certain adjustments. The Company recognized a loss on this transaction of \$262,000. In conjunction with the transaction, Novatech purchased certain assets with a book value of \$11.7 million and assumed certain operating liabilities totaling approximately \$6.8 million. The Company incurred approximately \$865,000 of closing costs associated with the transaction. Results of operations have been restated to classify the net earnings, assets and liabilities of the Process business as discontinued operations.

The contract revenue and net income (loss) for the discontinued Process business was:

(in thousands)	Years ended December 31,		
	2003	2002	2001
Contract revenue	13,693	22,896	24,822
Income (loss) from discontinued operations	(1,671)	(1,693)	1,502

Income (loss) from discontinued operations includes income in 2001 of \$3.3 million from the sale of the Company's VirtualPlant business technology and assets, developed by the Process Business, to Avantium International BV ("Avantium") and losses in 2003, 2002 and 2001 of \$115,000, \$2.8 million and \$4.6 million, respectively, from the write down of the Company's investment in Avantium.

Significant categories of assets and liabilities from the discontinued operations at December 31, 2002 are included in the table below:

(in thousands)	December 31,
	2002
Contract receivables	\$ 4,313
Inventories	1,561
Prepaid expenses and other current assets	1,915
Property and equipment, net	764
Software development costs, net	3,659
Goodwill, net	1,162
Other assets	2,024
<b>Total assets</b>	<b>15,398</b>
Current portion of long-term debt	1,875
Accounts payable	240
Accrued expenses	488
Accrued compensation and payroll taxes	404
Billings in excess of revenue earned	2,467
Accrued warranty reserves	410
Long-term debt	1,909
Billings in excess of revenue earned- long term	998
<b>Total liabilities</b>	<b>8,791</b>
<b>Net assets</b>	<b>\$ 6,607</b>

### 4. Contract receivables

Contract receivables represent balances due from a broad base of both domestic and international customers. All contract receivables are considered to be collectible within twelve months. Recoverable costs and accrued profit not billed represent costs incurred and associated profit accrued on contracts that will become billable upon future milestones or completion of contracts. The components of contract receivables are as follows:

(in thousands)	December 31,	
	2003	2002

Billed receivables	\$ 5,069	\$ 2,853
Recoverable costs and accrued profit not billed	4,395	3,631
Allowance for doubtful accounts	(7)	(35)
Total contract receivables	\$ 9,457	\$ 6,449

## 5. Prepaid expenses and other current assets

Prepaid expenses and other current assets consist of the following:

(in thousands)	December 31,	
	2003	2002
Prepaid expenses	\$ 1,485	\$ 446
Employee advances	16	49
Other current assets	134	246
Total	\$ 1,635	\$ 741

## 6. Equipment and leasehold improvements

Equipment and leasehold improvements consist of the following:

(in thousands)	December 31,	
	2003	2002
Computer equipment	\$ 2,772	\$ 2,900
Leasehold improvements	692	828
Furniture and fixtures	1,158	1,304
Accumulated depreciation and amortization	(3,979)	(4,099)
Equipment and leasehold improvements, net	\$ 643	\$ 933

Depreciation and amortization expense was approximately \$392,000, \$395,000, and \$1,098,000, for the years ended December 31, 2003, 2002, and 2001, respectively.

## 7. Software development costs

Software development costs, net, consist of the following:

(in thousands)	December 31,	
	2003	2002
Capitalized software development costs	\$1,207	\$986
Accumulated amortization	(261)	(244)
Software development costs, net	\$946	\$742

Software development costs capitalized were approximately \$542,000, \$555,000, and \$140,000, for the years ended December 31, 2003, 2002 and 2001, respectively. Amortization of software development costs capitalized was approximately \$339,000, \$256,000, and \$575,000, for the years ended December 31, 2003, 2002 and 2001, respectively, and were included in cost of revenue.

## 8. Long-term Debt

The Company's long-term debt consists of the following notes payable and other financing arrangements:

(in thousands)	December 31,	
	2003	2002

Line of credit with bank	\$ -	\$ 5,431
Note payable to related parties (see Note 16)	-	650
Notes payable, other	42	72
	-----	-----
Total notes payable and financing arrangements	42	6,153
Less amounts payable within one year	33	30
	-----	-----
Long-term portion	\$ 9	\$ 6,123
	=====	=====

## Line of Credit

The Company has a \$1.5 million bank line of credit. The credit facility provides for borrowings to support working capital needs and foreign letters of credit. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 85% of eligible accounts receivable and 50% of eligible unbilled receivables (up to a maximum of \$250,000). The interest rate on this line of credit is based on the bank's prime rate plus 1.00% (5.00% as of December 31, 2003), with interest only payments due monthly. At December 31, 2003, the Company's available borrowing base was \$1.5 million, none of which had been utilized. The current credit facility was scheduled to expire on May 31, 2004; but on March 30, 2004, the Company has entered into a new loan and security agreement with another financial institution. See Note 20, Subsequent events for a discussion of the new credit facility.

In March, 2003, GP Strategies extended their \$1.8 million limited guarantee of the Company's bank facility. In consideration for the extension of the guarantee, the Company issued 150,000 shares of its common stock to GP Strategies. The number of shares was calculated based upon a 10% fee divided by the closing price of GSE's common stock on March 21, 2003. The Company recorded the value of \$180,000 as deferred financing cost with a corresponding credit to common stock and additional paid-in capital. The deferred costs are being amortized over the life of the guarantee.

## Notes Payable to Related Parties

In 2000, the Company issued a demand promissory note to ManTech that allowed the Company to borrow up to \$1.8 million at an interest rate of prime plus one percent. In addition, ManTech provided \$1.8 million in standby letters of credit to the Company's bank as additional collateral for the Company's credit facility. In April 2001, ManTech agreed to allow the Company's bank to draw upon ManTech's \$1.8 million letter of credit which supported the Company's credit facility, thus paying down a portion of the Company's bank debt in exchange for additional subordinated debt in the Company. Accordingly, the Company's promissory note to ManTech was amended to increase the amount to \$3.9 million. The amended note permitted ManTech to convert the principal amount of the note into GSE Series A convertible preferred stock at a conversion rate of \$100 per share. The Company determined that the conversion of this debt did not constitute a beneficial conversion. ManTech elected to convert its subordinated debt into equity on December 5, 2001 (see Note 11).

On June 25, 2001, the Company issued an additional unsecured promissory note to ManTech for \$1.0 million at an interest rate of prime plus one percent. The Company used the loan proceeds for working capital purposes. The note was subordinated to the Company's credit facility. During 2002, the Company repaid ManTech \$350,000, plus \$247,000 of interest. In 2003, the Company paid \$35,000 of interest.

On October 23, 2003, ManTech sold this subordinated note to GP Strategies Corporation. The terms of the subordinated note were amended to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526 which was below the market rate (\$1.88) on the date the amendment was adopted. Accordingly, the Company recognized additional interest expense of \$137,000 reflecting the beneficial conversion premium. GP Strategies elected to convert the note on October 23, 2003 and received 418,653 shares of GSE common stock.

## Debt maturities

Aggregate maturities of debt outstanding at December 31, 2003 are as follows:

(in thousands)	
2004	\$ 33
2005	9
	-----
Total	\$ 42
	=====

## 9. Income taxes

The consolidated loss before income taxes, by domestic and foreign sources, is as follows:

(in thousands)	Years ended December 31,		
	2003	2002	2001
	-----	-----	-----
Domestic	\$ (3,609)	\$ (3,866)	\$ (135)
Foreign	196	(688)	41

Total	\$ (3,413)	\$ (4,554)	\$ (94)
	=====	=====	=====

The provision (benefit) for income taxes is as follows:

(in thousands)	Years ended December 31,		
	2003	2002	2001
Current:			
Federal	\$ -	\$ (112)	\$ 54
State	53	(57)	26
Foreign	66	(42)	43
Subtotal	119	(211)	123
Deferred:			
Federal and state	-	1,694	(448)
Foreign	-	(94)	(28)
Subtotal	-	1,600	(476)
Total	\$ 119	\$ 1,389	\$ (353)
	=====	=====	=====
The allocation of the provision (benefit) for income taxes to continuing and discontinued operations is as follows:			
Continuing operations	\$ 93	\$ 891	\$ (153)
Discontinued operations	26	498	(200)
	\$ 119	\$ 1,389	\$ (353)
	=====	=====	=====

The provision (benefit) for income taxes varies from the amount of income tax determined by applying the applicable U.S. statutory rate to pre-tax loss as a result of the following:

	Effective tax rate percentage (%)		
	Years ended December 31,		
	2003	2002	2001
Statutory U.S. tax rate	(34.0)%	(34.0)%	(34.0)%
State income tax, net of federal tax benefit	1.0	(2.0)	31.0
Effect of foreign operations	(0.1)	0.9	6.2
Change in valuation allowance	36.1	61.8	(447.6)
Other, principally permanent differences	0.5	3.8	68.9
Effective tax rate	3.5 %	30.5 %	(375.5)%
	=====	=====	=====

Deferred income taxes arise from temporary differences between the tax bases of assets and liabilities and their reported amounts in the financial statements. A summary of the tax effect of the significant components of the deferred income tax assets (liabilities) is as follows:

(in thousands)	December 31,	
	2003	2002
Net operating loss carryforwards	\$ 6,133	\$ 6,246
Investments	1,570	1,512
Foreign tax credits	378	379
Accrued expenses	288	243
Expenses not currently deductible for tax purposes	268	878
Alternative minimum tax credit carryforwards	162	162
Property and equipment	34	(90)
Software development costs	(347)	(1,615)
Other	95	60
Subtotal	8,581	7,775
Valuation allowance	(8,581)	(7,775)
Total	\$ -	\$ -

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities and projected future income in making this assessment. Since management could not substantiate recovery of the net deferred tax assets with currently available objective evidence, the Company has established a full valuation allowance of \$8,581,000 at December 31, 2003. If the Company is able to realize taxable income in the future the valuation allowance will be reduced. The net change in the valuation allowance for deferred tax assets was an increase of \$806,000 in 2003, an increase of \$2,845,000 in 2002 and a reduction of \$420,000 in 2001.

At December 31, 2003, the Company had available \$15,890,000 and \$955,000 of domestic and foreign net operating loss carryforwards, respectively, which expire between 2012 and 2023. In addition, the Company had \$378,000 of foreign tax credit carryforwards, which expire in various amounts during 2004 and 2005. The amount of loss carryforward which can be used by the Company may be limited to approximately \$500,000 annually.

## 10. Capital stock

The Company's Board of Directors has authorized 20,000,000 total shares of capital stock, of which 18,000,000 are designated as common stock and 2,000,000 are designated as preferred stock. The Board of Directors has the authority to establish one or more classes of preferred stock and to determine, within any class of preferred stock, the preferences, rights and other terms of such class.

On April 5, 1999, the Company agreed to replace the outstanding warrants of two non-employees as consideration for their consulting services relative to the Company's equity raising initiatives. One non-employee had 6,000 warrants, the other had 24,000. The replacement warrants have an exercise price of \$4.125 and expire 5 years from the date of grant.

On March 6, 2001, the Company granted warrants to purchase shares of the Company's common stock to two non-employees for certain services rendered. The warrants provide the right for each employee to purchase 37,500 shares of the Company's common stock at \$1.00 per share. In 2001, the Company recognized expense related to the warrants of \$115,000.

On March 9, 2001, the Company arranged a consulting agreement with a terminated employee. In consideration of consulting services, the Company granted fully vested options to purchase 53,000 shares of the Company's common stock at \$1.70 per share. In 2001, the Company recognized expense related to these options based on their estimated fair value of \$79,000.

As of December 21, 2001, the Company completed a rights offering granting rights to shareholders to purchase additional shares of common stock for a subscription price of \$2.53 per share. The rights granted 0.711 for every share of common stock held of record as of October 26, 2001. Each whole right entitled the shareholder to purchase one share of common stock for \$2.53 per share. As of December 31, 2001, the Company had a rights offering receivable of \$1.3 million due from its escrow agent and accrued \$139,000 of costs associated with the completion of the rights offering. The Company received the cash proceeds from its escrow agent in January 2002. The proceeds were used for a partial repayment of a \$1 million loan from ManTech and working capital requirements.

In March, 2003 GP Strategies extended their \$1.8 million limited guarantee of the Company's bank facility through March 31, 2004. In consideration for the extension of the guarantee, the Company issued 150,000 shares of its common stock to GP Strategies. The number of shares was calculated based upon a 10% fee divided by the closing price of GSE's common stock on March 21, 2003. The Company recorded the value of \$180,000 as deferred financing cost with a corresponding credit to common stock and additional paid-in capital. The deferred costs are being amortized over the life of the guarantee.

In June 2003, the Company received a \$6.6 million order from the Mexican utility Comision Federal de Electricidad (CFE) for a major

simulator upgrade to the Laguna Verde nuclear plant near Vera Cruz, Mexico. The contract required that the Company issue an advance payment bond (\$1.8 million) and a performance bond (\$1.3 million) to CFE. On July 9, 2003, the Company entered into a Collateral Agreement with ManTech in which ManTech agreed to issue two letters of credit on the Company's behalf to a Mexican surety company as collateral for the bonds. One letter of credit will be outstanding for at least 30 months or until the advance payment bond is released, which ever is later, and the other letter of credit will be outstanding for at least 42 months or until the performance bond is released, which ever is later. As consideration of ManTech's issuance of the letters of credit, the Company issued 100,000 warrants at an exercise price of \$1.33 per share, the closing price on July 8, 2003 and will pay ManTech a fee equal to 7% per annum on the total amount of the then-existing value of the letters of credit, payable on a quarterly basis. The Company is amortizing the estimated fair value of these warrants (\$86,000) over the live of the related letters of credit as additional contract costs.

On October 23, 2003 ManTech converted its preferred stock to 2,511,915 shares of GSE common stock. See the discussion of this transaction in Note 11, Series A Convertible Preferred Stock.

On October 23, 2003 GP Strategies purchased a \$650,000 unsecured subordinated promissory note from ManTech. The terms of the subordinated note were amended by the Company to allow the conversion of the subordinated debt to GSE common stock at a rate of \$1.5526. GP Strategies elected to convert the note on October 23, 2003 and received 418,653 shares of GSE common stock. See Note 8, Long-term debt for further discussion of this transaction.

As of December 31, 2003, the Company has reserved 1,903,976 shares of common stock for issuance upon exercise of stock options and warrants.

#### 11. Series A Convertible Preferred Stock

On December 5, 2001, ManTech elected to convert \$3.9 million of subordinated debt into Series A convertible preferred stock at a conversion rate of \$100 per share. The Company determined that the conversion of this debt into preferred stock did not constitute a beneficial conversion. The Series A convertible preferred stock had no voting rights and bore dividends at the rate of 6% per annum payable quarterly. Dividends accumulated if not paid quarterly and compounded interest accrued on any unpaid dividends. As of December 31, 2003 and 2002, the Company had accrued dividends payable of \$366,000 and \$176,000, respectively

ManTech, at its discretion, had the right to convert each share of Series A convertible preferred stock into GSE common stock at a purchase price of \$2.645 per share at any time after a one-year holding period from the date of issuance. On September 29, 2003 the Company amended the Preferred Stock issuance agreement to revise the conversion rate to \$1.5526 per share. The change in conversion rate increased the number of common shares available upon conversion from 1,474,480 to 2,511,915. On October 23, 2003 ManTech elected to convert all of its preferred stock to common stock in conjunction with the sale of its ownership in GSE to GP Strategies. The additional common shares that ManTech received in the conversion due to the change in conversion rate have been recorded as a beneficial conversion premium, valued at \$1,950,000 based upon the closing market price per share (\$1.88) as of October 23, 2003, and a reduction in income attributable to common stockholders.

#### 12. Stock options

##### Long term incentive plan

During 1995, the Company established the 1995 Long-Term Incentive Stock Option Plan (the "Plan"), which includes all officers, key employees and non-employee members of the Company's Board of Directors. All options to purchase shares of the Company's common stock under the Plan expire seven years from the date of grant and generally become exercisable in three installments with 40% vesting on the first anniversary of the grant date and 30% vesting on each of the second and third anniversaries of the grant date, subject to acceleration under certain circumstances. At December 31, 2003, the Company had 679,644 shares of common stock reserved for the future grants under the Plan.

Stock option activity under the Plan is as follows:

	Shares	Weighted Average Exercise Price
	-----	-----
Options outstanding, as of January 1, 2001	1,437,105	\$ 4.81
Options exercised	(25,000)	(1.33)
Options canceled	(99,950)	(4.59)
Options granted	547,000	1.95
	-----	
Options outstanding, as of December 31, 2001	1,859,155	\$ 4.03
Options exercised	(128,000)	(2.05)
Options canceled	(39,179)	(2.00)
Options granted	-	-

Options outstanding, as of December 31, 2002	1,691,976	\$ 4.15
Options exercised	-	-
Options canceled	(35,500)	(2.28)
Options granted	-	-
Options outstanding, as of December 31, 2003	1,656,476	\$ 4.19

The following table summarizes information relating to currently outstanding and exercisable options at December 31, 2003:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Options Outstanding	Weighted Average Remaining Contract Life in Years	Weighted Average Exercise Price	Options Exercisable	Weighted Average Exercise Price
\$1.48 - \$2.95	510,550	4.0	\$ 2.15	393,550	\$ 2.18
\$2.96 - \$4.43	789,485	2.6	3.67	389,485	3.83
\$4.44 - \$5.90	200,000	3.1	4.75	200,000	4.75
\$5.91 - \$7.38	10,000	3.3	6.38	10,000	6.38
\$7.39 - \$8.85	20,000	3.2	7.50	20,000	7.50
\$8.86 - \$11.80	200	2.6	11.25	200	11.25
\$11.81 - \$14.75	126,241	1.7	14.11	126,241	14.11
Total	1,656,476	3.0	\$ 4.19	1,139,476	\$ 4.65

In 1997, the Company granted one of its senior executives a stock option to acquire 25,000 shares of common stock at an exercise price of \$11.25. This grant was not made pursuant to the Plan. This option expires ten years from the date of grant and was exercisable in three installments with 40% vesting on the first anniversary of the date of grant and 30% vesting on each of the second and third anniversaries of the date of grant. During 1999, the executive terminated employment with the Company and was vested in 70% of the stock options (17,500) at the date of termination.

In 1998, the Company granted stock options to two directors to acquire 12,500 shares each of common stock at an exercise price of \$2.25. The grants were not made pursuant to the Plan.

### 13. Commitments and contingencies

#### Leases

The Company is obligated under certain noncancelable operating leases for office facilities and equipment. Future minimum lease payments under noncancelable operating leases as of December 31, 2003 are as follows:

(in thousands)	Gross future minimum lease payments	Sublease rental income	Net future minimum lease payments
2004	\$ 1,515	\$ (688)	\$ 827
2005	1,522	(147)	1,375
2006	1,409	-	1,409
2007	1,363	-	1,363
2008	642	-	642
Thereafter	-	-	-
Total	\$ 6,451	\$ (835)	\$ 5,616

Total rent expense under operating leases for the years ended December 31, 2003, 2002, and 2001 was approximately \$998,000, \$999,000, and \$902,000, respectively.

In September 2001, the Company entered into a sublease agreement with ManTech International, Inc. in which ManTech subleases 1,432 sq. feet of space in the Columbia, Maryland facility. The sublease is currently on a month to month basis.

In September 2001, the Company entered into a sublease agreement with MECx in which MECx subleases 2,088 sq. feet of space in the

Columbia, Maryland facility. The sublease is currently on a month to month basis.

In May, 2003, the Company moved its Process Automation business to its Columbia, Maryland facility from the 34,000 square foot facility in Baltimore, Maryland where this business had been headquartered. The Company entered into a sublease agreement with Alpha USA Inc. to sublease 29,000 square feet of this Baltimore, MD facility for a five year period commencing on May 1, 2003. The subtenant may terminate the lease at the end of the second or third year of the agreement provided a six month notice is given.

In conjunction with the sale of the Process business to Novatech LLC in September, 2003, the Company entered into a sublease agreement with Novatech to sublease a portion of the Columbia, Maryland facility for a one-year period.

#### Letters of credit and performance bonds

As of December 31, 2003, the Company was contingently liable for approximately \$502,000 under six letters of credit used as payment bonds on contracts, all of which were secured by cash deposits classified as restricted cash in the consolidated balance sheet. In addition, the Company was contingently liable at December 31, 2003 for approximately \$65,000 under a performance bond on one contract, which was secured by a bank guarantee of the Company's foreign subsidiary.

#### Contingencies

Various actions and proceedings are presently pending to which the Company is a party. In the opinion of management, the aggregate liabilities, if any, arising from such actions are not expected to have a material adverse effect on the financial position, results of operations or cash flows of the Company.

#### 14. Other related party transactions

Due to the Company's liquidity situation at the end of 2000, GSE experienced some difficulties in procuring supplies from its vendors for business operations. In January 2001, the Company entered into a purchasing arrangement with ManTech whereby ManTech dealt directly with some of the Company's vendors, ordered the supplies needed and had the products shipped in accordance with the Company's instructions. Purchases under this agreement totaled \$843,000 for the year ended December 31, 2001. This purchasing arrangement terminated in June 2001. The supplies purchased through ManTech were at the same prices at which the Company could have procured the supplies directly.

In September 2001, the Company entered into a sublease agreement with ManTech, allowing ManTech to sublease 1,432 square feet of space at the Company's Columbia, Maryland office through September 2002. Subsequent to September 2002, the lease is on a month to month basis. For the years ended December 31, 2003, 2002 and 2001, such sublease rentals amounted to \$32,000, \$32,000 and \$13,000, respectively.

In September 2001, the Company entered into an alliance with General Physics Corporation, one of the leading suppliers of operator instructional training programs for the Power industry. In addition to cooperating in marketing of individual products, the companies will combine some of General Physics' extensive training materials and programs with GSE's power plant simulation models to provide interactive and adaptive total training solutions. GSE will also help sell and distribute General Physics' GFE product to GSE's customer base.

On December 7, 2001, the Company agreed to make certain cash and in-kind contributions to RedStorm Scientific, Inc. ("RedStorm") in exchange for a 10.2% interest in RedStorm. RedStorm is a privately held computational drug design company. Its technology (patents pending), known as Fyrestar, utilizes bio-informatics and computer-aided molecular design to create lead compounds that are developed into successful new drugs. It greatly reduces the significant cost associated with screening thousands of potential compounds common in the drug development process.

The Company paid \$50,000 to RedStorm in the fourth quarter of 2001 and made additional cash payments of \$200,000 in the year ended December 31, 2002. GSE's in-kind contribution consists of the development of a graphical user interface that will allow scientists to easily access and use the Fyrestar technology and the development of additional functionality to Fyrestar, allowing results to be graphically displayed as the calculations take place. This will allow scientists the opportunity to adjust their assumptions in real time and further improve results. GSE will receive a perpetual, worldwide, royalty-free, non-transferable exclusive license for RedStorm's software products solely in the power markets.

One of the Company's directors is also on RedStorm's Board of Directors and another director owns approximately 0.5% of RedStorm. The Company has accounted for its investment in RedStorm using the equity method of accounting based on management's conclusion that the Company has significant influence with respect to the operations of RedStorm. During the year ended December 2002, the Company recorded a loss \$59,000 on this investment. In 2003, the Company wrote-off the remaining balance of its investment, \$279,000 as the decline in fair value was deemed to be other than temporary.

In October 2002, the Company purchased a Chinese subsidiary of ManTech. See the discussion of this transaction in Note 16. Acquisitions.

In December 2003, GSE's Board of Directors elected John Moran, a GP Strategies executive with experience in the power industry and simulation technology, as Chief Executive Officer. Mr. Moran will continue as a GP Strategies employee, however, Mr. Moran will devote

100% of his time to the performance of his duties as CEO of GSE. For 2003, GSE will reimburse GP Strategies \$35,000 for his compensation and benefits; in 2004 GSE will reimburse GP Strategies \$300,000 for Mr. Moran's compensation and benefits.

In December 2003, GSE agreed to pay to General Physics, a fully-owned subsidiary of GP Strategies, approximately \$35,000 for services performed by General Physics personnel in the fourth quarter 2003 for the implementation of the Management Services Agreement effective January 1, 2004. See Note 20, Subsequent events. In addition, GSE will reimburse General Physics \$30,000 for coverage under General Physics' directors and officers liability and umbrella insurance for November and December 2003.

#### 15. Employee benefits

The Company has a qualified defined contribution plan that covers substantially all U.S. employees under Section 401(k) of the Internal Revenue Code. Under this plan, the Company's stipulated basic contribution matches a portion of the participants' contributions based upon a defined schedule. Contributions are invested by an independent investment company in one or more of several investment alternatives. The choice of investment alternatives is at the election of each participating employee. The Company's contributions to the plan were approximately \$239,000, \$215,000, and \$293,000, for the years ended December 31, 2003, 2002, and 2001, respectively.

#### 16. Acquisitions

In October 2002, the Company completed an acquisition for the Process business unit which was accounted for using the purchase method. The Company purchased the stock of ManTech Automation Systems (Beijing) Company Ltd, from ManTech International Corp. The Chinese company, which has seven employees, was renamed GSE Systems Engineering (Beijing) Company Ltd. The purchase price was \$45,000 and was allocated 100% to certain assets and property and equipment.

In December 1997, the Company acquired 100% of the outstanding common stock of J.L. Ryan, Inc. ("Ryan") for an initial purchase price of \$1,000,000 and contingent consideration based on the performance of the business from 1998 to 2002. A minimum of \$250,000 of such earnings payments for each of 1998 and 1999 was guaranteed by the Company. The Company paid \$600,000 in cash upon the closing of the transaction and entered into a promissory note payable in four annual installments of \$100,000 each beginning on January 2, 1999. This acquisition was accounted for under the purchase method. For the year ended December 31, 2002, the contingent consideration totaled approximately \$515,000, which the Company recorded as an addition to goodwill. For the year ended December 31, 2001, there was no contingent consideration.

#### 17. Segment information

With the sale of the Company's Process business, the Company has only one reportable segment. The Company has a wide range of knowledge of simulation systems and the processes those systems are intended to control and model. The Company's knowledge is concentrated heavily in the power generation industry. The Company is primarily engaged in simulation for the power generation industry and simulation for the process industries, with the vast majority of customers being in the nuclear power industry. Contracts typically range from 18 months to three years. The Power business is comprised of three divisions: Power Simulation, Process Simulation, and Emergency Management Simulation.

For the years ended December 31, 2003, 2002, and 2001, one customer (Battelle's Pacific Northwest National Laboratory) accounted for approximately 29%, 23%, and 33%, respectively, of the Company's consolidated revenue. The Pacific Northwest National Laboratory is the purchasing agent for the Department of Energy and the projects the Company performs in Eastern and Central Europe.

For the years ended December 31, 2003, 2002, and 2001, 88%, 85%, and 76% of the Company's consolidated revenue was from customers in the nuclear power industry, respectively. The Company designs, develops and delivers business and technology solutions to the energy industry worldwide. Approximately 70%, 56% and 73% of the Company's 2003, 2002, and 2001 revenue, respectively, was derived from international sales of its products and services. Revenue, operating income (loss) and identifiable assets for the Company's United States, European, and Asian operations as of and for the years ended December 31, 2003, 2002, and 2001 are as follows:

(in thousands)	Year Ended December 31, 2003				
	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	\$ 21,214	\$ 3,661	\$ 144	\$ -	\$ 25,019
Transfers between geographic locations	162	-	-	(162)	-
Total contract revenue	\$ 21,376	\$ 3,661	\$ 144	\$ (162)	\$ 25,019
Operating income (loss)	\$ (1,313)	\$ 346	\$ (24)	\$ -	\$ (991)
Identifiable assets, at December 31	\$ 41,423	\$ 2,651	\$ 40	\$ (27,578)	\$ 16,536
(in thousands)	Year Ended December 31, 2002				

	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	\$ 18,600	\$ 1,575	\$ 45	\$ -	\$ 20,220
Transfers between geographic locations	92	-	-	(92)	-
Total contract revenue	\$ 18,692	\$ 1,575	\$ 45	\$ (92)	\$ 20,220
Operating income (loss)	\$ (2,607)	\$ (716)	\$ (18)	\$ -	\$ (3,341)
Identifiable assets, at December 31	\$ 36,000	\$ 1,363	\$ 52	\$ (8,521)	\$ 28,894

(in thousands)

Year Ended December 31, 2001

	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	\$ 23,070	\$ 2,439	\$ -	\$ -	\$ 25,509
Transfers between geographic locations	123	37	-	(160)	-
Total contract revenue	\$ 23,193	\$ 2,476	\$ -	\$ (160)	\$ 25,509
Operating income (loss)	\$ (1,388)	\$ (52)	\$ 71	\$ -	\$ (1,369)
Identifiable assets, at December 31	\$ 40,168	\$ 1,921	\$ 101	\$ (8,516)	\$ 33,674

## 18. Supplemental disclosure of cash flow information

(in thousands)	Years ended December 31,		
	2003	2002	2001
Issuance of options/warrants to non-employees (see Note 10)	\$ 86	\$ -	\$ 194
Conversion of related party note payable to preferred stock (see Note 11)	\$ -	\$ -	\$ 3,900
Conversion of related party note payable to common stock (see Note 11)	\$ 787	\$ -	\$ -
Conversion of preferred stock to common stock	\$ 3,900	\$ -	\$ -
Cash paid:			
Interest	\$ 668	\$ 485	\$ 845
Income taxes	\$ 138	\$ 385	\$ 434

## 19. Quarterly financial data (unaudited)

The Company's quarterly financial information has not been audited but, in management's opinion, includes all adjustments necessary for a fair presentation.

(in thousands, except per share data)	Year ended December 31, 2003 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	\$ 4,975	\$ 5,545	\$ 6,139	\$ 8,360
Operating loss	(157)	(400)	(197)	(237)
Loss from continuing operations	(135)	(597)	(313)	(816)
Loss from discontinued operations	(383)	(535)	(383)	(370)
Net loss	\$ (518)	\$ (1,132)	\$ (696)	\$ (1,186)
Basic loss per common share:				
Continuing operations	\$ (0.03)	\$ (0.11)	\$ (0.06)	\$ (0.34)
Discontinued operations	(0.07)	(0.09)	\$ (0.07)	(0.04)
Net loss	\$ (0.10)	\$ (0.20)	\$ (0.13)	\$ (0.38)
Diluted loss per common share:				
Continuing operations	\$ (0.03)	\$ (0.11)	\$ (0.06)	\$ (0.34)
Discontinued operations	(0.07)	(0.09)	(0.07)	(0.04)
Net loss	\$ (0.10)	\$ (0.20)	\$ (0.13)	\$ (0.38)

(in thousands, except per share data)	Year ended December 31, 2002 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	\$ 4,573	\$ 5,215	\$ 5,483	\$ 4,949
Operating loss	(772)	(694)	(336)	(1,539)
Loss from continuing operations	(1,558)	(1,053)	(382)	(1,257)
Income (loss) from discontinued operations	1,990	1,176	300	(5,159)
Net income (loss)	\$ 432	\$ 123	\$ (82)	\$ (6,416)
Basic earnings (loss) per common share:				
Continuing operations	\$ (0.27)	\$ (0.19)	\$ (0.07)	\$ (0.22)
Discontinued operations	\$ 0.33	0.20	0.05	(0.88)
Net income (loss)	\$ 0.06	\$ 0.01	\$ (0.02)	\$ (1.10)
Diluted earnings (loss) per common share:				
Continuing operations	\$ (0.27)	\$ (0.19)	\$ (0.07)	\$ (0.22)
Discontinued operations	0.33	0.20	0.05	(0.88)
Net income (loss)	\$ 0.06	\$ 0.01	\$ (0.02)	\$ (1.10)

The fourth quarter 2002 net loss includes a \$2.8 million pre-tax write down of an investment and a \$2.8 million increase in the Company's deferred tax valuation allowance.

## 20. Subsequent events

General Physics Corporation is a wholly owned subsidiary of GP Strategies. On March 30, 2004, the Company was added as an additional borrower under the Financing and Security Agreement between General Physics Corporation and a financial institution. Under the terms of the agreement, \$1.5 million of General Physics' available credit facility has been carved out for use by the Company. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 80% of eligible accounts receivable and 80% of eligible unbilled receivables. The interest rate on this line of credit is based upon the LIBOR Market Index Rate plus 3%, with interest only payments due monthly. The credit facility expires on August 23, 2005.

On January 1, 2004, the Company entered into a Management Services Agreement with GP Strategies Corporation in which GP Strategies agreed to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax. In addition, GSE will use General Physics' financial system. GSE will pay an annual fee to General Physics of \$685,000. The term of the agreement is one year, subject to earlier termination only upon the mutual consent of the parties to the agreement. The agreement can be

renewed for successive one-year terms.

**GSE SYSTEMS, INC.**  
**FORM 10-K**  
**For the Year Ended December 31, 2001**

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

None.

**ITEM 9A. CONTROLS AND PROCEDURES.**

Within the 90-day period prior to the filing of this report, GSE management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Exchange Act Rule 13a-14(c). Based on that evaluation, the Chief Operating Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of the date of that evaluation. There have been no significant changes in internal controls, or in factors that could significantly affect internal controls, subsequent to the date the Chief Operating Officer and Chief Financial Officer completed their evaluation.

**GSE SYSTEMS, INC.**  
**FORM 10-K**  
**For the Year Ended December 31, 2002**

**PART III**

The information required in response to Items 10, 11, 12 13, and 14 is hereby incorporated by reference to the information under the captions "Election of Directors", "Principal Executive Officers of the Company Who Are Not Also Directors", "Executive Compensation", "Voting Securities and Principal Stockholders", "Security Ownership of Management", "Certain Related Transactions" and "Principal Accountant Fees and Services" in the Proxy Statement for the Company's 2004 Annual Meeting of Shareholders.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K.

#### (a)(1) List of Financial Statements

The following financial statements are included in Item 8:

#### **GSE Systems, Inc. and Subsidiaries**

##### Independent Auditors' Report

Consolidated Balance Sheets as of December 31, 2003 and 2002 Consolidated Statements of Operations for the years ended December 31, 2003, 2002, and 2001 Consolidated Statements of Comprehensive Loss for the years ended December 31, 2003, 2002, and 2001 Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2003, 2002, and 2001 Consolidated Statements of Cash Flows for the years ended December 31, 2003, 2002, and 2001 Notes to Consolidated Financial Statements

#### (a)(2) List of Schedules

All other schedules to the consolidated financial statements are omitted as the required information is either inapplicable or presented in the consolidated financial statements or related notes.

#### (a)(3) List of Exhibits

The Exhibits which are filed with this report or which are incorporated by reference are set forth in the Exhibit Index hereto.

#### (b) Reports on Form 8-K

Form 8-K was filed by the Registrant with the Securities and Exchange Commission on October 8, 2003 in which the Company filed the Sixth Modification of the Company's Loan and Security agreement between GSE Systems, Inc. and PNC Bank N.A.

Form 8-K was filed by the Registrant with the Securities and Exchange Commission on October 10, 2003 regarding the sale of the Company's Process Solutions business unit to NovaTech LLC on September 25, 2003.

Form 8-K was filed by the Registrant with the Securities and Exchange Commission on November 7, 2003 announcing the change in control in the ownership of the Company.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### GSE Systems, Inc.

By: /s/ JOHN MORAN  
John Moran  
Chief Executive Officer

Pursuant to the requirements of the Securities Act, this report has been signed by the following persons in the capacities and on the dates indicated.

Date: April 13, 2004	/s/ JOHN MORAN John Moran, Chief Executive Officer (Principal Executive Officer)
Date: April 13, 2004	/s/ JEFFERY G. HOUGH Jeffery G. Hough, Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)
Date: April 13, 2004 (Jerome I. Feldman, Chairman of the Board) (Dr. Sheldon L. Glashow, Director ) (Scott N. Greenberg, Director ) (Dr. Roger Hagengruber, Director ) (Andrea Kantor, Director ) (Joseph W. Lewis, Director ) (John A. Moore, Jr., Director ) (George J. Pedersen, Director ) (Douglas Sharp, Director )	By: /s/ JEFFERY G. HOUGH Jeffery G. Hough Attorney-in-Fact

A Power of Attorney, dated March 12, 2004, authorizing Jeffery G. Hough to sign this Annual Report on Form 10-K for the fiscal year ended December 31, 2003 on behalf of certain of the directors of the Registrant is filed as Exhibit 24 to this Annual Report.

## EXHIBIT INDEX

The following exhibits are either filed herewith or have been previously filed with the Securities and Exchange Commission and are referred to and incorporated by reference.

Exhibit	Description of Exhibit
3.	Articles of Incorporation and Bylaws
a.	Third Amended and Restated Certificate of Incorporation of the Company. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on October 24, 2001 and incorporated herein by reference.
b.	Form of Amended and Restated Bylaws of the Company. Previously filed in connection with Amendment No. 1 to the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on June 14, 1995 and incorporated herein by reference.
4.	Instruments Defining Rights of Security Holders, including Indenture.
a.	Specimen Common Stock Certificate of the Company. Previously filed in connection with Amendment No. 3 to the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on July 24, 1995 and incorporated herein by reference.
10.	Material Contracts
a.	Agreement among ManTech International Corporation, National Patent Development Corporation, GPS Technologies, Inc., General Physics Corporation, Vattenfall Engineering AB and GSE Systems, Inc. (dated as of April 13, 1994). Previously filed in connection with the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on April 24, 1995 and incorporated herein by reference.
b.	GSE Systems, Inc. 1995 Long-Term Incentive Plan, amended as of April 5, 1999. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 30, 1999 and incorporated herein by reference.*
c.	Form of Option Agreement Under the GSE Systems, Inc. 1995 Long-Term Incentive Plan. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 22, 1996 and incorporated herein by reference. *
d.	Office Lease Agreement between Sterling Rutherford Plaza, L.L.C. and GSE Systems, Inc. (dated as of February 10, 1998). Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 21, 1998 and incorporated herein by reference.
e.	Office Lease Agreement between Red Branch Road, L.L.C. and GSE Systems, Inc. (dated February 10, 1998). Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 21, 1998 and incorporated herein by reference.
f.	Executive Employment Agreements between GSE Systems, Inc. and Directors Jerome I. Feldman, George J. Pedersen, Scott N. Greenberg, and John A. Moore, Jr. (dated January 1, 1999). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on August 1, 2001 and incorporated herein by reference. *
g.	Warrant Agreements with GP Strategies and ManTech International Corporation (dated September 13, 1999). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on August 15, 2001 and incorporated herein by reference.
h.	Change of Control Agreements between GSE Systems, Inc. and Jerry Jen and Jeffery G. Hough (dated March 10, 2000). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on August 1, 2001 and incorporated herein by reference. *
i.	Loan and Security Agreement among GSE Systems, Inc., GSE Process Solutions, Inc., GSE Power Systems, Inc., and National Bank of Canada, dated March 23, 2000. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 30, 2000 and incorporated herein by reference.

- j. \$10,000,000 Promissory Note dated March 23, 2000, from GSE Systems, Inc., GSE Process Solutions, Inc., and GSE Power Systems, Inc. to National Bank of Canada. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 30, 2000 and incorporated herein by reference.
- k. GP Strategies, Inc. Guarantee to National Bank of Canada, dated March 23, 2000. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 30, 2000 and incorporated herein by reference.
- l. Subscription and Shareholders' Agreement by and among Avantium International B.V., B.V. Licht en Kracht Maatschappij, SmithKline Beecham PLC, S.R. One, Limited, GSE Systems, Inc. Delft University of Technology, Universiteit Twente, Eindhoven University of Technology, the Generics Group Limited, and Alpinvest Holding NV, dated February 24, 2000. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 30, 2000 and incorporated herein by reference.
- m. Asset Sale and Purchase Agreement between GSE Systems, Inc. and Avantium International B.V. dated March 6, 2001. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on March 21, 2001 and incorporated herein by reference.
- n. Executive Compensation Plan for Jerry Jen (dated August 28, 2002). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on September 20 2002 and incorporated herein by reference. \*
- o. \$1,000,000 promissory note dated June 25, 2001 to ManTech International Corporation. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on August 1, 2001 and incorporated herein by reference.
- p. Preferred Stock Issuance Agreement by and between GSE Systems, Inc. and ManTech International Corporation (dated December 5, 2001). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on December 12, 2001 and incorporated herein by reference.
- q. Fifth Modification Agreement dated March 21, 2003 to the Loan and Security Agreement among GSE Systems, Inc., GSE Process Solutions, Inc., GSE Power Systems, Inc. and National Bank of Canada dated March 23, 2000 which was transferred on or about January 15, 2002 to PNC Bank, National Association.
- r. Sixth Modification Agreement dated September 25, 2003 to the Loan and Security Agreement among GSE Systems, Inc., GSE Process Solutions, Inc., GSE Power Systems, Inc. and National Bank of Canada dated March 23, 2002 which was transferred on or about January 15, 2002 to PNC Bank, National Association. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on October 8, 2003 and incorporated herein by reference.
- s. Asset Sale and Purchase Agreement between GSE Systems, Inc. and Novatech LLC dated September 25, 2003. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on October 10, 2003 and incorporated herein by reference.
- t. Management Services Agreement between GSE Systems, Inc. and GP Strategies Corporation dated January 1, 2004.\*\*
- u. First Amendment dated March 30, 2004 to the Financing and Security Agreement among General Physics Corporation, Skillright, Inc., GSE Systems, Inc., GSE Power Systems, Inc., and MSHI, Inc. and Wachovia Bank, National Association.\*\*
- 21. Subsidiaries.
  - a. List of Subsidiaries of Registrant at December 31, 2003.\*\*
- 23. Consents of Experts and Counsel
  - a. Independent Auditors' Consent.\*\*
- 24. Power of Attorney
  - a. Power of Attorney for Directors' and Officers' Signatures on SEC Form

10-K.\*\*

- 31. Section 302 Certification
  - a. Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. \*\*
  - b. Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. \*\*
- 32. Section 906 Certification
  - a. Certification of the Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.\*\*
- 99. Additional Exhibits
  - a. Form of Right of First Refusal Agreement. Previously filed in connection with Amendment No. 3 to the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on July 24, 1995 and incorporated herein by reference.

\* Management contracts or compensatory plans required to be filed as exhibits pursuant to Item 14 (c) of this report.

\*\* Filed herewith.

## Exhibit 10.1

### MANAGEMENT SERVICES AGREEMENT

This Agreement is made as of January 1, 2004 between GP Strategies Corporation, a Delaware corporation ("GP") and GSE Systems, Inc., a Delaware corporation ("GSE").

W I T N E S S E T H WHEREAS, GP has processes, systems, equipment and personnel capable of supporting the business operations of its own and other businesses; and WHEREAS, GSE has need of the types of business support services that GP can provide and GSE wishes to avail itself of services GP can provide; and WHEREAS GP and GSE desire in this Agreement to evidence the terms upon which GP shall provide mutually agreed services; NOW, THEREFORE, in consideration of the mutual promises set forth herein, and for other good and valuable consideration, the parties agree as follows:

#### ARTICLE I. - MANAGEMENT SERVICES

During the term of this Agreement, GP shall provide the following support services to the extent and in the areas described (collectively, the "Services"):

1. Supervision and administration of payroll and employee-benefit services covering GSE employees, including the administration of health care claims.
2. Obtaining and maintaining in force all insurance policies necessary or appropriate in connection with GSE's activities, provided that GP shall have no obligation to pay premiums or other fees under such insurance policies on GSE's behalf (and GP shall be promptly reimbursed for any insurance-related cost it incurs on GSE's behalf).
3. GP shall provide GSE with financial analysis and support, accounting and audit service and support, and accounts payable services using the systems, processes and practices utilized by GP.
4. GP shall provide GSE with legal advice through its in-house counsel, and supervision of matters referred to outside counsel, including assistance with respect to the preparation and review of SEC reports, general corporate and securities matters, corporate governance issues, issues relating to compliance with the Sarbanes-Oxley Act, claims, litigation, the preparation and review of contracts and other matters. GP shall have the authority to engage on behalf of GSE outside counsel satisfactory to GSE, provided that such engagement shall be approved in advance by GSE and further provided that all fees and expenses in connection with services rendered by such counsel shall be borne by GSE.
5. GP shall assist GSE to comply with federal, state and local laws, rules and regulations applicable to GSE's activities, including the preparation and filing of tax returns, reports and other documents required of GSE by any public authority or agency.
6. GP shall advise GSE in banking, financial and cash management affairs, and shall use its best efforts to obtain payment and performance bonds and letters of credit for GSE. Any fees charged by GP for obtaining such bonds or letters of credit for GSE shall be based on commercially reasonable terms and payment thereof is subject to approval by GSE's independent directors. To the extent requested by GSE, GP shall prepare and present to GSE's Board of Directors recommendations as to the appropriate means of financing GSE's activities and shall assist in the supervision of banking and other cash control matters.
7. GP shall assist GSE in matters relating to purchasing, leasing, procurement, disposal and other activities relating to resources utilized in its business, and GSE shall receive the financial benefit of such activities. By way of example only, if GP negotiates a volume discount or other savings relating to purchasing, such benefits shall flow directly to GSE.
8. GP shall assist GSE with invoicing and collection services, but GP shall not be a guarantor of the collectability of any amounts owed to GSE.
9. GP shall provide network support services and financial system support services using the systems and processes used by GP. This includes providing the actual financial system that GSE will utilize.
10. GP shall provide human resources advice and services to GSE management and GSE employees, including assistance regarding employment issues, benefits, policies and procedures and the administration thereof.
11. GP shall assist GSE with such other general and administrative services as are necessary to enable GSE to function in the ordinary course of business.
12. GP shall provide GSE with executive management support to assist GSE with business performance and development.

#### ARTICLE II. - PERSONNEL AND EXPENSES

GP shall employ and maintain a staff adequate, in its judgment, to provide management and administrative services to GSE pursuant to this Agreement. In addition to the Compensation stated in Article VI, GSE shall reimburse GP any for any reasonable travel and temporary living expenses incurred while traveling and other reasonable out-of-pocket costs incurred by its employees in providing the services described in Article I of this Agreement. GP shall invoice GSE quarterly and GSE shall, within 30 days after the receipt of each such invoice, remit payment to GP.

GSE shall pay directly to the provider/vendor, or shall reimburse GP after the payment therefor by GP, all costs related to services furnished by third parties, such as legal and accounting fees, insurance premiums, facility costs, printing costs, costs of consulting services furnished by independent contractors, and all taxes and other services requested by GSE or reasonably required to carry out the objectives of this Agreement. GP agrees to work with GSE in good faith to minimize the use of third parties for any services contemplated hereunder and any such third party use shall be governed by Articles I and III.

#### ARTICLE III. - EXTENT OF GP's AUTHORITY

GP shall not have the authority to obligate GSE for any expenditure in excess of \$10,000 or other obligation not outlined herein without prior approval from an officer or other authorized manager of GSE.

## **ARTICLE IV. - CONFIDENTIAL INFORMATION**

For purposes of this Agreement, "Confidential Information" shall mean information disclosed to GP or known by GP or any of its officers, directors, stockholders, agents or employees as a consequence of or through the performance by GP of this Agreement, which in the reasonable judgment of GSE is not generally known in any industry in which GSE is engaged, about GSE's products, processes and services, including information relating to research, development, inventions, manufacturing, purchasing, accounting, engineering, marketing, merchandising and selling. Except as may be required by law or as required in the fulfillment of its duties under this Agreement, GP will not, directly or indirectly, use, disseminate or disclose any Confidential Information, and GP shall take all steps reasonably necessary to prevent the dissemination or disclosure of Confidential Information by any of its agents or employees. Upon termination of this Agreement, GP will return to GSE all documents, records, notebooks and similar repositories of such Confidential Information, including copies thereof, then in GP's possession, whether prepared by GP, its agents, employees or others. However, nothing in this Article IV shall require GP to segregate records, electronic data or other information that would increase the cost of providing the services under this Agreement unless GSE pays the additional cost of doing so.

## **ARTICLE V. - COOPERATION**

A. GSE shall make available to GP such information, records and other data as may be needed by GP to perform the services required by this Agreement. Any material misstatement by GSE or any failure by GSE to inform GP of any material fact with respect to GSE shall relieve GP of any liability relating to such material fact or omission arising under this Agreement.

B. Each party hereto will, and will cause their respective subsidiaries to, give one another reasonable access (including duplication rights) to any books, records, contracts, instruments and other information used in the businesses of GP and GSE prior to the date hereof which may prove reasonably necessary to the other party in connection with their respective businesses both before and after the date hereof.

## **ARTICLE VI. - COMPENSATION**

As compensation for the services provided by GP hereunder, in addition to the reimbursement payable to GP under Article II above, GP shall receive a total yearly fee of Six Hundred Eighty Five Thousand Dollars (\$685,000), which fee shall be applicable to the first year and, if exercised, the second year of this Agreement. The total yearly fee of \$685,000 shall be reduced to \$620,000 for the first year, and \$590,000 for the second year, in the event that GP does not provide a loan guarantee to GSE in the amount of \$1,800,000. Thereafter, any fee for the services provided by GP hereunder shall be agreed upon by GP and GSE not less than 30 days prior to the commencement of any year, subject to approval by GSE's independent directors. The fee compensation for all services shall be payable in equal quarterly installments on the last day of each calendar year quarter (with the first such quarterly fee being due on April 1, 2004).

## **ARTICLE VII. - LIMITATION OF LIABILITY**

In providing services hereunder, GP shall have a duty to act, and to cause its agents to act, in a reasonably prudent manner, but neither GP nor any officer, director, employee or agent of GP shall be liable to GSE for any error of judgment or mistake of law or for any loss incurred by GSE in connection with the matters to which this Agreement relates, except a loss resulting from willful misfeasance, bad faith or gross negligence on the part of GP or from GP's disregard of obligations and duties under this Agreement.

ARTICLE VIII. - indemnification GSE shall indemnify and hold harmless GP, its subsidiaries (other than GSE and its subsidiaries) and their respective stockholders, officers, directors and employees from and against any and all losses, liabilities, claims, damages, costs and expenses (including reasonable attorneys' fees and other expenses of litigation) to which such party may become subject arising out of the provision by GP to GSE of services under this Agreement, but such indemnity shall not protect any person against any liability to which such person would otherwise be subject by reason of willful misfeasance, bad faith, gross negligence or disregard of obligations and duties hereunder. Notwithstanding the foregoing, in no event shall GSE be liable for any consequential damages.

article ix. - arbitration In the event the parties hereto shall not be able to agree as to the amount of any services rendered or expenses incurred under this Agreement, or as to any other matter relating to this Agreement, the matter shall be settled by arbitration in New York in accordance with the Commercial Arbitration Rules of the American Arbitration Association and the award rendered by such arbitrator(s) shall not be subject to appeal and may be entered in any court having jurisdiction thereof.

## **ARTICLE X. - TERM**

The term of this Agreement shall commence on the date hereof and shall continue for a period of one (1) year, subject to earlier termination only upon the mutual consent of the parties hereto or at the election of one of the parties upon default by the other in performance of its obligations hereunder, provided that this Agreement may be renewed by GSE for successive one-year terms upon notifying GP in writing at least three (3) months prior to the end of the initial term of this Agreement or any renewal thereof. After the initial term, and only for any renewal period, GSE may terminate the Agreement at any time for its own convenience upon providing GP with at least sixty (60) days prior written notice.

## **ARTICLE XI - OTHER PROVISIONS**

1. Any notice provided for herein shall be in writing and shall be deemed to have been given if and when delivered personally or otherwise

actually received after it is (i) deposited in the United States mail, certified, return receipt requested, postage prepaid, (ii) hand delivered by a recognized courier service or otherwise, or (iii) faxed (with receipt confirmed) to the recipient addressed as follows:  
If to GP:

777 Westchester Ave, 4th Floor  
White Plains, New York 10604

Attn: Scott Greenberg, President Fax: (914) 249-9745

If to GSE:

9189 Red Branch Road  
Columbia, Maryland 21045

Attn: Jerry Jen  
Fax: (410) 772-3599

Or addressed to any such party at any such other address as such party shall have furnished by written notice to the other.

2. This Agreement contains the entire agreement between the parties with respect to the transactions contemplated herein and supersedes all previous written or oral negotiations, commitments and writings with respect to such transactions.
3. Neither this Agreement nor any term hereof may be changed, amended, modified, waived, discharged or terminated other than by an agreement in writing signed by the parties hereto, and the waiver of any provision of this Agreement shall not constitute a general waiver or a waiver of any other provision hereof.
4. In the event any provision of this Agreement is declared to be invalid or unenforceable the remainder of this Agreement shall be considered valid and enforceable in accordance with its terms, and the parties shall endeavor to replace the invalid or unenforceable provision with a new provision as close as possible to the original that is valid and enforceable.
5. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument.
6. This Agreement shall be governed by the laws of the State of New York and inure to the benefit of the successors and assigns of the parties hereto, provided that this Agreement may not be assigned by either of the parties hereto without the prior written consent of the other party hereto.
7. This Agreement is subject to the prior approval of GSE's independent directors.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first above written.

**GP STRATEGIES CORPORATION GSE SYSTEMS, INC.**

By: \_\_\_\_\_ By: \_\_\_\_\_ Title: Title:

**FIRST AMENDMENT TO FINANCING AND SECURITY  
AGREEMENT**

THIS FIRST AMENDMENT TO FINANCING AND SECURITY AGREEMENT (this "Agreement") is made as of the 30th day of March, 2004, by GENERAL PHYSICS CORPORATION, a corporation organized under the laws of the State of Delaware ("General Physics") and SKILLRIGHT, INC., a Delaware corporation ("Skillright"; General Physics and Skillright are hereinafter referred to collectively as "the Borrower"), GSE SYSTEMS, INC., a corporation organized under the laws of the State of Delaware ("GSE Systems"), GSE POWER SYSTEMS, INC., a Delaware corporation ("GSE Power") and MSHI, INC., a Virginia corporation ("MSHI"; GSE Systems, GSE Power and MSHI are hereinafter referred to collectively as "GSE"), jointly and severally and WACHOVIA BANK, NATIONAL ASSOCIATION, a national banking association (the "Lender").

**RECITALS**

- A. The Borrower, MXL Industries, Inc. ("MXL") and the Lender are parties to a Financing and Security Agreement dated August 13, 2003 (the same, as amended, modified, substituted, extended, and renewed from time to time, the "Financing Agreement").
- B. The Financing Agreement provides for some of the agreements between the Borrower and the Lender with respect to a revolving credit facility in an amount not to exceed \$25,000,000.
- C. Pursuant to Section 2.4.12 of the Financing Agreement, the Borrower has notified the Lender that all obligations of MXL shall be terminated, and therefore the Financing Agreement shall be deemed modified to eliminate all references to MXL and any and all obligations of MXL under the Financing Agreement and all of the other Financing Documents.
- D. The Borrower has requested that the Lender make available to GSE a revolving credit facility in the maximum principal amount of \$1,500,000 as a part of the revolving credit facility described in Recital B above.
- E. The Lender is willing to agree to the Borrower's request on the condition, among others, that this Agreement be executed by the Borrower and GSE.

**AGREEMENTS**

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, receipt of which is hereby acknowledged, the Borrower and the Lender agree as follows:

1. The Borrower and the Lender agree that the Recitals above are a part of this Agreement. Unless otherwise expressly defined in this Agreement, terms defined in the Financing Agreement shall have the same meaning under this Agreement.

2. The Borrower and the Lender agree that on the date hereof the aggregate outstanding principal balance under the Revolving Credit Note (subject to change for returned items and other adjustments made in the ordinary course of business) is \$9,244,984.

3. The Borrower represents and warrants to the Lender as follows:

(a) Borrower is a corporation duly organized, and validly existing and in good standing under the laws of the State of Delaware and is duly qualified to do business as a foreign corporation in good standing in every other state wherein the conduct of its business or the ownership of its property requires such qualification;

(b) Borrower has the power and authority to execute and deliver this Agreement and perform its obligations hereunder and has taken all necessary and appropriate action to authorize the execution, delivery and performance of this Agreement;

(c) The Financing Agreement, as heretofore amended and as amended by this Agreement, and each of the other Financing Documents remains in full force and effect, and each constitutes the valid and legally binding obligation of Borrower, enforceable in accordance with its terms;

(d) All of Borrower's representations and warranties contained in the Financing Agreement and the other Financing Documents are true and correct on and as of the date of Borrower's execution of this Agreement; and

(e) No Event of Default and no event which, with notice, lapse of time or both would constitute an Event of Default, has occurred and is continuing under the Financing Agreement or the other Financing Documents which has not been waived in writing by the Lender.

4. The Financing Agreement is hereby amended as follows:

(a) Section 1.1 (Certain Defined Terms) is modified by deleting the following defined terms in their entirety and inserting the following in place thereof:

"Collateral" means the Borrower Collateral and the GSE Collateral.

"Credit Facility" means the Revolving Credit Facility, the Letter of Credit Facility or the GSE Loan, as the case may be, and "Credit Facilities" means collectively the Revolving Credit Facility, the Letter of Credit Facility and the GSE Loan and any and all other credit facilities now or hereafter extended under or secured by this Agreement.

"Guarantor" or "Guarantors" means GP Strategies Corporation, a corporation organized and existing under the laws of the State of Delaware ("GPX") and its successors and assigns.

"Guaranty" means that certain guaranty of payment for the benefit of Lender dated the date hereof from GPX, as the same may from time to time be extended, amended, restated or otherwise modified.

"Note" means the Revolving Credit Note or the GSE Note, and "Notes" means collectively the Revolving Credit Note, the GSE Note and any other promissory note which may from time to time evidence all or any portion of the Obligations.

"Permitted Uses" means (a) as to Borrower, to refinance existing indebtedness owed to Fleet National Bank, LaSalle Business Credit, Inc. and Washington Mutual Bank, FA (the successor in interest to Dime Savings Bank of New York, FSB) and for general working capital purposes arising in the ordinary course of Borrower's business and to support the issuance of Letters of Credit and (b) as to GSE for general working capital purposes arising in the ordinary course of GSE's business.

"Prepayment" means a Revolving Loan Mandatory Prepayment, a Revolving Loan Optional Prepayment, a GSE Mandatory Prepayment or a GSE Optional Prepayment, as the case may be, and "Prepayments" mean collectively all Revolving Loan Mandatory Prepayments, Revolving Loan Optional Prepayments, GSE Mandatory Prepayments and GSE Optional Prepayments."

(b) Section 1.1 (Certain Defined Terms) is modified by adding the following defined terms:

"Cash Flow means as to GSE and its Subsidiaries for any period of determination thereof, the sum of (a) the net profit (or loss) determined in accordance with GAAP consistently applied less any dividends or distributions and less any capitalized research and development expense, plus (b) depreciation and amortization, plus (c) interest expense.

"Debt Service" means as to GSE and its Subsidiaries for any period of determination thereof an amount equal to the total of the aggregate amount of all payments of principal and interest with respect to Indebtedness for Borrowed Money of GSE and its Subsidiaries scheduled to be due and payable during such period.

"Debt Service Coverage Ratio means as to GSE and its Subsidiaries for the period of any determination the ratio of (a) Cash Flow to (b) Debt Service

"GSE" means GSE Systems Inc., a Delaware corporation, its successors and assigns."

"GSE Borrowing Base" has the meaning described in Section 2.5.3 (GSE Borrowing Base).

"GSE Borrowing Base Deficiency" has the meaning described in Section 2.5.3 (GSE Borrowing Base).

"GSE Borrowing Base Report" and "GSE Borrowing Base Reports" have the meanings described in Section 2.5.3 (GSE Borrowing Base).

"GSE Collateral" means all property of GSE subject from time to time to the Liens of this Agreement, any of the Security Documents and/or any of the other Financing Documents, together with any and all Proceeds thereof.

"GSE Collateral Account" has the meaning described in Section 2.5.8 (GSE Collateral Account).

"GSE Eligible Receivables" means Eligible Receivables as defined herein, as related to GSE only and not the Borrower.

"GSE Loan" has the meaning described in Section 2.5.1 (GSE Revolving Credit Facility).

"GSE Loan Account" has the meaning described in Section 2.5.9 (GSE Loan Account).

"GSE Lockbox" has the meaning described in Section 2.5.8 (GSE Collateral Account).

"GSE Mandatory Prepayment" and "GSE Mandatory Prepayments" have the meanings described in Section 2.5.6 (Mandatory Prepayments of GSE Loan).

"GSE Note" has the meaning described in Section 2.5.5 (GSE Revolving Credit Note).

"GSE Optional Prepayment" and "GSE Optional Prepayments" have the meanings described in Section 2.5.7 (Optional Prepayments of GSE Loan).

"GSE Revolving Credit Committed Amount" has the meaning described in Section 2.5.1 (GSE Revolving Credit Facility)

"GSE Revolving Credit Commitment Period" means the period of time from March 30, 2004 to the Business Day preceding the Revolving Credit Termination Date.

"GSE Unbilled Receivables" means Receivables which otherwise qualify as GSE Eligible Receivables but which shall be billed within fifteen (15) days after the last day of the prior month and are included in GSE's General Ledger Account number 1160-0001 titled "Sales earned not billed".

"GSE Unused Line Fees" and individually, a "GSE Unused Line Fee" have the meanings described in Section 2.5.10 (GSE Unused Line Fee)."

(c) Section 2.1.1 (Revolving Credit Facility) is hereby deleted in its entirety and the following is hereby inserted in its place:  
"2.1.1 Revolving Credit Facility.

Subject to and upon the provisions of this Agreement, Lender establishes a revolving credit facility in favor of Borrower. The aggregate of all advances under the Revolving Credit Facility (which includes advances of the GSE Revolving Credit Committed Amount) is sometimes referred to in this Agreement as the "Revolving Loan".

The principal amount of Twenty Five Million Dollars (\$25,000,000) is the "Revolving Credit Committed Amount".

During the Revolving Credit Commitment Period, Lender agrees to make advances under the Revolving Credit Facility in accordance with the provisions of this Agreement; provided that after giving effect to Borrower's request, the outstanding principal balance of the Revolving Loan and all Letter of Credit Obligations would not exceed the lesser of (a) the Revolving Credit Committed Amount less the GSE Loan or (b) the then most current Borrowing Base.

Unless sooner paid, the unpaid Revolving Loan, together with interest accrued and unpaid thereon, and all other Obligations shall be due and payable in full on the Revolving Credit Expiration Date."

(d) Section 2.3(a) is hereby deleted in its entirety and the following is hereby inserted in its place:

"(a) Each advance of the Revolving Loan and the GSE Loan shall bear interest until maturity (whether by acceleration, declaration, extension or otherwise) at the Applicable Rate as determined in accordance with the provisions of this Section."

(e) Section 2.4.1 is hereby deleted in its entirety and the following is hereby inserted in its place:

"2.4.1 Borrowers' Representatives.

(a) Borrower: Lender is hereby irrevocably authorized by Borrower and GSE to make advances under the Revolving Loan to Borrower pursuant to the provisions of this Agreement upon the written, oral or telephone request of any one or more of the Persons who is from time to time a Responsible Officer of Borrower under the provisions of the most recent certificate of corporate resolutions and/or incumbency of Borrower on file with Lender. Lender assumes no responsibility or liability for any errors, mistakes, and/or discrepancies in the oral, telephonic, written or other transmissions of any instructions, orders, requests and confirmations delivered by Borrower to Lender in connection with the Credit Facilities, any advance of the Revolving Loan, any Letter of Credit or any other transaction in connection with the provisions of this Agreement.

(b) GSE: Lender is hereby irrevocably authorized by Borrower and GSE to make advances under the GSE Loan to GSE pursuant to the provisions of this Agreement upon the written, oral or telephone request of any one or more of the Persons who is from time to time a Responsible Officer of GSE under the provisions of the most recent certificate of corporate resolutions and/or incumbency of GSE on file with Lender. Lender assumes no responsibility or liability for any errors, mistakes, and/or discrepancies in the oral, telephonic, written or other transmissions of any instructions, orders, requests and confirmations delivered by GSE to Lender in connection with the GSE Loan or any other transaction in connection with the provisions of this Agreement."

(f) The following section is added to Article II (The Credit Facilities): "Section 2.5 The GSE Revolving Credit Facility. Section 2.5.1 GSE Loan. Subject to and upon the provisions of this Agreement and as a part of the Revolving Credit Commitment, Lender establishes a revolving credit facility in favor of GSE. The aggregate of all advances under the GSE Revolving Credit Facility is sometimes referred to in this Agreement as the "GSE Loan".

The principal amount of One Million Five Hundred Thousand Dollars (\$1,500,000) is the "GSE Revolving Credit Committed Amount" and shall be included in and a part of the Revolving Credit Committed Amount.

During the GSE Revolving Credit Commitment Period, Lender agrees to make advances under the GSE Revolving Credit Facility in accordance with the provisions of this Agreement; provided that after giving effect to GSE's request, (a) the outstanding principal balance of the GSE Loan would not exceed the lesser of (i) the GSE Revolving Credit Committed Amount of (ii) the then most current GSE Borrowing Base and

(b) the outstanding principal balance of the Revolving Loan, the GSE Loan and all Letter of Credit Obligations would not exceed the Revolving Credit Committed Amount.

Unless sooner paid, the unpaid GSE Loan, together with interest accrued and unpaid thereon, and all other Obligations shall be due and payable in full on the Revolving Credit Expiration Date.

Section 2.5.2 Procedure for Making Advances Under the Revolving Loan; Lender Protection Loans.

Borrower may borrow under the GSE Revolving Credit Facility on any Business Day. Advances under the GSE Loan shall be deposited to a demand deposit account of GSE with Lender (or an Affiliate of Lender) or shall be otherwise applied as directed by GSE, which direction

Lender may require to be in writing. No later than 12:00 p.m.(Eastern Time) on the date of the requested borrowing, GSE shall give Lender oral or written notice (a "Loan Notice") of the amount and (if requested by Lender) the purpose of the requested borrowing. Any oral Loan Notice shall be confirmed in writing by GSE within three (3) Business Days after the making of the requested advance under the GSE Loan. Each Loan Notice shall be irrevocable.

In addition, GSE hereby irrevocably authorizes Lender at any time and from time to time, without further request from or notice to GSE, to make advances under the GSE Loan, and to establish, without duplication, reserves against the GSE Borrowing Base, which Lender, in its sole and absolute discretion, deems necessary or appropriate to protect the interests of Lender, including, without limitation, advances and reserves under the GSE Loan made to cover debit balances in the GSE Loan Account, principal of, and/or interest on, the GSE Loan, the Obligations (including, without limitation, any Letter of Credit Obligations), and/or Enforcement Costs, prior to, on, or after the termination of other advances under this Agreement, regardless of whether the outstanding principal amount of the GSE Loan that Lender may advance or reserve hereunder exceeds the GSE Revolving Credit Committed Amount or the GSE Borrowing Base. Lender shall communicate to Borrower from time to time any action taken under this paragraph either orally or in writing.

**2.5.3 GSE Borrowing Base.** As used in this Agreement, the term "GSE Borrowing Base" means at any time, an amount equal to the aggregate of (a) eighty percent (80%) of the amount of GSE Eligible Receivables and (b) eighty percent (80%) of GSE Unbilled Receivables.

The GSE Borrowing Base shall be computed based on the GSE Borrowing Base Report most recently delivered to and accepted by Lender in its sole and absolute discretion. In the event GSE fails to furnish a GSE Borrowing Base Report required by Section 2.5.4 (GSE Borrowing Base Report), or in the event Lender believes that a GSE Borrowing Base Report is no longer accurate, Lender may, in its sole and absolute discretion exercised from time to time and without limiting its other rights and remedies under this Agreement, suspend the making of or limit advances under the GSE Loan.

If at any time the total of the aggregate principal amount of the GSE Loan exceeds the GSE Borrowing Base, a borrowing base deficiency ("GSE Borrowing Base Deficiency") shall exist. Each time a GSE Borrowing Base Deficiency exists, GSE, at the sole and absolute discretion of Lender exercised from time to time, shall pay the GSE Borrowing Base Deficiency ON DEMAND to Lender.

Without implying any limitation on Lender's discretion with respect to the GSE Borrowing Base, the criteria for GSE Eligible Receivables contained in the definition of GSE Eligible Receivables is in part based upon the business operations of GSE existing on or about March 30, 2004 and upon information and records furnished to Lender by GSE. If at any time or from time to time hereafter, the business operations of GSE change or such information and records furnished to Lender is incorrect or misleading, Lender in its discretion, may at any time and from time to time during the duration of this Agreement change such criteria or add new criteria. Lender shall communicate such changed or additional criteria to GSE from time to time either orally or in writing.

#### **2.5.4 GSE Borrowing Base Report.**

GSE will furnish to Lender no less frequently than monthly and at such other times as may be requested by Lender a report of the GSE Borrowing Base (each a "GSE Borrowing Base Report"; collectively, the "GSE Borrowing Base Reports") in the form required from time to time by Lender, appropriately completed and duly signed. The GSE Borrowing Base Report shall contain the amount and payments on the GSE Receivables, both billed and unbilled, and the calculations of the GSE Borrowing Base, all in such detail, and accompanied by such supporting and other information, as Lender may from time to time request. Upon Lender's request GSE will provide Lender with (a) confirmatory assignment schedules; (b) copies of Account Debtor invoices; (c) evidence of shipment or delivery; and (d) such further schedules, documents and/or information regarding the Receivables, both billed and unbilled, as Lender may reasonably require. The items to be provided under this subsection shall be in form satisfactory to Lender, and certified as true and correct by a Responsible Officer (or by any other officers or employees of GSE whom a Responsible Officer from time to time authorizes in writing to do so), and delivered to Lender from time to time solely for Lender's convenience in maintaining records of the Collateral. The failure of GSE to deliver any of such items to Lender shall not affect, terminate, modify, or otherwise limit the Liens of Lender on the Collateral.

#### **2.5.5 GSE Revolving Credit Note.**

The obligation of GSE to pay the GSE Loan, with interest, shall be evidenced by a promissory note (as from time to time extended, amended, restated, supplemented or otherwise modified, the "GSE Note") substantially in the form of EXHIBIT B-2 attached hereto and made a part hereof, with appropriate insertions. The GSE Note shall be dated as of March 30, 2004, shall be payable to the order of Lender at the times provided in the GSE Note, and shall be in the principal amount of the GSE Revolving Credit Committed Amount. GSE acknowledges and agrees that, if the outstanding principal balance of the GSE Loan outstanding from time to time exceeds the face amount of the GSE Note, the excess shall bear interest at the Post-Default Rate for the GSE Loan and shall be payable, with accrued interest, ON DEMAND. The GSE Note shall not operate as a novation of any of the Obligations or nullify, discharge, or release any such Obligations or the continuing contractual relationship of the parties hereto in accordance with the provisions of this Agreement.

**2.5.6 Mandatory Prepayments of GSE Loan.** GSE shall make the mandatory prepayments (each a "GSE Mandatory Prepayment" and collectively, the "GSE Mandatory Prepayments") of the GSE Loan at any time and from time to time in such amounts as is required pursuant to Section 2.5.3 (GSE Borrowing Base) in order to cover any GSE Borrowing Base Deficiency.

**2.5.7 Optional Prepayments of GSE Loan.** GSE shall have the option, at any time and from time to time, to prepay (each a "GSE Optional Prepayment" and collectively the "GSE Optional Prepayments") the GSE Loan, in whole or in part without premium or penalty.

2.5.8 The GSE Collateral Account. GSE will deposit, or cause to be deposited, all Items of Payment to a bank account or bank accounts designated by Lender and from which Lender alone has power of access and withdrawal (collectively, the "GSE Collateral Account"). In the case of any deposit that is made by GSE manually (i.e., the payment is received by the GSE rather than being delivered to the GSE Lockbox or wired to the Collateral Account), such deposit shall be made not later than the next Business Day after the date of receipt of the Items of Payment. The Items of Payment shall be deposited in precisely the form received, except for the endorsements of GSE where necessary to permit the collection of any such Items of Payment, GSE hereby agreeing to make such endorsement. In the event GSE shall fail to do so, Lender is hereby authorized by GSE to make the endorsement in the name of GSE. Prior to such a deposit, GSE will not commingle any Items of Payment with any of the other funds or property of GSE, but will hold them separate and apart in trust and for the account of Lender.

GSE shall direct its Account Debtors that all Items of Payment are to be either (a) wired to the GSE Collateral Account or (b) mailed to one or more post-office boxes designated by Lender, or to such other additional or replacement post-office boxes pursuant to the request of Lender from time to time (collectively, the "GSE Lockbox"). Lender shall have unrestricted and exclusive access to the Lockbox.

GSE hereby authorizes Lender to inspect all Items of Payment, endorse all Items of Payment in the name of GSE, and deposit such Items of Payment in the GSE Collateral Account. Lender reserves the right, exercised in its sole and absolute discretion from time to time, to provide to the GSE Collateral Account credit prior to final collection of an Item of Payment and to disallow credit for any Item of Payment which is unsatisfactory to Lender. In the event Items of Payment are returned to Lender for any reason whatsoever, Lender may, in the exercise of its discretion from time to time, forward such Items of Payment a second time. Any returned Items of Payment shall be charged back to the Collateral Account, the GSE Loan Account, or other account, as appropriate.

Lender will apply the whole or any part of the collected funds credited to the GSE Collateral Account against the GSE Loan (or with respect to Items of Payment that are not proceeds of Accounts or after the occurrence and during the continuance of an Event of Default, against any of the Obligations) or credit such collected funds to a depository account of GSE with Lender (or an Affiliate of Lender), the order and method of such application to be in the sole discretion of Lender.

2.5.9 GSE Loan Account. Lender will establish and maintain a loan account on its books (the "GSE Loan Account") to which Lender will (a) debit (i) the principal amount of each advance of the GSE Loan made by Lender hereunder as of the date made, (ii) the amount of any interest accrued on the GSE Loan as and when due, and (iii) any other amounts due and payable by GSE to Lender from time to time under the provisions of this Agreement in connection with the GSE Loan, including, without limitation, Enforcement Costs, Fees, late charges, and service, collection and audit fees, as and when due and payable, and (b) credit all payments made by GSE to Lender on account of the GSE Loan as of the date made including, without limitation, funds credited to the GSE Loan Account from the GSE Collateral Account. Lender may debit the GSE Loan Account for the amount of any Item of Payment that is returned to Lender unpaid. All credit entries to the GSE Loan Account are conditional and shall be readjusted as of the date made if final and indefeasible payment is not received by Lender in cash or solvent credits. Any and all periodic or other statements or reconciliations, and the information contained in those statements or reconciliations, of the GSE Loan Account shall be final, binding and conclusive upon GSE in all respects, absent manifest error, unless Lender receives specific written objection thereto from GSE within thirty (30) Business Days after such statement or reconciliation shall have been sent by Lender.

#### 2.5.10 GSE Unused Line Fee.

GSE shall pay to Lender a revolving credit facility fee (collectively, the "GSE Unused Line Fees" and individually, a "GSE Unused Line Fee") in an amount equal to three-eighths percent (3/8%) per annum of the average daily unused and undisbursed portion of the GSE Revolving Credit Committed Amount in effect from time to time accruing during each quarter. The accrued and unpaid portion of the GSE Unused Line Fee shall be paid in arrears by GSE to Lender on the first day of each September, December, March and June, commencing on the first such date following the date hereof, and on the Revolving Credit Termination Date.

#### 2.5.11 GSE Origination Fee.

GSE shall pay to Lender on or before March 30, 2004 a loan origination fee in the amount of Fifteen Thousand Dollars (\$15,000), which fee has been fully earned and is non-refundable."

Exhibit A to this Agreement shall be deemed to be Exhibit B-2 to the Financing Agreement.

(g) Section 3.2.2 (MXL Collateral) is hereby deleted in its entirety and the following is inserted in place thereof:

"Section 3.2.2 GSE Collateral.

(a) GSE hereby assigns, pledges and grants to Lender, and agrees that Lender shall have a perfected and continuing security interest in, and Lien on, (i) all of GSE's Accounts, Inventory, Chattel Paper, Documents, Instruments, Equipment, Investment Property, and General Intangibles (in which GSE is permitted under the terms thereof to grant a security interest) and all of GSE's deposit accounts with any financial institution with which GSE maintains deposits, whether now owned or existing or hereafter acquired or arising, (ii) all returned, rejected or repossessed goods, the sale or lease of which shall have given or shall give rise to an Account or Chattel Paper, (iii) all insurance policies relating to the foregoing and the right to receive refunds of unearned insurance premiums under those policies, (iv) all books and records in whatever media (paper, electronic or otherwise) recorded or stored, with respect to the foregoing and all Equipment and General Intangibles necessary or beneficial to retain, access and/or process the information contained in those books and records; and (v) all Proceeds and products of the foregoing. GSE further agrees that Lender shall have in respect thereof all of the rights and remedies of a secured party under the

Uniform Commercial Code as well as those provided in this Agreement, under each of the other Financing Documents to which it is a party and under applicable Laws.

(b) GSE covenants and agrees that GSE shall provide Lender with all necessary information and will execute and deliver such documents as are required to comply with the Federal Assignment of Claims Act of 1940 (31 U.S.C. ss.3727 and 41 U.S.C. ss.15), to perfect Lender's security interest in the Accounts arising under Government Contracts with a contract value equal to or greater than Fifty Thousand Dollars (\$50,000) and such other Government Contracts as Lender may determine in its sole discretion."

(h) The following section is hereby added to Section 7.1 (Affirmative Covenants - Borrower):

"7.1.23 Financial Covenants - GSE.

(a) Total Liabilities to Tangible Net Worth. GSE shall maintain, at all times a ratio of Total Liabilities to Tangible Net Worth not greater than 3.0 to 1.0.

(b) Commencing March 31, 2004 GSE will maintain, on a consolidated basis and tested as of the last day of each of GSE's fiscal quarters for the four (4) quarter period ending on that date, a Debt Service Coverage Ratio of not less 1.2 to 1.0; provided, however, this covenant for the period ending March 31, 2004 shall be calculated by multiplying the Cash Flow as of March 31, 2004 by a factor of 4; for the period ending June 30, 2004 shall be calculated by multiplying the aggregate Cash Flow as of March 31, 2004 and June 30, 2004 by a factor of 2; and for the period ending September 30, 2004 shall be calculated by multiplying the aggregate Cash Flow as of March 31, 2004, June 30, 2004 and September 30, 2004 by a factor of 1.33.

(i) All references to MXL shall be deemed to be deleted from the Financing Agreement as of the date hereof. MXL is hereby released from any and all obligations under the Financing Agreement.

(j) Section 9.1 (Notices) is modified by adding the following to the list of parties:

"GSE" GSE Systems  
9189 Red Branch Road  
Columbia, MD 21045  
Attention: Jeffery G. Hough

with a copy to: GP Strategies Corporation 777 Westchester Avenue, 4th Floor White Plains, NY 10604 Attention: Andrea Kantor, Esquire

5. The agreements of the Lender under this Agreement are subject to fulfillment on or before the date of this Agreement of the following conditions precedent in a manner satisfactory in form and substance to Lender and its counsel:

(a) Organizational Documents - GSE: Lender shall have received:

(i) a certificate of good standing certified by the Secretary of State, or other appropriate Governmental Authority, of the state of formation of GSE;

(ii) a certified copy from the appropriate Governmental Authority under which GSE is organized, of GSE's organizational documents and all recorded amendments thereto;

(iii) a certificate of qualification to do business certified by the Secretary of State or other Governmental Authority of each jurisdiction in which the character of the properties owned by GSE or in which the transaction of its business makes such qualification necessary; and

(iv) a certificate dated as of the date of this Agreement by the Secretary or an Assistant Secretary of GSE covering:

(A) true and complete copies of GSE's organizational and governing documents and all amendments thereto;

(B) true and complete copies of the resolutions of its Board of Directors authorizing (1) the execution, delivery and performance of the Financing Documents to which it is a party, (2) the borrowings hereunder, and (3) the granting of the Liens contemplated by this Agreement and the Financing Documents to which GSE is a party;

(C) the incumbency, authority and signatures of the officers of GSE authorized to sign this Agreement and the other Financing Documents to which GSE is a party; and (D) the identity of GSE's current directors.

(b) Opinion of GSE's Counsel. Lender shall have received the favorable opinion of counsel for GSE addressed to Lender.

(c) Note. Lender shall have received the GSE Note, conforming to the requirements hereof and executed by a Responsible Officer of GSE and attested by a duly authorized representative of GSE.

(d) Financing Documents and GSE Collateral. GSE shall have executed and delivered the Financing Documents to be executed by it, and shall

have delivered original Chattel Paper, Instruments, Investment Property, and related GSE Collateral and all opinions and other documents contemplated by ARTICLE III (The Collateral).

(e) Other Financing Documents. In addition to the Financing Documents to be delivered by GSE, Lender shall have received all other Financing Documents duly executed and delivered by Persons other than GSE.

(f) Other Documents, Etc. Lender shall have received such other certificates, opinions, documents and instruments confirmatory of or otherwise relating to the transactions contemplated hereby as may have been reasonably requested by Lender.

(g) Payment of Fees. Lender shall have received payment of any Fees due on or before the date hereof.

(h) Collateral Disclosure List. GSE shall have delivered to Lender a Collateral Disclosure List required under the provisions of Section 3.3 (Collateral Disclosure List) duly executed by a Responsible Officer of GSE.

(i) Recordings and Filings. GSE shall have: (i) authorized, executed and/or delivered all Financing Documents required to be filed, registered or recorded in order to create, in favor of Lender, a perfected Lien in the Collateral (subject only to the Permitted Liens) in form and in sufficient number for filing, registration, and recording in each office in each jurisdiction in which such filings, registrations and recordations are required, and (ii) delivered such evidence as Lender deems satisfactory that all necessary filing fees and all recording and other similar fees, and all Taxes and other expenses related to such filings, registrations and recordings will be or have been paid in full.

(j) Insurance Certificate. Lender shall have received insurance certificates in accordance with the provisions of the Financing Agreement.

(k) Landlord's Waivers. Lender shall have received a waiver from the landlord of the 9189 Red Branch Road, Columbia, Maryland location leased by Borrower in form reasonably acceptable to Lender and its counsel in their sole and absolute discretion.

(l) Borrowing Base Report. Lender shall have received a current GSE Borrowing Base Report.

6. GSE hereby joins in the Financing Agreement as a borrower for the purpose of rendering the representations, warranties and covenants contained in the Financing Agreement, as amended hereby.

7. The Borrower hereby issues, ratifies and confirms the representations, warranties and covenants contained in the Financing Agreement, as amended hereby. The Borrower agrees that this Agreement is not intended to and shall not cause a novation with respect to any or all of the Obligations.

8. GSE shall pay at the time this Agreement is executed and delivered all fees, commissions, costs, charges, taxes and other expenses incurred by the Lender and its counsel in connection with this Agreement, including, but not limited to, reasonable fees and expenses of the Lender's counsel and all recording fees, taxes and charges.

9. This Agreement may be executed in any number of duplicate originals or counterparts, each of such duplicate originals or counterparts shall be deemed to be an original and all taken together shall constitute but one and the same instrument. The Borrower agrees that the Lender may rely on a telecopy of any signature of the Borrower. The Lender agrees that the Borrower may rely on a telecopy of this Agreement executed by the Lender.

IN WITNESS WHEREOF, the Borrower and the Lender have executed this Agreement under seal as of the date and year first written above.

WITNESS OR ATTEST:

GENERAL PHYSICS CORPORATION

By:

(SEAL)

Name:

Title:

WITNESS OR ATTEST:

SKILLRIGHT, INC.

By:

(SEAL)

Name:

Title:

WITNESS OR ATTEST:

GSE SYSTEMS, INC.

By:  
Name:

(SEAL)

Title:

WITNESS OR ATTEST:

GSE POWER SYSTEMS, INC.

By:

(SEAL)

Name:

Title:

By:

(SEAL)

Name:

Title:

WITNESS:

WACHOVIA BANK, NATIONAL ASSOCIATION

By:

(SEAL)

Lucy C. Campbell  
Vice President

### AGREEMENT OF GUARANTOR

The undersigned is the "Guarantor" under a Guaranty of Payment Agreement, dated August 13, 2003 (as amended, modified, substituted, extended and renewed from time to time, the "Guaranty"), in favor of the Lender. In order to induce the Lender to enter into the foregoing Agreement, the undersigned (a) consents to the transactions contemplated by, and agreements made by the Borrower under, the foregoing Agreement, and (b) ratifies, confirms and reissues the terms, conditions, promises, covenants, grants, assignments, security agreements, agreements, representations, warranties and provisions contained in the Guaranty.

WITNESS signature and seal of the undersigned as of the date of the Agreement. **WITNESS OR ATTEST: GP STRATEGIES CORPORATION**

By: (SEAL)

Name:

Title:

## Exhibit 21.1

### SUBSIDIARIES OF REGISTRANT AT DECEMBER 31, 2003

The companies listed below are directly or indirectly owned 100% by GSE Systems, Inc. and are included in its consolidated financial statements.

o MSHI, Inc., GSE Power Systems AB, GSE Process Solutions, Inc., GSE Erudite Software, Inc. and GSE Engineering System (Beijing) Company Ltd. are wholly owned subsidiaries of GSE Systems, Inc.

o GP International Engineering & Simulation, Inc. and GSE Services Company LLC. are wholly owned subsidiaries of GSE Power Systems, Inc. which is a wholly owned subsidiary of MSHI, Inc.

o GSE Process Solution BV is a wholly owned subsidiary of GSE Process Solutions, Inc.

o J.L. Ryan, Inc., acquired by GSE Power Systems, Inc. in December 1997, has been merged with and into GSE Power Systems, Inc. as of February 1998, with GSE Power Systems, Inc. being the surviving corporation.

Name	Place of Incorporation or Organization
MSHI, Inc.	State of Virginia
GSE Power Systems AB	Sweden
GSE Erudite Software, Inc.	State of Delaware
GP International Engineering & Simulation, Inc.	State of Delaware
GSE Services Company LLC.	State of Delaware
GSE Power Systems, Inc.	State of Delaware
GSE Engineering Systems (Beijing) Company, Ltd	Peoples Republic of China
GSE Process Solutions, Inc.	State of Delaware
GSE Process Solutions BV	Netherlands

Independent Auditors' Consent

The Board of Directors  
GSE Systems, Inc.

We consent to the incorporation by reference in the registration statement (No. 333-08805) on Form S-8 of GSE Systems, Inc. of our report dated March 30, 2004 relating to the consolidated balance sheets of GSE Systems, Inc. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, comprehensive loss, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2003, which report appears in the December 31, 2003 annual report on Form 10-K of GSE Systems, Inc. Our report refers to the Company's adoption of SFAS No. 142, Goodwill and Other Intangible Assets, on January 1, 2002.

*/S/ KPMG LLP  
Baltimore, Maryland  
April 12, 2004*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS that the undersigned Officers and Directors of GSE Systems, Inc., a Delaware corporation, hereby constitute and appoint John Moran and Jeffery G. Hough, and each of them, the true and lawful agents and attorneys-in-fact of the undersigned with full power and authority in said agents and attorneys-in-fact, and in any one or both of them, to sign for the undersigned and in their respective names as Officers and Directors of the Corporation, the Annual Report of Form 10-K of the Corporation to be filed with the Securities and Exchange Commission, Washington, D.C., under the Securities Exchange Act of 1934, as amended, and any amendment or amendments to such Annual Report, hereby ratifying and confirming all acts taken by such agents and attorneys-in-fact, or any one or more of them, as herein authorized. This Power of Attorney, which is dated as of March 12, 2004, may be executed in any number of counterparts, and such signatures may be by means of facsimile or other means of transmission.

<i>Name</i>	<i>Title</i>
<i>/s/ Jerome I. Feldman Jerome I. Feldman</i>	<i>Chairman of the Board</i>
<i>/s/ John V. Moran John V. Moran</i>	<i>Chief Executive Officer and Director (Principal Executive Officer)</i>
<i>/s/ Chin-our Jerry Jen Chin-our Jerry Jen</i>	<i>President, Chief Operating Officer and Director</i>
<i>/s/ Jeffery G. Hough Jeffery G. Hough</i>	<i>Senior Vice President and Chief Financial Officer (Principal Finance and Accounting Officer)</i>
<i>/s/ Sheldon L. Glashow, Ph.D. Sheldon L. Glashow, Ph.D.</i>	<i>Director</i>
<i>/s/ Scott N. Greenberg Scott N. Greenberg</i>	<i>Director</i>
<i>/s/ Roger L. Hagengruber, Ph.D. Roger L. Hagengruber, Ph.D.</i>	<i>Director</i>
<i>/s/ Andrea Kantor Andrea Kantor</i>	<i>Director</i>
<i>/s/ Joseph M. Lewis Joseph M. Lewis</i>	<i>Director</i>
<i>/s/ John A. Moore, Jr. John A. Moore, Jr.</i>	<i>Director</i>
<i>/s/ George J. Pedersen George J. Pedersen</i>	<i>Director</i>
<i>/s/ Douglas Sharp Douglas Sharp</i>	<i>Director</i>

SECTION 302 CERTIFICATIONS

I, John Moran, certify that:

1. I have reviewed this annual report on Form 10-K of GSE Systems, Inc.;
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(s) 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) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonable likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

*Date: April 13, 2004  
/S/ JOHN MORAN  
John Moran  
Chief Executive Officer  
(Principal Executive Officer)*

SECTION 302 CERTIFICATIONS

I, Jeffery G. Hough, certify that:

1. I have reviewed this annual report on Form 10-K of GSE Systems, Inc.;
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(s) 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) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonable likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

*Date: April 13, 2004  
/S/ JEFFERY G. HOUGH  
Jeffery G. Hough Senior Vice President  
and Chief Financial Officer  
(Principal Financial and Accounting Officer)*

**WRITTEN STATEMENT OF CHIEF EXECUTIVE OFFICER**

**AND CHIEF FINANCIAL OFFICER  
PURSUANT TO SECTION 906 OF THE  
SARBANES-OXLEY ACT OF 2002**

The undersigned, the Chief Executive Officer and the Chief Financial Officer of GSE Systems, Inc. (the "Company"), each hereby certifies that, to his knowledge, on the date hereof:

(a) the Annual Report on form 10-K of the Company for the year ended December 31, 2003 filed on the date hereof with the Securities and Exchange Commission (the "Annual Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

*/s/ JOHN V. MORAN*

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*John V. Moran  
Chief Executive Officer  
Date: April 13, 2004*

*/s/ JEFFERY G. HOUGH*

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*Jeffery G. Hough  
Senior Vice President and  
Chief Financial Officer  
Date: April 13, 2004*