



Edgar Filing: GSE SYSTEMS INC - Form 10-K

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 a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer [ ]

Accelerated filer [ ]

Non-accelerated filer [X]

Indicate by check mark whether the registrant is a shell company (as defined in rule 12(b)-2 of the Exchange Act).  
Yes [ ] No [X]

The aggregate market value of Common Stock held by non-affiliates as of June 30, 2006 was \$37,173,659 based on the closing price of such stock on that date of \$4.10.

The number of shares outstanding of each of the registrant's Common Stock and Series A Cumulative Convertible Preferred Stock as of March 31, 2007:

Common Stock, par value \$.01 per share	13,112,843 shares
Series A Cumulative Convertible Preferred Stock, par value \$.01 per share	0 shares

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2007 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, are incorporated by reference into Part III.

---

**GSE SYSTEMS, INC.**  
**FORM 10-K**  
**For the Year Ended December 31, 2006**

**TABLE OF CONTENTS**

<b>PART I</b>	<b>Page</b>
Item 1. Business	4
Item 1A. Risk Factors	19
Item 1B. Unresolved Staff Comments	23
Item 2. Properties	23
Item 3. Legal Proceedings	23
Item 4. Submission of Matters to a Vote of Security Holders	24
 <b>PART II</b>	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities	25
Item 6. Selected Consolidated Financial Data	28
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	30
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	48
Item 8. Financial Statements and Supplementary Data	49
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	50
Item 9A. Controls and Procedures	50
Item 9B. Other Information	51
 <b>PART III</b>	
Item 10. Directors and Executive Officers of the Registrant and Corporate Governance Matters*	51
Item 11. Executive Compensation*	51
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*	51
Item 13. Certain Relationships and Related Transactions and Director Independence*	52
Item 14. Principal Accountant Fees and Services*	52
 <b>PART IV</b>	
Item 15. Exhibits and Financial Statement Schedules	53
SIGNATURES	54
Exhibits Index	55

\*to be incorporated by reference from the Proxy Statement for the registrant’s 2007 Annual Meeting of Shareholders.

REACT®, GSE Systems®, Thor®, OpenSim®, SmartTutor®, SimSuite Pro®, ESmart®, and GAARDS® are registered trademarks and GFLOW+™, GLOGIC+™, GCONTROL+™, GPower+™, SimSuite Power™, SimExec™, eXtreme I/S™, RACST™, PEGASUS Plant Surveillance and Diagnosis System™, SIMON™, BRUS™, SensBase™, Vista PIN™, and Java Applications & Development Environment (JADE)™ are trademarks of GSE Systems, Inc. All other trademarks used in this document are the property of their respective owners.



**GSE SYSTEMS, INC.**  
**FORM 10-K**  
**For the Year Ended December 31, 2006**

**CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS.**

This report and the documents incorporated by reference herein contain “forward-looking” statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that are based on management’s assumptions, expectations and projections about us, and the industry within which we operate, that have been made pursuant to the Private Securities Litigation Reform Act of 1995 which reflect our expectations regarding our future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as “anticipate”, “believe”, “continue”, “estimate”, “intend”, “may”, “plan”, “potential”, “predict”, “expect”, “should”, “expressions, or the negative of these terms or other comparable terminology, have been used to identify these forward-looking statements. These forward-looking statements may also use different phrases. These statements regarding our expectations reflect our current beliefs and are based on information currently available to us. Accordingly, these statements by their nature are subject to risks and uncertainties, including those listed under Item 1A Risk Factors, which could cause our actual growth, results, performance and business prospects and opportunities to differ from those expressed in, or implied by, these statements. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. Except as otherwise required by federal securities law, we are not obligated to update or revise these forward-looking statements to reflect new events or circumstances. We caution you that a variety of factors, including but not limited to the factors described below under Item 1A Risk Factors and the following, could cause our business conditions and results to differ materially from what is contained in forward looking statements:

- changes in the rate of economic growth in the United States and other major international economies;
- changes in investment by the nuclear and fossil electric utility industry, the chemical and petrochemical industries and the U.S. military-industrial complex;
  - changes in the financial condition of our customers;
    - changes in regulatory environment;
    - changes in project design or schedules;
      - contract cancellations;
  - changes in our estimates of costs to complete projects;
  - changes in trade, monetary and fiscal policies worldwide;
    - currency fluctuations;
- war and/or terrorist attacks on facilities either owned or where equipment or services are or may be provided;
  - outcomes of future litigation;
- protection and validity of our patents and other intellectual property rights;
  - increasing competition by foreign and domestic companies;
    - compliance with our debt covenants;
  - recoverability of claims against our customers and others; and
  - changes in estimates used in our critical accounting policies.

Other factors and assumptions not identified above were also involved in the formation of these forward-looking statements and the failure of such other assumptions to be realized, as well as other factors, may also cause actual results to differ materially from those projected. Most of these factors are difficult to predict accurately and are generally beyond our control. You should consider the areas of risk described above in connection with any

forward-looking statements that may be made by us. You should not place undue reliance on any forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which factors will arise.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any additional disclosures we make in proxy statements, quarterly reports on Form 10-Q, and current reports on Form 8-K filed with the SEC.

## PART I

### ITEM 1. BUSINESS.

GSE Systems, Inc. (“GSE Systems”, “GSE”, the “Company”, “our”, “we” or “us”), a Delaware corporation organized in 1994, is a world leader in real-time, high fidelity simulation. The Company provides simulation and educational solutions and services to the nuclear and fossil electric utility industry and the chemical and petrochemical industries. In addition, the Company provides plant monitoring, and signal analysis monitoring and optimization software primarily to the power industry. GSE is the parent company of GSE Power Systems, Inc., a Delaware corporation; GSE Power Systems, AB, a Swedish corporation; GSE Engineering Systems (Beijing) Co. Ltd, a Chinese limited liability company; and has a 10% minority interest in Emirates Simulation Academy, LLC, a United Arab Emirates limited liability company.

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 file or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act (15 U.S.C. 78m(a) or 78o(d)) 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 SEC. In addition, the public may read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>.

#### Recent Developments.

On June 21, 2005, the Board of Directors of GP Strategies Corporation (“GP Strategies”) approved plans to spin-off its 57% interest in GSE through a special dividend to the GP Strategies’ stockholders. On September 30, 2005, the GP Strategies’ stockholders received 0.283075 share of GSE common stock for each share of GP Strategies common stock or Class B stock held on the record date of September 19, 2005. Following the spin-off, GP Strategies ceased to have any ownership interest in GSE. GP Strategies continued to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax pursuant to a Management Services Agreement which expired on December 31, 2006.

In order to ensure that the Company had sufficient working capital in 2006, the Company completed several financing transactions in early 2006. On February 28, 2006, the Company and Dolphin Direct Equity Partners, LP (“Dolphin”) entered into a Cancellation and Warrant Exchange Agreement (the “Cancellation Agreement”) under which Dolphin agreed to cancel its Senior Subordinated Secured Convertible Promissory Note and cancel its outstanding warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. In exchange for Dolphin’s agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction discussed below, the Company repaid the Dolphin Note and agreed to issue a new warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share (the “Dolphin Warrant”). At the date of issuance, the fair value of the Dolphin Warrant was \$868,000, as established using the Black-Scholes Model, and was recorded in paid-in capital with the offset recorded as loss on extinguishment of debt. In accordance with the terms of the warrant agreement, Dolphin exercised the Dolphin Warrant on November 8, 2006 upon the Company’s certification that, among other things, the underlying shares of GSE common stock were registered with the Securities and Exchange Commission on October 31, 2006, that the current stock price was greater than \$1.25 per share, and that the average of the current stock prices for each trading day of the prior 30 calendar day period was not less than \$1.25 per share. The Company received cash proceeds of \$603,000.

In conjunction with the early payoff of the Dolphin Note and the cancellation of the 380,952 warrants, the Company wrote off the remaining unamortized Original Issue Discount of \$1.1 million, wrote off the remaining unamortized deferred financing charges of \$185,000, recognized a credit of \$698,000 from the write-off of the liabilities related to the Dolphin Note conversion feature and the related warrants, and took an \$868,000 charge for the value of the 900,000 new warrants issued to Dolphin. The total loss on extinguishment of the Dolphin Note and the cancellation of the related warrants totaled \$1.4 million.

On February 28, 2006, the Company raised \$3.9 million, net of associated fees of \$395,000, through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to “accredited investors”, as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stock was convertible at any time into a total of 2,401,133 shares of GSE common stock at a conversion price of \$1.77 per share. The conversion price was equal to 110% of the closing price of the Company’s Common Stock on February 28, 2006, the date the sale of the Convertible Preferred Stock was completed. Each investor received a five-year warrant to purchase GSE common stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of \$1.77 per share. In aggregate, the Company issued warrants to purchase a total of 480,226 shares of GSE common stock. The Convertible Preferred Stockholders are entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid dividends totaling \$279,000 to the preferred stockholders. At the date of issuance, the fair value of the warrants was \$342,000 and the fair value of the preferred stock was \$3.9 million. The fair value of the warrants and the preferred stock was determined by the use of the relative fair value method, in which the \$4.25 million gross proceeds was allocated based upon the fair values of the warrants, as determined by using the Black-Scholes Model, and the preferred stock, as determined by an independent appraisal. At any time after March 1, 2007, the Company had the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeded 200% of the Series A Conversion Price. Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006 and 13,920 shares of Preferred Stock in 2007. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock will convert to 1,129,946 shares of GSE common stock. The holders of the Convertible Preferred Stock were entitled to vote on all matters submitted to the stockholders for a vote, together with the holders of the voting common stock, all voting together as a single class. The holders of the Convertible Preferred Stock were entitled to the number of votes equal to the number of GSE common stock that they would receive upon conversion of their Convertible Preferred Stock.





The Company paid the placement agent for the Convertible Preferred Stock and Warrants 6% of the gross proceeds received by the Company from the offering (\$255,000) plus five-year warrants to purchase 150,000 shares of the Company's common stock at an exercise price of \$1.77 per share. In addition to the placement agent fee, the Company paid \$140,000 of other transaction fees related to the offering. At the date of issuance, the fair value of the placement agent warrants was \$128,000, as established using the Black-Scholes Model, and was recorded in paid-in capital, with the offset recognized as a reduction of the preferred stock proceeds.

The proceeds were used to payoff the Dolphin Note and the Company's line of credit balance and for other working capital purposes.

On March 7, 2006, the Company entered into a new loan and security agreement with Laurus Master Fund, Ltd and terminated its existing \$1.5 million bank line of credit. The new agreement established a \$5.0 million line of credit for the Company. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 90% of eligible accounts receivable and 40% of eligible unbilled receivables (up to a maximum of \$1.0 million). The interest rate on this line of credit is based on the prime rate plus 200-basis points (10.25% as of December 31, 2006), with interest only payments due monthly. There are no financial covenant requirements under the new agreement and the credit facility expires on March 6, 2008. On May 18, 2006, Laurus Master Fund agreed to temporarily increase the Company's borrowing capability by \$2.0 million over and above the funds that were available to the Company based upon its normal borrowing base calculation. The over advance was used to collateralize a \$2.1 million performance bond that the Company issued to the Emirates Simulation Academy, LLC ("ESA") in the form of a standby letter of credit. One half of the increased borrowing capability expired on July 18, 2006, and the balance expires on April 13, 2007. The Company's borrowings over and above the normal borrowing base calculation bear additional interest of 1.5% per month over and above the normal interest rate on the line of credit. At December 31, 2006, the Company's available borrowing base was \$4.2 million of which \$2.2 million had been utilized. The Company issued to Laurus Master Fund, Ltd a warrant to purchase up to 367,647 shares of GSE common stock at an exercise price of \$.01 per share. At the date of issuance, the fair value of the Laurus warrant, which was established using the Black-Scholes Model, was \$603,000 and was recorded as paid-in capital with the offset recorded as deferred financing charges. Deferred financing charges are classified as an other asset and are amortized over the term of the credit facility through a charge to interest expense. On July 31, 2006, Laurus exercised the warrant through a cashless exercise procedure as defined in the warrant. Laurus received 366,666 shares of GSE common stock.

The Company believes it is positioned to take advantage of emerging trends in the power industry including a global nuclear power renaissance driven by the high cost of oil coupled with environmental concerns caused by fossil fuels. In the U.S. alone, most operating units have applied for license extensions and/or power upgrades. These license extensions and power upgrades lead to significant upgrades to the physical equipment and control room technology. Both will result in the need to modify or replace the existing plant control room simulators. In addition, eleven utility companies in the United States have already submitted, or plan to submit shortly, construction and operating license applications to the Nuclear Regulatory Commission for the construction of 31 new nuclear plants. Each of these plants will be required to have a full scope simulator ready for operator training and certification about two years prior to plant operation. Similar nuclear plant construction programs are underway or planned in China, Russia, Ukraine, Japan and Central Europe to meet growing energy demands. Globally, industry sources indicate that over 180 new nuclear power plants are in the planning, pre-construction or construction phase. The Company, having what it believes is the largest installed base of existing simulators, over 65% on a global basis, is well positioned to capture a large portion of this business, although no assurance can be given that it will be successful in doing so.

In 2005, the Company completed an agreement with Westinghouse Electric Company LLC to become their preferred vendor for the development of simulators for the AP1000 reactor design. As a result of this agreement, GSE is working closely with Westinghouse to finalize the verification and validation of the AP1000 Reactor Human-Machine Interface for the Main Control Room, and the Company's simulation models have been used to help Westinghouse successfully complete several phases of Human-Machine Interface testing with US regulators. In turn, Westinghouse and GSE will collaborate on new opportunities both internationally and domestically. Westinghouse announced on March 1, 2007 that it had successfully negotiated a framework agreement to provide four AP 1000 Nuclear Power Plants in the People's Republic of China. China's State Nuclear Power Technology Company (SNPTC) selected Westinghouse's AP1000 passive Generation III technology as the basis for the Sanmen and Haiyang plants. The framework agreement confirmed the basic requirements and obligations of all involved parties, early engineering activities and early funding for long-lead materials including early stage work on the two planned simulators. GSE received a small contract from Westinghouse to begin work on the simulators. The Westinghouse agreement does not prevent the Company from working with other nuclear vendors anywhere in the world.

In 2005, the Company was awarded a \$1.3 million contract to develop simulation models for the novel Pebble Bed Modular Reactor System (PBMR) being developed by a South African company. The PBMR is a new high temperature gas cooled reactor that is inherently safe and reliable. Each reactor is designed to produce 165 MW, enough to provide energy for 40,000 hours. The system is designed such that additional reactors can easily be added as energy demand increases. The PBMR is ideally suited for areas with current modest energy needs that are expected to grow. In July, 2006, the Company successfully completed the Site Acceptance Testing for recently delivered simulation models for the PBMR. GSE believes it is in an excellent position to provide the simulators that will be required with each PBMR installation, although there is no guarantee the Company will be awarded additional contracts.

Throughout the year, the Company continued its focus on the fossil power segment of the power industry. In 2006, the Company logged fossil power orders of over \$5.3 million. 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.

While GSE simulators are primarily utilized for power plant operator certification and training, the uses are expanding to include control system design, 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 finalize control system displays and control system layout. This helps to ensure on-time plant start-up. After commissioning, the same tools can be used to increase plant availability and optimize plant performance for the life of the facility.

Over the course of 2006, the Company has continued to develop its concept of integrating simulation with broader training programs and educational initiatives giving customers a turnkey alternative to operator and maintenance training. The Company believes that this offering is unique. In late 2005, the Company announced the formation of the Emirates Simulation Academy, LLC (ESA), a United Arab Emirates company, to build and operate simulation training academies in the Arab Gulf Region. GSE is a 10% owner of ESA. These simulation training centers will be designed to train and certify indigenous workers for deployment to a nation's critical infrastructure facilities including power plants, oil refineries, petro-chemical plants, desalination units and other industrial facilities. In January 2006, the Company announced the award of a contract valued at over \$15 million from ESA to supply five simulators and an integrated training program. Similar simulation training center opportunities are in development in a number of regions around the world.

## **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.

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.

In October 2002, GSE purchased the stock of ManTech Automation Systems (Beijing) Company Ltd, from ManTech International Corp. The Chinese company, which has ten 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. (“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.

## **Simulation Business.**

### **Power Simulation.**

#### *Industry History*

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 and 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.

Beyond traditional operator training uses, the Company sees a significant shift in the use of its simulators to test plant automation systems before they are deployed in the actual plant. Control strategies and equipment set points are validated on the simulator prior to plant start up to ensure the control schemes work properly and the expected plant performance is achieved. Performing these tests on a high fidelity simulator saves days or weeks in the plant start up, thereby reducing cost and ensuring quicker revenue generation by the utility.

#### *Industry Future*

The Company sees a renaissance in nuclear power generation both domestically and internationally that will provide significant opportunities for expansion of the Company's business. China has announced plans to build 40 new nuclear plants by the year 2020. Russia has also announced plans for 40 new plants by 2030. New plants are on the drawing board or under construction in Finland, Slovakia, and Bulgaria. Domestically, numerous utilities are preparing applications for Construction and Operating Licenses under the Department of Energy 2010 incentive program, a joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop advanced nuclear plant technologies, and demonstrate new regulatory processes leading to a private sector decision to order new nuclear power plants for deployment in the United States in the 2010 timeframe. Beyond new construction, numerous U.S. utilities are extending the useful life of their current assets.

These license extension processes in the nuclear industry will result in significant changes in plant equipment and control room technology. Based upon U.S. 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.

The second phenomena affecting the industry is the aging of the nuclear and fossil plant operator workforce which will result in the need for simulation to train the next generation of plant operators. The industry is faced with an aging workforce at the same time new capacity is needed, thereby placing significant pressure on the industry to find and train the next generation of operations and maintenance personnel. According to the Energy Central Research and Analysis Division white paper entitled *The High Cost of Losing Intellectual Capital*, the U.S. Bureau of Labor Statistics predicts that 30% or more of the existing workforce will be eligible for retirement in the next five years, and it is believed that by 2012 there will be nearly 10,000 more utility industry jobs than workers to fill them.

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.

The Company has developed integrated training solutions which combine the power of the Company's simulation technology with training content to provide turn-key training for the power and process industries. These training centers will help industry bridge the gap between college and university level training, and real world experience through simulation. The students that graduate from GSE's training centers will be eminently more valuable to the market place.



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 and safety parameter display 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, Linux and Windows 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.

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.
  - *XtremeControl*, 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 Smart Tag technology, 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.

The 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 four fronts:

- “ Continue serving its traditional customer base.
- “ Combine its simulation capability with training content to provide totally integrated training solutions.
- “ 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 Westinghouse, General Electric and Areva. 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 25 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. GSE has received several projects in the last two years for implementing digital turbine control systems in U.S. plants.

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. This is particularly the case in China and the Gulf Region of the Middle East. In 2006, the Company received its first contract for a fully integrated training academy in the United Arab Emirates. The Emirates Simulation Academy, LLC will use five simulators developed by the Company for gas turbine plants, combined cycle power plants, oil refineries, oil platforms and desalination plants. In addition, the Company is providing the training content for both classroom and simulator training. The Company sees other opportunities for similar academies in other regions of the world.

*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.

*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. In addition to domestic resources, GSE has developed a network of trained engineers in Russia, Ukraine, Czech Republic, Bulgaria, 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.

#### *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, a significant amount of the Company's international business has come from contracts in Eastern Europe, including the republics of the former Soviet Union, and the Pacific Rim. In order to acquire and perform these contracts, the Company entered into strategic alliances with various entities including All Russian Research Institute for Nuclear Power Plant Operation (Russia); Kurchatov Institute (Russia); Risk Engineering Ltd. (Bulgaria); SAIC (US); Samsung Electronics (Korea); and Toyo Engineering Corporation (Japan). In March 2006, GSE completed a strategic alliance with the University of Strathclyde in Glasgow, UK to develop a simulation training and plant diagnostics center to serve the UK.

#### *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 L-3 Communications, MAPPS Inc. 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 2006, approximately 74% of the Company's revenue was generated from end users outside the United States. Customers include, among others, ABB Inc., American Electric Power, Bernische Kraftwerke AG (Switzerland), British Energy Generation (UK), Comission Federal De Electricidad (Mexico), Emerson Process Management, Emirates Simulation Academy, LLC (UAE), Honeywell Hi-Spec Solutions (Canada), Kapar Energy Ventures SDN BHD (Malaysia), Karnkraftsakerhet och Utbildning AB (Sweden), Battelle's Pacific Northwest

National Laboratory, Nuclear Engineering Ltd. (Japan), Pebble Bed Modular Reactor (Pty) Ltd. (South Africa), PSEG Nuclear, Inc., and Rosenergoatom Federal State Owned Enterprise (Russia).

For the year ended December 31, 2006, the Emirates Simulation Academy, LLC provided 21% of the Company's consolidated 2006 revenue (none in 2005 and 2004); Rosenergoatom Federal State Owned Enterprise provided 12% of the Company's consolidated 2006 revenue (0% and 5% in 2005 and 2004, respectively), and Battelle's Pacific Northwest National Laboratory accounted for approximately 11% of the Company's 2006 consolidated revenue (25% and 24% in 2005 and 2004, respectively). 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.

### *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. 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 and China. 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:

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

### **Process Simulation.**

#### *Industry*

Throughout the process industries there is continuing competitive pressure, reduction of technical resources, and an aging workforce 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.

### *Competition*

GSE's process simulation 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 Invensys and Honeywell who are Distributed Control System ("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 RSI. 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.

### **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 135 employees, including approximately 90 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 74% of the Company’s 2006 revenue was derived from international sales of its products and services. GSE has a multinational sales force with offices located in Beijing, China, and Nykoping, Sweden 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 eight registered U.S. trademarks: RETACT, GSE Systems, THOR, OpenSim, Smart Tutor, SimSuite Pro, ESmart and GAARDS. Some of these trademarks have also been registered in foreign countries. The Company also claims trademark rights to GLOW+, GLOGIC+, GCONTROL+, GPower+, SimSuite Power, SimExec, eXtreme I/S, RACS, PEGASUS Plant Surveillance and Diagnosis System, SIMON, BRUS, Sens Base 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 2006, 2005, and 2004 consolidated revenue by industries served:

	2006	2005	2004
Nuclear power industry	60%	83%	85%
Fossil power industry	18%	14%	10%
Training and education industry	21%	-	-
Other	1%	3%	5%
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, 2006, the Company's aggregate contract backlog totaled approximately \$18.5 million (including \$9.4 million for the ESA contract) of which approximately \$17.8 million or 96% is expected to be converted to revenue by December 31, 2007. As of December 31, 2005, the Company's aggregate contract backlog totaled approximately \$12.3 million.

### Employees.

As of December 31, 2006, the Company had 135 employees as compared to 123 employees at December 31, 2005.



## **ITEM 1A. RISK FACTORS.**

The Company believes that the following risk 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.

**The Company has limited cash resources. If the Company is unable to generate adequate cash flow from operations, it will need additional capital to fund its operations.**

Based on the Company's forecasted expenditures and cash flow, we believe we will need \$32.6 million to fund our consolidated operations for the twelve months ended December 31, 2007. All of this funding is expected to be generated through our normal operations and the utilization of our current credit facility, and we believe that we will have sufficient liquidity and working capital without additional financing. We expect to generate \$30.0 million of cash in the year ended December 31, 2007 from the Company's milestone billings backlog as of December 31, 2006, including \$12.8 million from the ESA Contract, plus the orders logged by the Company in 2007 through March 15, 2007. The balance of the Company's 2007 cash requirement is expected to be generated by future orders. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

**The Company's expense levels are based upon its expectations as to future revenue, 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 revenue was \$27.5 million, \$22.0 million, and \$29.5 million for the years ended December 31, 2006, 2005 and 2004, respectively. The Company's operating income (loss) was \$2.1 million, (\$4.7 million), and \$2,000 in 2006, 2005 and 2004, respectively. 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 revenue, 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.

### **Risk of International Sales and Operations.**

Sales of products and services to end users outside the United States accounted for approximately 74% of the Company's consolidated revenue in 2006, 63% of consolidated revenue in 2005, and 65% of consolidated revenue in 2004. 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 the United Arab Emirates (21% of the Company's consolidated revenue in 2006, but none in 2005 and 2004) and Russia (12%, 0% and 5% of the Company's consolidated revenue in 2006, 2005, and 2004, respectively) Although end users in the Ukraine accounted for 8%, 18%, and 21% of the Company's consolidated revenue in 2006, 2005, and 2004, 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.

**For the year ended December 31, 2006, three customers provided a substantial portion of the Company's consolidated revenue. There is no guarantee that the Company will be able to generate the same level of revenue from these customers in future periods, nor that the Company could replace this revenue from other customers. The loss of this revenue would cause a material adverse effect upon the Company's future revenue and results of operations.**

For the year ended December 31, 2006, the Emirates Simulation Academy, LLC (UAE) provided 21% of the Company's consolidated 2006 revenue (none in 2005 and 2004); Rosenergoatom Federal State Owned Enterprise (Russia) provided 12% of the Company's consolidated 2006 revenue (0% and 5% in 2005 and 2004, respectively), and Battelle's Pacific Northwest National Laboratory accounted for approximately 11% of the Company's 2006 consolidated revenue (25% and 24% in 2005 and 2004, respectively). The Pacific Northwest National Laboratory is the purchasing agent for the DOE and the numerous projects the Company performs in Eastern and Central Europe. The Company may not generate comparable revenue from these customers in future periods and may not be able to replace this revenue from other customers, thus materially and adversely affecting the Company's revenue and results of operations.

**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 2006, 60% of GSE's revenue was from customers in the nuclear power industry (83% in 2005 and 85% in 2004). 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 line of credit agreement with Laurus Master Fund Ltd. imposes significant operating and financial restrictions, which may prevent it from capitalizing on business opportunities.**

GSE's line of credit agreement with Laurus Master Fund Ltd. 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;
- “ 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 revenue 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 technology. The life cycles for software modeling tools, graphical user interfaces, and simulation technology 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 may 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 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.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

**None.**

**ITEM 2. PROPERTIES.**

The Company is headquartered in a facility in Baltimore, Maryland (approximately 21,000 square feet). The lease for this facility expires in 2008.

In addition, the Company leases office space domestically in Georgia and internationally in China and Sweden. The Company leases these facilities for terms ending between 2007 and 2008.

In October 2005, the Company relocated its Maryland operations from its facility in Columbia to the Baltimore facility and signed an "Assignment of Lease and Amendment to Lease" that assigned and transferred to another tenant (the "assignee") the Company's rights, title and interest in its Columbia, Maryland facility lease. The assignee's obligation to pay rent under the Lease began on February 1, 2006. The Company remains fully liable for the payment of all rent and for the performance of all obligations under the lease through the scheduled expiration of the lease, May 31, 2008, should the assignee default on their obligations.

**ITEM 3. LEGAL PROCEEDINGS.**

The Company and our subsidiaries are from time to time involved in ordinary routine litigation incidental to the conduct of our business. The Company and our subsidiaries are not a party to, and our property is not the subject of, any material pending 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.**

On November 15, 2006, the Company held its annual meeting of shareholders. At that meeting, the following matters were voted upon:

Proposal	For	Withheld	Total
1) Election of Directors for a three year term expiring in 2009:			
Scott N. Greenberg	8,953,174	543,619	9,496,793
Joseph W. Lewis	8,964,240	532,553	9,496,793
O. Lee Tawes, III	9,281,036	215,757	9,496,793

The following directors are serving terms until the annual meeting in 2007 and were not reelected at the November 15, 2006 annual meeting:

Jerome I. Feldman

John V. Moran

George J. Pedersen

The following directors are serving terms until the annual meeting in 2008 and were not reelected at the November 15, 2006 annual meeting:

Michael D. Feldman

Sheldon L. Glashow

Roger L. Hagenruber

Proposal	For	Against	Abstain	Total
2) Ratification of KPMG LLP as the Company's independent auditors for the 2006 fiscal year	9,273,315	57,395	166,083	9,496,793

**PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES.**

The Company's common stock is listed on the American Stock Exchange, where it trades under the symbol "GVP". 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 for each full quarterly period within the two most recent fiscal years:

<b>2006</b>		
<b>Quarter</b>	<b>High</b>	<b>Low</b>
<b>First</b>	<b>\$</b>	<b>\$</b>
	<b>1.90</b>	<b>1.30</b>
<b>Second</b>	<b>\$</b>	<b>\$</b>
	<b>4.56</b>	<b>1.70</b>
<b>Third</b>	<b>\$</b>	<b>\$</b>
	<b>4.23</b>	<b>3.22</b>
<b>Fourth</b>	<b>\$</b>	<b>\$</b>
	<b>6.99</b>	<b>3.20</b>

<b>2005</b>		
<b>Quarter</b>	<b>High</b>	<b>Low</b>
<b>First</b>	<b>\$</b>	<b>\$</b>
	<b>2.76</b>	<b>1.75</b>
<b>Second</b>	<b>\$</b>	<b>\$</b>
	<b>2.20</b>	<b>1.70</b>
<b>Third</b>	<b>\$</b>	<b>\$</b>
	<b>1.80</b>	<b>1.25</b>
<b>Fourth</b>	<b>\$</b>	<b>\$</b>
	<b>1.58</b>	<b>1.06</b>

The following table sets forth the equity compensation plan information for the year ended December 31, 2006:



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	1,892,702	\$2.48	224,186
Equity compensation plan not approved by security holders	--	\$ --	--
Total	1,892,702	\$2.48	224,186

There were approximately 74 holders of record of the common stock as of March 15, 2007. 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. At the date of the conversion, the Company's credit facility restricted the Company from paying any dividends on the preferred stock. At December 31, 2006, the Company had accrued dividends payable to ManTech of \$316,000. The unpaid dividends accrue interest at 6% per annum. At December 31, 2006 the Company had an accrual for interest payable of \$80,000.

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.

On February 28, 2006, the Company raised \$4.25 million through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to “accredited investors”, as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stockholders were entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid total dividends of \$279,000. At any time after March 1, 2007, the Company had the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeded 200% of the Series A Conversion Price. Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006, and 13,920 shares of Preferred Stock in 2007. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock will convert to 1,129,946 shares of GSE common stock.

The following graph compares the Company’s cumulative total shareholder return since January 1, 2001 through December 31, 2006 with that of the American Stock Exchange- US & Foreign Index and a peer group index. The Peer Group consists of companies selected on a line-of-business basis and includes Aspen Technology, Inc., GenSym Corporation and Honeywell International. The graph assumes an initial investment of \$100 on January 1, 2001 in our common stock and each index and that all dividends were reinvested. The Company has never paid a dividend on its common stock. The indices are re-weighted daily, using the market capitalization on the previous tracking day. The comparisons shown in the graph below are based upon historical data. The stock price performance shown in the graph below is not necessarily indicative of, or intended to forecast, the potential future performance of the Company’s common stock. The graph was prepared for the Company by Ipreo, LLC.

		<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	
	GSE SYSTEMS, INC.	100.00	33.87	58.06	87.10	40.00	214.55	
	PEER GROUP INDEX	100.00	71.66	103.38	111.37	119.82	148.86	
	AMEX MARKET INDEX	100.00	96.01	130.68	149.65	165.03	184.77	

#### Sales of Unregistered Securities

Except as described in Item 5 above, the Company has not made any sales of unregistered securities during the past three years.

#### **ITEM 6. SELECTED CONSOLIDATED 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.

Edgar Filing: GSE SYSTEMS INC - Form 10-K

(in thousands, except per share data)

Years ended December 31,

	2006	2005	2004	2003	2002
<b>Statements of Operations:</b>					
Contract revenue	\$ 27,502	\$ 21,950	\$ 29,514	\$ 25,019	\$ 20,220
Cost of revenue	19,602	18,603	22,715	19,175	16,660
Gross profit	7,900	3,347	6,799	5,844	3,560
<b>Operating expenses:</b>					
Selling, general and administrative	4,929	6,958	5,543	6,343	6,506
Administrative charges from GP					
Strategies	685	685	974	100	-
Depreciation and amortization	186	431	280	392	395
Total operating expenses	5,800	8,074	6,797	6,835	6,901
Operating income (loss)	2,100	(4,727)	2	(991)	(3,341)
Interest expense, net	(764)	(416)	(176)	(504)	(55)
Loss on extinguishment of debt	(1,428)	-	-	-	-
Other income (expense), net	(105)	497	316	(273)	37
<b>Income (loss) from continuing operations</b>					
before income taxes	(197)	(4,646)	142	(1,768)	(3,359)
Provision (benefit) for income taxes	149	149	60	93	891
Income (loss) from continuing operations	(346)	(4,795)	82	(1,861)	(4,250)
<b>Loss from discontinued operations, net of income taxes</b>					
Income (loss) on sale of discontinued operations, net of income taxes	-	-	-	(1,409)	(1,693)
<b>Income (loss) from discontinued operations</b>					
Net income (loss)	\$ (346)	\$ (4,795)	\$ 118	\$ (3,532)	\$ (5,943)
<b>Basic income (loss) per common share (1) (2):</b>					
Continuing operations	\$ (0.07)	\$ (0.53)	\$ 0.01	\$ (0.61)	\$ (0.76)
Discontinued operations	-	-	-	(0.26)	(0.29)
Net income (loss)	\$ (0.07)	\$ (0.53)	\$ 0.01	\$ (0.87)	\$ (1.05)
<b>Diluted income (loss) per common share (1) (2):</b>					
Continuing operations	\$ (0.07)	\$ (0.53)	\$ 0.01	\$ (0.61)	\$ (0.76)
Discontinued operations	-	-	-	(0.26)	(0.29)
Net income (loss)	\$ (0.07)	\$ (0.53)	\$ 0.01	\$ (0.87)	\$ (1.05)

Weighted average common shares outstanding:

-Basic	9,539	8,999	8,950	6,542	5,863
-Diluted	9,539	8,999	9,055	6,542	5,863

As of December 31,

	2006	2005	2004	2003	2002
<b>Balance Sheet data:</b>					
Working capital (deficit)	\$ 1,463	\$ (925)	\$ 2,175	\$ 2,130	\$ 5,450

Edgar Filing: GSE SYSTEMS INC - Form 10-K

Total assets	18,448	11,982	14,228	16,536	28,894
Long-term liabilities	251	1,567	19	34	9,031
Stockholders' equity	7,361	897	5,945	5,679	8,111

29

---

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

On June 21, 2005, the Board of Directors of GP Strategies Corporation ("GP Strategies") approved plans to spin-off its 57% interest in GSE through a special dividend to the GP Strategies' stockholders. On September 30, 2005, the GP Strategies' stockholders received 0.283075 share of GSE common stock for each share of GP Strategies common stock or Class B stock held on the record date of September 19, 2005. Following the spin-off, GP Strategies ceased to have any ownership interest in GSE. GP Strategies continued to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax pursuant to a Management Services Agreement which expired on December 31, 2006.

In order to ensure that the Company had sufficient working capital in 2006, the Company completed several financing transactions in early 2006. On February 28, 2006, the Company and Dolphin entered into a Cancellation and Warrant Exchange Agreement (the "Cancellation Agreement") under which Dolphin agreed to cancel its Senior Subordinated Secured Convertible Promissory Note and cancel its outstanding warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. In exchange for Dolphin's agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction discussed below, the Company repaid the Dolphin Note and agreed to issue a new warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share (the "Dolphin Warrant"). At the date of issuance, the fair value of the Dolphin Warrant was \$868,000, as established using the Black-Scholes Model, and was recorded in paid-in capital with the offset recorded as loss on extinguishment of debt. In accordance with the terms of the warrant agreement, Dolphin exercised the Dolphin Warrant on November 8, 2006 upon the Company's certification that, among other things, the underlying shares of GSE common stock were registered with the Securities and Exchange Commission on October 31, 2006, that the current stock price was greater than \$1.25 per share, and that the average of the current stock prices for each trading day of the prior 30 calendar day period was not less than \$1.25 per share. The Company received cash proceeds of \$603,000.

In conjunction with the early payoff of the Dolphin Note and the cancellation of the 380,952 warrants, the Company wrote off the remaining unamortized Original Issue Discount of \$1.1 million, wrote off the remaining unamortized deferred financing charges of \$185,000, recognized a credit of \$698,000 from the write-off of the liabilities related to the Dolphin Note conversion feature and the related warrants, and took an \$868,000 charge for the value of the 900,000 new warrants issued to Dolphin. The total loss on extinguishment of the Dolphin Note and the cancellation of the related warrants totaled \$1.4 million.

On February 28, 2006, the Company raised \$3.9 million, net of associated fees of \$395,000, through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to “accredited investors”, as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stock was convertible at any time into a total of 2,401,133 shares of GSE common stock at a conversion price of \$1.77 per share. The conversion price was equal to 110% of the closing price of the Company’s Common Stock on February 28, 2006, the date the sale of the Convertible Preferred Stock was completed. Each investor received a five-year warrant to purchase GSE common stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of \$1.77 per share. In aggregate, the Company issued warrants to purchase a total of 480,226 shares of GSE common stock. The Convertible Preferred Stockholders are entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid dividends totaling \$279,000 to the preferred stockholders. At the date of issuance, the fair value of the warrants was \$342,000 and the fair value of the preferred stock was \$3.9 million. The fair value of the warrants and the preferred stock was determined by the use of the relative fair value method, in which the \$4.25 million gross proceeds was allocated based upon the fair values of the warrants, as determined by using the Black-Scholes Model, and the preferred stock, as determined by an independent appraisal. At any time after March 1, 2007, the Company had the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeds 200% of the Series A Conversion Price. Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006, and 13,920 shares of Preferred Stock in 2007. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock will convert to 1,129,946 shares of GSE common stock. The holders of the Convertible Preferred Stock were entitled to vote on all matters submitted to the stockholders for a vote, together with the holders of the voting common stock, all voting together as a single class. The holders of the Convertible Preferred Stock were entitled to the number of votes equal to the number of GSE common stock that they would receive upon conversion of their Convertible Preferred Stock.

The Company paid the placement agent for the Convertible Preferred Stock and Warrants 6% of the gross proceeds received by the Company from the offering (\$255,000) plus five-year warrants to purchase 150,000 shares of the Company’s common stock at an exercise price of \$1.77 per share. In addition to the placement agent fee, the Company paid \$140,000 of other transaction fees related to the offering. At the date of issuance, the fair value of the placement agent warrants was \$128,000, as established using the Black-Scholes Model, and was recorded in paid-in capital, with the offset recognized as a reduction of the preferred stock proceeds.

The proceeds were used to payoff the Dolphin Note and the Company’s line of credit balance and for other working capital purposes.

On March 7, 2006, the Company entered into a new loan and security agreement with Laurus Master Fund, Ltd and terminated its existing \$1.5 million bank line of credit. The new agreement established a \$5.0 million line of credit for the Company. The line is collateralized by substantially all of the Company’s assets and provides for borrowings up to 90% of eligible accounts receivable and 40% of eligible unbilled receivables (up to a maximum of \$1.0 million). The interest rate on this line of credit is based on the prime rate plus 200-basis points (10.25% as of December 31, 2006), with interest only payments due monthly. There are no financial covenant requirements under the new agreement and the credit facility expires on March 6, 2008. On May 18, 2006, Laurus Master Fund agreed to temporarily increase the Company’s borrowing capability by \$2.0 million over and above the funds that were available to the Company based upon its normal borrowing base calculation. The over advance was used to collateralize a \$2.1 million performance bond that the Company issued to the Emirates Simulation Academy, LLC in the form of a standby letter of credit. One half of the increased borrowing capability expired on July 18, 2006, and the balance expires on April 13, 2007. The Company’s borrowings over and above the normal borrowing base calculation bear additional interest of 1.5% per

month over and above the normal interest rate on the line of credit. At December 31, 2006, the Company's available borrowing base was \$4.2 million of which \$2.2 million had been utilized. The Company issued to Laurus Master Fund, Ltd a warrant to purchase up to 367,647 shares of GSE common stock at an exercise price of \$.01 per share. At the date of issuance, the fair value of the Laurus warrant, which was established using the Black-Scholes Model, was \$603,000 and was recorded as paid-in capital with the offset recorded as deferred financing charges. Deferred financing charges are classified as an other asset and are amortized over the term of the credit facility through a charge to interest expense. On July 31, 2006, Laurus exercised the warrant through a cashless exercise procedure as defined in the warrant. Laurus received 366,666 shares of GSE common stock.



Based on the Company's forecasted expenditures and cash flow, we believe we will need \$32.6 million to fund our operations for the twelve months ended December 31, 2007. All of this funding is expected to be generated through our normal operations and the utilization of our current credit facility, and we believe that we will have sufficient liquidity and working capital without additional financing. We expect to generate \$30.0 million of cash in the year ended December 31, 2007 from the Company's milestone billings backlog as of December 31, 2006, including \$12.8 million from the ESA Contract, plus the orders logged by the Company in 2007 through March 15, 2007. The balance of the Company's 2007 cash requirement is expected to be generated by future orders. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

### **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 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 revenue and earnings as work progresses on the contract and is based on an estimate of the revenue and earnings earned to date, less amounts recognized in prior 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. The Company recognizes revenue arising from contract claims either as income or as an offset against a potential loss only when the amount of the claim can be estimated reliably and realization is probable and there is a legal basis of the claim.

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.

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*.

Revenue from the sale of software licenses which do not require significant modifications or customization for the Company's modeling tools are recognized when the license agreement is signed, the license fee is fixed and determinable, delivery has occurred, and collection is considered probable.

Revenue for contracts with multiple elements are recognized in accordance with Emerging Issues Task Force issue 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*.

Revenues from certain consulting or training contracts is 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.

*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 amortizes the costs, on a straight line method, over the estimated useful life of the product, which normally ranges from three to five years. As of December 31, 2006, the Company has net capitalized software development costs of \$820,000. On an annual basis, and more frequently as conditions indicate, 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 operations. Significant changes in the sales projections could result in 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 regular 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 asset to its realizable value. As of December 31, 2006, the Company's largest deferred tax asset related to a U.S. net operating loss carryforward of \$19.3 million which expires in various amounts over the next nineteen years. The amount of loss carryforward which can be used by the Company may be significantly limited due to changes in the Company's ownership which have occurred subsequent to the spin-off of GSE by GP Strategies, including equity transactions that occurred in 2006. Thus, a portion of the Company's loss carryforward may expire unutilized. We believe that the Company will achieve profitable operations in future years that will enable the Company to recover

the benefit of its net deferred tax assets. However, the Company presently does not have sufficient objective evidence to support management's belief, and accordingly, the Company has established a \$10.2 million valuation allowance for its net deferred tax assets.

**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 contract revenue.

<i>(in thousands)</i>	<b>Years ended December 31,</b>					
	<b>2006</b>	<b>%</b>	<b>2005</b>	<b>%</b>	<b>2004</b>	<b>%</b>
Contract revenue	\$ 27,502	100.0%	\$ 21,950	100.0%	\$ 29,514	100.0%
Cost of revenue	19,602	71.3%	18,603	84.7%	22,715	76.9%
Gross profit	7,900	28.7%	3,347	15.3%	6,799	23.1%
Operating expenses:						
Selling, general and administrative	4,929	17.9%	6,958	31.7%	5,543	18.8%
Administrative charges from GP Strategies	685	2.5%	685	3.1%	974	3.3%
Depreciation and amortization	186	0.7%	431	2.0%	280	1.0%
Total operating expenses	5,800	21.1%	8,074	36.8%	6,797	23.1%
Operating income (loss)	2,100	7.6%	(4,727)	(21.5)%	2	0.0%
Interest expense, net	(764)	(2.8)%	(416)	(1.9)%	(176)	(0.6)%
Loss on extinguishment of debt	(1,428)	(5.2)%	-	0.0%	-	0.0%
Other income (expense), net	(105)	(0.4)%	497	2.3%	316	1.1%
Income (loss) from continuing operations before income taxes	(197)	(0.7)%	(4,646)	(21.1)%	142	0.5%
Provision for income taxes	149	0.5%	149	0.7%	60	0.2%
Income (loss) from continuing operations	(346)	(1.3)%	(4,795)	(21.8)%	82	0.3%
Income on sale of discontinued operations, net of income taxes	-	0.0%	-	0.0%	36	0.1%
Income from discontinued operations	-	0.0%	-	0.0%	36	0.1%
Net income (loss)	\$ (346)	(1.3)%	\$ (4,795)	(21.8)%	\$ 118	0.4%

**Comparison of the Years Ended December 31, 2006 to December 31, 2005.**

*Contract Revenue.* Revenue for the year ended December 31, 2006 was \$27.5 million versus \$22.0 million for the year ended December 31, 2005, a 25.0% increase. The increase reflects an increase in orders and higher volume in

2006. Total orders logged in 2006 totaled \$33.5 million (including a \$15.1 million contract received from ESA) as compared to \$15.3 million in 2005. For the twelve months ended December 31, 2006, the Company recognized \$5.7 million of contract revenue on the ESA project, which accounted for 20.7% of the Company's consolidated revenue. The Company settled an outstanding claim with a customer for work performed through December 31, 2005 of approximately \$265,000, of which \$120,000 was recognized as revenue in 2005 and the balance was recognized as revenue in 2006. License revenue totaled \$1.2 million for the twelve months ended December 31, 2006 versus only \$472,000 in 2005. At December 31, 2006, the Company's backlog was \$18.5 million.

*Gross Profit.* Gross profit increased from \$3.3 million (15.3% of revenue) for the year ended December 31, 2005 to \$7.9 million (28.7% of revenue) for the year ended December 31, 2006. 2006 gross margin was favorably impacted by the ESA contract, the increase in license revenue and the settlement of the outstanding claim discussed above. In 2005, the Company had made certain adjustments to the estimated costs to complete several of its long-term contracts which resulted in a net reduction of the contract-to-date gross profit recognized on the contracts of approximately \$895,000 or 4% of revenue.

*Selling, General and Administrative Expenses.* Selling, general and administrative (“SG&A”) expenses totaled \$5.0 million in the year ended December 31, 2006, a 27.9% decrease from the \$7.0 million for 2005. The reduction reflects the following spending variances:

- “ Business development and marketing costs decreased from \$3.0 million for the year ended December 31, 2005 to \$2.1 million in 2006. In order to reduce operating expenses, the Company terminated several of its business development personnel in mid-2005 and reassigned others to operating positions.
- “ The Company’s general and administrative expenses totaled \$2.4 million in the year ended December 31, 2006, which was 16.2% lower than the \$2.9 million incurred in 2005. The reduction reflects lower facility costs in 2006 due to the restructuring of the Company’s leased facilities in late 2005 (the assignment of the Columbia, Maryland facility and the move of the Company’s headquarters to the Baltimore, Maryland facility) plus the reassignment of one executive from corporate to an operating position.
- “ Gross spending on software product development (“development”) totaled \$871,000 for the twelve months ended December 31, 2006 versus \$758,000 in the same period of 2005. For the year ended December 31, 2006, the Company expensed \$538,000 and capitalized \$333,000 of its development spending while in the year ended December 31, 2005, the Company expensed \$275,000 and capitalized \$483,000 of its development spending. The Company’s capitalized development expenditures in 2006 were related to the development of new features for the Xflow modeling tool for modeling power plant buildings and the development of new features for the THEATRe thermo-hydraulic and REMARK core models. The Company anticipates that its total gross development spending in 2007 will approximate \$800,000.
- “ In 2005, the Company implemented staff reductions; 2005 SG&A expense reflected \$301,000 of accrued severance.
- “ The Company increased its reserve for bad debts by \$496,000 for the twelve months ended December 31, 2005.

*Administrative Charges from GP Strategies.* The Company extended its Management Services Agreement with GP Strategies Corporation through December 31, 2006. Under the agreement, GP Strategies provided corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax. In addition, GSE used the financial system of General Physics, a subsidiary of GP Strategies. The Company was charged \$685,000 in both the twelve months ended December 31, 2006 and 2005. The Company terminated the agreement on December 31, 2006.

*Depreciation and Amortization.* For the years ended December 31, 2006 and 2005, depreciation expense totaled \$186,000 and \$431,000, respectively. Due to the relocation of the Company's Maryland operations from Columbia, Maryland to Baltimore, Maryland, the Company accelerated the depreciation of certain leasehold improvements in 2005 which has resulted in lower depreciation expense in 2006.

*Operating Income (Loss).* The Company had an operating income of \$2.0 million (7.3% of revenue) for the year ended December 31, 2006, as compared with an operating loss of \$4.7 million (21.5% of revenue) for the prior year. The variances were due to the factors outlined above.

*Interest Expense, Net.* Net interest expense increased from \$416,000 in the year ended December 31, 2005 to \$764,000 for the year ended December 31, 2006.

The Company incurred interest expense of \$264,000 and \$57,000 on borrowings against its credit facilities in the twelve months ended December 31, 2006 and 2005, respectively.

Amortization of deferred financing costs related to the Company's lines of credit totaled \$200,000 in 2006 versus only \$37,000 in 2005. The increase reflects the replacement of the Wachovia Bank credit facility with one from Laurus Master Fund, Ltd in early 2006.

Amortization of the cost of the warrants issued to Laurus in conjunction with the new credit facility totaled \$251,000 in 2006.

The Company incurred interest expense of \$26,000 and \$96,000 on the Dolphin Note in 2006 and 2005, respectively. Also included in interest expense was original issue discount accretion related to the Dolphin Note and GSE Warrant of \$58,000 and \$203,000, in the twelve months ended December 31, 2006 and 2005, respectively.

Interest accrued on the preferred dividends payable to ManTech was \$20,000 for the year ended December 31, 2006 and \$21,000 for the same period of 2005. Other interest expense totaled \$11,000 in both years.

The Company earned interest income of \$66,000 in the twelve months ended December 31, 2006 versus only \$9,000 in the twelve months ended December 31, 2005. The increase reflects the increase in cash deposited into certificates of deposit as collateral for performance bonds. This cash is classified on the balance sheet as restricted cash.

*Loss on Extinguishment of Debt.* On February 28, 2006, the Company and Dolphin entered into a Cancellation and Warrant Exchange Agreement (the "Cancellation Agreement") under which Dolphin agreed to cancel its Senior Subordinated Secured Convertible Promissory Note and cancel its outstanding warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. In exchange for Dolphin's agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction, the Company repaid the Dolphin Note and agreed to issue a new warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share.

In conjunction with the early payoff of the Dolphin Note and the cancellation of the 380,952 warrants, the Company wrote off the remaining unamortized Original Issue Discount of \$1.1 million, wrote off the remaining unamortized deferred financing charges of \$185,000, recognized a credit of \$698,000 from the write-off of the liabilities related to the Dolphin Note conversion feature and the related warrants, and took an \$868,000 charge for the value of the 900,000 new warrants issued to Dolphin.

*Other Income (Expense), Net.* Other Income (Expense), net was (\$105,000) in 2006 versus \$497,000 in 2005.

At December 31, 2006, the Company had contracts for sale of approximately 142 million Japanese Yen at fixed rates. The contracts expire on various dates through August 2007. The Company has not designated the contracts as hedges and has recorded the estimated change in the fair value of the contracts of (\$24,000) in other income (expense). The estimated fair value of the contracts was \$12,000 at December 31, 2006 and is recorded on the balance sheet under other current assets.

At December 31, 2005, the Company had contracts for the sale of approximately 247 million Japanese Yen at fixed rates. The Company had not designated the contracts as hedges and has recorded the change in the estimated fair value of the contracts during 2005 of (\$170,000) in other income (expense), net. The estimated fair value of the contracts was \$31,000 as of December 31, 2005. \$20,000 of the fair value is recorded on the balance sheet under other current assets, and the balance is classified under other assets.

The Company accounts for its investment in ESA using the equity method. In accordance with the equity method, the Company has eliminated 10% of the profit from this contract as the training simulators are assets that will be recorded on the books of ESA, and the Company is thus required to eliminate its proportionate share of the profit included in the asset value. The profit elimination totaled \$251,000 for the year ended December 31, 2006, respectively, and has been recorded as an other expense in the income statement and as an other liability on the balance sheet. Once ESA begins to amortize the training simulators on their books, GSE will begin to amortize the other liability to other income.

The Company incurred foreign currency transaction gains of \$128,000 in the twelve months ended December 31, 2006 versus currency transaction losses of \$35,000 in 2005.

In conjunction with the Dolphin Note and GSE Warrants, the fair value of the GSE Warrant was \$375,000 and the fair value of the Conversion Option of the Dolphin Note was \$959,000. The GSE Warrant and Conversion Option liabilities were marked to market through earnings on a quarterly basis in accordance with EITF No. 00-19, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in a Company's Common Stock*. In 2005, the Company recognized a gain of \$636,000 from the change in fair market value of these liabilities as of December 31, 2005.

*Provision for Income Taxes.* The Company's tax provision in 2006 was \$149,000 and consisted of foreign income taxes of \$17,000 and state income taxes of \$29,000 and federal income taxes of \$103,000. The Company has a full valuation allowance on its deferred tax assets.

In 2005, the Company's tax provision was \$149,000 and consisted of foreign income taxes of \$103,000, deferred income taxes of \$50,000 and state income taxes of (\$4,000).



Comparison of the Year Ended December 31, 2005 to December 31, 2004

*Contract Revenue.* Contract revenue decreased 25.6% from \$29.5 million in 2004 to \$22.0 million in 2005 primarily as a result of a decline in orders and lower volumes. In addition, the Company had an outstanding claim with a customer for work performed through December 31, 2005 of approximately \$265,000, for which \$120,000 was recognized in 2005. Total orders logged in 2005 totaled \$15.3 million as compared to \$18.9 million in 2004.

*Gross Profit.* Gross profit totaled \$3.3 million (15.3% of revenue) for the year ended December 31, 2005 as compared with \$6.8 million (23.1% of revenue) for the year ended December 31, 2004. The decline in gross profit was directly related to a decrease in contract revenue and certain adjustments made by the Company during 2005 to the estimated costs to complete several of its long-term contracts, which resulted in a net reduction of the contract-to-date gross profit recognized of approximately \$895,000 or 4% of revenue.

*Selling, General and Administrative Expenses.* Selling, general and administrative (“SG&A”) expenses for the year ended December 31, 2005 increased 25.5% from the prior year; from \$5.5 million in 2004 to \$7.0 million in 2005. Business development costs increased from \$2.8 million for the year ended December 31, 2004 to \$3.0 million in 2005, an 8.0% increase. The Company expanded its business development organization throughout 2004 into the first quarter of 2005, adding an additional five employees between the first quarter 2004 and the first quarter 2005. In addition, the Company incurred higher bidding and proposal costs in the pursuit of new orders. In order to reduce operating expenses, the Company terminated several of its business development personnel in mid-2005 and reassigned others to operating positions. The Company’s corporate and G&A expenses increased 43.4% in 2005, from \$2.5 million in 2004 to \$3.7 million in 2005. The increase reflects severance costs of \$301,000 in 2005, bad debt expense of \$496,000, and the salary and benefit costs of the Company’s CEO who became a GSE employee in December 2004. Prior to December 2004, the Company was charged for the CEO’s services by GP Strategies and his costs were classified as GP Strategies administration fees.

Software and other development expenditures were \$758,000 in 2005 and \$552,000 in 2004 of which \$275,000 and \$191,000 was expensed in 2005 and 2004, respectively. The Company capitalized \$483,000 of software development costs in 2005 as compared to \$361,000 in 2004. The Company’s capitalized costs in 2005 were related to:

- “ Enhancements to JADE (Java Applications & Development Environment), a Java-based application that provides a window into the simulation station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run scenarios from anywhere they have access to the web. JADE 3.0 was released in April 2005.
- “ The continued development of the Company’s REMITS product used to simulate the operation of Emergency Operations Centers (EOC) run by municipal and state governments.
- “ The development of generic simulation models representing the Westinghouse Electric Company LLC AP1000 nuclear plant design.
  - “ The development of new features for the Xflow modeling tool for modeling power plant buildings.

*Administrative Charges from GP Strategies.* 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. Expense for these services was \$685,000 in both 2005 and 2004. On September 30, 2005, GP Strategies spun-off its 57% interest in GSE through a special dividend to the GP Strategies’ stockholders. Despite the spin-off, the Management Services Agreement was extended through December 31, 2006 without an increase. In 2004, the Company was also charged \$298,000 for salary and benefits of its CEO who was a GP Strategies employee until December 16, 2004.

*Depreciation and Amortization.* Depreciation expense totaled \$431,000 and \$280,000 for 2005 and 2004, respectively. Due to the relocation of the Company's Maryland operations from Columbia, Maryland to Baltimore, Maryland, the Company accelerated the depreciation of certain leasehold improvements in 2005.

*Operating Income (Loss).* The Company had an operating loss of \$4.7 million (21.5% of revenue) in 2005 as compared with operating income of \$2,000 in 2004. The 2005 operating loss was due to the factors outlined above.

*Interest Expense, Net.* Net interest expense increased from \$176,000 in 2004 to \$416,000 in 2005. The Company incurred interest expense of \$96,000 on the Dolphin Note in 2005. Also included in 2005 interest expense was original issue discount accretion related to the Dolphin Note and GSE Warrant of \$203,000.

The Company incurred interest expense of \$58,000 on borrowings against its \$1.5 million credit facility. In 2004, the Company had no borrowings against the credit facility.

Amortization of deferred financing costs totaled \$37,000 in 2005 and \$111,000 in 2004.

*Other Income (Expense), Net.* Other income (expense), net was \$497,000 and \$316,000 in 2005 and 2004, respectively.

In conjunction with the Dolphin Note and GSE Warrants, the fair value of the GSE Warrant was \$375,000 and the fair value of the Conversion Option of the Dolphin Note was \$959,000. The GSE Warrant and Conversion Option liabilities are marked to market through earnings on a quarterly basis in accordance with EITF No. 00-19, Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in a Company's Common Stock. In 2005, the Company recognized a gain of \$636,000 from the change in fair market value of these liabilities as of December 31, 2005.

At December 31, 2005, the Company had contracts for the sale of approximately 247 million Japanese Yen at fixed rates. The contracts expire on various dates through May 2007. The Company had not designated the contracts as hedges and recorded the change in the estimated fair value of the contracts during 2005 of (\$170,000) in other income (expense), net. The estimated fair value of the contracts was \$31,000 as of December 31, 2005.

At December 31, 2004, the Company had contracts for the sale of approximately 435 million Japanese Yen at fixed rates. The Company had not designated the contracts as hedges and recorded the change in the estimated fair value of the contracts of \$203,000 in other income (expense).

*Provision for Income Taxes.* In 2005, the Company's tax provision was \$149,000 and consisted of foreign taxes of \$103,000, deferred taxes of \$50,000 and state taxes of (\$4,000). The Company had a full valuation allowance on its net deferred tax assets.

The Company's tax provision in 2004 was \$90,000; \$60,000 related to continuing operations and \$30,000 related to discontinued operations. The provision consisted of state income taxes of \$18,000, U.S. alternative minimum tax of \$1,000, foreign income taxes of \$121,000 and deferred income taxes of (\$50,000).

*Income on Sale of Discontinued Operations.* Income from discontinued operations was \$36,000 in 2004 related to the Company's Process Simulation business sold in 2003.

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

As of December 31, 2006, GSE had cash and cash equivalents of \$1.1 million versus \$1.3 million at December 31, 2005.

*Cash from operating activities.* Net cash used in operating activities was \$832,000 for the year ended December 31, 2006. The loss on early extinguishment of debt of \$1.4 million was a non-cash expense that had no impact on the Company's operating cash flow. Significant changes in the Company's assets and liabilities in 2006 included:

- .. A \$3.8 million increase in contracts receivable. An invoice for \$1.7 million was issued to ESA in August 2006 and was still outstanding at December 31, 2006. In March 2007, ESA established a line of credit with a bank. Payment will be made to GSE as soon as all required documents have been received by the bank. No bad debt reserve has been established for the outstanding ESA receivable at December 31, 2006. In addition, the Company had an unbilled receivable of \$1.9 million for the ESA contract at December 31, 2006.
- .. A \$690,000 increase in billings in excess of revenues earned. The increase is related to the timing of milestone billings on several projects.
- .. A \$536,000 decrease in the amount due to GP Strategies Corporation. The reduction reflects the utilization of a portion of the funds received through the Company's convertible preferred stock transaction to pay down the balance due to GP Strategies. The Company paid off the balance due to GP Strategies prior to the termination of the Management Services Agreement on December 31, 2006.

For the year ended December 31, 2005, net cash used in operating activities was \$1.9 million compared with \$393,000 in 2004. The increase of \$1.5 million was primarily attributed to the change in net loss of \$4.8 million offset by significant changes in the Company's assets and liabilities, which in 2005 included:

- .. A \$1.8 decrease in contracts receivable. The decrease reflected the combination of (a) a decrease in outstanding trade receivables of \$1.0 million due to the lower project activity in 2005, (b) a decrease in unbilled receivables of \$560,000 due to the timing of contract invoicing milestones, and (c) an increase in the bad debt reserve of \$220,000.
- .. An \$810 decrease in prepaid expenses and other assets. The decrease mainly reflected the following items: (a) the amortization of fees incurred in 2004 related to the issuance of project advance payment and performance bonds, (b) the reduction of an advance payment to a subcontractor in 2004 as the subcontractor performed the related work, and (c) the reduction in the fair value of the Company's hedging contracts.

For the year ended December 31, 2004, net cash used in operating activities was \$393,000; \$357,000 was used by continuing operations and \$36,000 was used by discontinued operations. Significant changes in the Company's assets and liabilities in 2004 included:

- A \$734,000 decrease in contracts receivable. The Company invoices customers upon the completion of contract-specified milestones; milestone billings were lower in the fourth quarter 2004 compared to the fourth quarter 2003 due to lower contract activity.
- A \$547,000 reduction in prepaid expenses and other assets. The reduction reflects (1) lower prepaid insurance expense due to the participation of the Company in some of GP Strategies' insurance programs, (2) the collection from Novatech of expenses paid by the Company on behalf of Novatech after the sale of the Process business in 2003 and (3) amortization of capitalized bank commitment fees.
- An increase in accounts payable, accrued compensation and accrued expenses of \$200,000. The increase reflects the increase in project activity in 2004 as compared to the prior year and the related increase in obligations to the Company's subcontractors.
- A decrease in billings in excess of revenues earned by \$2.8 million. In 2003, the Company had entered into a \$6.6 million contract with a Mexican customer for a full scope simulator that allowed the Company to invoice the customer for 20% of the contract upon the receipt of the purchase order as an advance payment. The reduction in billings in excess of revenues earned largely reflects the completion of work which has reduced the Company's liability to the customer for the advance payment.

*Cash provided by (used in) investing activities.* For the year ended December 31, 2006, net cash used in investing activities was \$2.8 million consisting of \$333,000 of capitalized software development costs, \$185,000 of capital expenditures, and the restriction of \$2.3 million of cash as collateral for five performance bonds issued by the Company and backed by standby letters of credit. The largest is a \$2.1 million performance bond issued to ESA which expires on October 31, 2008 at the completion of the one-year warranty period.

Net cash used in investing activities was \$692,000 for the year ended December 31, 2005. The Company made capital expenditures of \$182,000 and capitalized software development costs of \$483,000.

Net cash used in investing activities was \$110,000 for the year ended December 31, 2004, consisting of \$361,000 of capitalized software development costs and \$222,000 of capital expenditures, offset by the expiration of stand-by letters of credit for which the \$473,000 of 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.

*Cash provided by (used in) financing activities.* The Company generated \$3.4 million from financing activities in the twelve months ended December 31, 2006. The Company generated net proceeds of \$3.9 million from the issuance of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants which were used to pay off the \$2.0 million Dolphin Note and the outstanding borrowings under the Company's bank line of credit. In conjunction with the establishment of a new line of credit with Laurus Master Fund, Ltd, the Company incurred cash financing costs of \$448,000.

The Company entered into a new credit facility with Laurus Master Fund on March 7, 2006 and had outstanding borrowings under the credit facility on December 31, 2006 of \$2.2 million. On May 18, 2006, Laurus Master Fund agreed to temporarily increase the Company's borrowing capability by \$2.0 million over and above the funds that were available to the Company based upon its normal borrowing base calculation. The over advance was used to collateralize a \$2.1 million performance bond that the Company issued to the Emirates Simulation Academy, LLC in the form of a standby letter of credit. One half of the increased borrowing capability expired on July 18, 2006, and the balance expires on April 13, 2007. The Company's borrowings over and above the normal borrowing base calculation bear additional interest of 1.5% per month over and above the normal interest rate on the line of credit.



The Company received \$409,000 through the issuance of common stock due to the exercise of employee stock options, and \$730,000 through the issuance of common stock due to the exercise of warrants. The Company recognized a tax benefit of \$124,000 related to the employee stock option exercises.

In 2006, the Company paid dividends of \$279,000 to the preferred stockholders.

For the year ended December 31, 2005, the Company generated \$3.0 million in cash from financing activities. The Company borrowed \$1,182,000 from its bank line of credit, generated \$100,000 from the exercise of employee stock options, and issued to Dolphin Direct Equity Partners, LP a Senior Subordinated Secured Convertible Note in the aggregate principle amount of \$2,000,000. The Company incurred \$197,000 of deferred financing costs related to the Dolphin Note and paid down a note payable of \$9,000.

For the year ended December 31, 2004, the Company used \$33,000 in financing activities related to the pay down of a note payable.

#### *Credit Facilities.*

The Company had a line of credit with a bank through General Physics Corporation, a wholly owned subsidiary of GP Strategies. Under the terms of the agreement, \$1.5 million of General Physics' available credit facility was carved out for use by GSE. The line was collateralized by substantially all of the Company's assets and provided for borrowings up to 80% of eligible accounts receivable and 80% of eligible unbilled receivables. GP Strategies guaranteed GSE's borrowings under the credit facility, which continued in place after the spin-off from GP Strategies in 2003. The interest rate on the line of credit was based upon the Daily LIBOR Market Index Rate plus 3%, with interest only payments due monthly. A portion of the proceeds from the Company's sale of Series A Cumulative Convertible Preferred Stock on February 28, 2006 (see discussion below) was used to pay off the outstanding balance of the line of credit, \$1.2 million.

On March 7, 2006, the Company entered into a new loan and security agreement with Laurus Master Fund, Ltd and terminated its existing \$1.5 million bank line of credit. The new agreement established a \$5.0 million line of credit for the Company. The line is collateralized by substantially all of the Company's assets and provides for borrowings up to 90% of eligible accounts receivable and 40% of eligible unbilled receivables (up to a maximum of \$1.0 million). The interest rate on this line of credit is based on the prime rate plus 200-basis points (10.25% as of December 31, 2006), with interest only payments due monthly. There are no financial covenant requirements under the new agreement, and the credit facility expires on March 6, 2008. On May 18, 2006, Laurus Master Fund agreed to temporarily increase the Company's borrowing capability by \$2.0 million over and above the funds that were available to the Company based upon its normal borrowing base calculation. The over advance was used to collateralize a \$2.1 million performance bond that the Company issued to the Emirates Simulation Academy, LLC ("ESA") in the form of a standby letter of credit. One half of the increased borrowing capability expired on July 18, 2006, and the balance expires on April 13, 2007. The Company's borrowings over and above the normal borrowing base calculation bear additional interest of 1.5% per month over and above the normal interest rate on the line of credit. The Company issued to Laurus Master Fund, Ltd a warrant to purchase up to 367,647 shares of GSE common stock at an exercise price of \$.01 per share. At the date of issuance, the fair value of the Laurus warrant, which was established using the Black-Scholes Model, was \$603,000 and was recorded as paid-in capital with the offset recorded as deferred financing charges. Deferred financing charges are classified as an other asset and are amortized over the term of the credit facility through a charge to interest expense. On July 31, 2006, Laurus exercised the warrant through a cashless exercise procedure as defined in the warrant. Laurus received 366,666 shares of GSE common stock.

Senior Subordinated Secured Convertible Note Payable

On May 26, 2005, GSE issued and sold to Dolphin Direct Equity Partners, LP a Senior Subordinated Secured Convertible Note in the aggregate principal amount of \$2,000,000, which had a maturity date of March 31, 2009, and a seven-year warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. The Dolphin Note was convertible into 1,038,961 shares of GSE common stock at a conversion price of \$1.925 per share and accrued interest at 8% payable quarterly. The aggregate purchase price for the Dolphin Note and GSE Warrant was \$2,000,000. At the date of issuance, the fair value of the GSE Warrant was \$375,000 and the fair value of the Conversion Option of the Dolphin Note was \$959,000, both of which were recorded as noncurrent liabilities, with the offset recorded as original issue discount (OID). OID was accreted over the term of the Dolphin Note and charged to interest expense, and the unamortized balance was netted against long-term debt in the accompanying consolidated balance sheets. The GSE Warrant and Conversion Option liabilities were marked to market through earnings on a quarterly basis in accordance with EITF NO. 00-19, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in a Company's Common Stock*.

On February 28, 2006, the Company and Dolphin entered into a Cancellation and Warrant Exchange Agreement (the "Cancellation Agreement") under which Dolphin agreed to cancel its Senior Subordinated Secured Convertible Promissory Note and cancel its outstanding warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. In exchange for Dolphin's agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction discussed below, the Company repaid the Dolphin Note and agreed to issue a new warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share. At the date of issuance, the fair value of the Dolphin Warrant was \$868,000, as established using the Black-Scholes Model, and was recorded in paid-in capital with the offset recorded as loss on extinguishment of debt. In accordance with the terms of the warrant agreement, Dolphin exercised the Dolphin Warrant on November 8, 2006 upon the Company's certification that, among other things, the underlying shares of GSE common stock were registered with the Securities and Exchange Commission on October 31, 2006, that the current stock price was greater than \$1.25 per share, and that the average of the current stock prices for each trading day of the prior 30 calendar day period was not less than \$1.25 per share. The Company received cash proceeds of \$603,000.

In conjunction with the early payoff of the Dolphin Note and the cancellation of the 380,952 warrants, the Company wrote off the remaining unamortized Original Issue Discount of \$1.1 million, wrote off the remaining unamortized deferred financing charges of \$185,000, recognized a credit of \$698,000 from the write-off of the liabilities related to the Dolphin Note conversion feature and the related warrants, and took an \$868,000 charge for the value of the 900,000 new warrants issued to Dolphin. The total loss on extinguishment of the Dolphin Note and the cancellation of the related warrants totaled \$1.4 million.

*Series A Cumulative Preferred Stock*

On February 28, 2006, the Company raised \$3.9 million, net of associated fees of \$395,000, through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to “accredited investors”, as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stock is convertible at any time into a total of 2,401,130 shares of GSE common stock at a conversion price of \$1.77 per share. The conversion price was equal to 110% of the closing price of the Company’s Common Stock on February 28, 2006, the date the sale of the Convertible Preferred Stock was completed. Each investor received a five-year warrant to purchase GSE common stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of \$1.77. In aggregate, the Company issued warrants to purchase a total of 480,226 shares of GSE common stock. At the date of issuance, the fair value of the warrants was \$342,000 and the fair value of the preferred stock was \$3.9 million. The fair value of the warrants and the preferred stock was determined by the use of the relative fair value method, in which the \$4.25 million gross proceeds was allocated based upon the fair values of the warrants, as determined by using the Black-Scholes Model, and the preferred stock, as determined by an independent appraisal. The Convertible Preferred Stock holders are entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid dividends totaling \$279,000 to the preferred stockholders. At the date of issuance, the fair value of the warrants was \$342,000 and the fair value of the preferred stock was \$3.9 million. The fair value of the warrants and the preferred stock was determined by the use of the relative fair value method, in which the \$4.25 million gross proceeds was allocated based upon the fair values of the warrants, as determined by using the Black-Scholes Model, and the preferred stock, as determined by an independent appraisal. At any time after March 1, 2007, the Company had the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeds 200% of the Series A Conversion Price. Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006, and 13,920 shares of Preferred Stock in 2007. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock will convert to 1,129,946 shares of GSE common stock. The holders of the Convertible Preferred Stock were entitled to vote on all matters submitted to the stockholders for a vote, together with the holders of the voting common stock, all voting together as a single class. The holders of the Convertible Preferred Stock were entitled to the number of votes equal to the number of GSE common stock that they would receive upon conversion of their Convertible Preferred Stock.

The Company paid the placement agent 6% of the gross proceeds received by the Company from the offering (\$255,000) plus five-year warrants to purchase 150,000 shares of the Company’s common stock at an exercise price of \$1.77 per share. In addition to the placement agent fee, the Company paid \$140,000 of other transaction fees related to the offering. At the date of issuance, the fair value of the placement agent warrants was \$128,000, as established using the Black-Scholes Model, and was recorded in paid-in capital, with the offset recognized as a reduction of the preferred stock proceeds.

The proceeds were used to payoff the Dolphin Note and the Company’s bank line of credit balance and for other working capital purposes.



*Contractual Cash Commitments*

The following summarizes the Company's contractual cash obligations as of December 31, 2006, and the effect these obligations are expected to have on its liquidity and cash flow in future periods:

<b>Contractual Cash Obligations</b>	<b>Payments Due by Period</b>				
	<b>(in thousands)</b>				
	<b>Total</b>	<b>Less than 1 year</b>	<b>1-3 Years</b>	<b>4-5 Years</b>	<b>After 5 Years</b>
<b>Long Term Debt</b>	\$ 2,155	\$ 2,155	\$ -	\$ -	\$ -
<b>Subcontractor and Purchase Commitments</b>	\$ 4,970	\$ 4,872	\$ 98	\$ -	\$ -
<b>Net future minimum lease payments</b>	\$ 1,137	\$ 804	\$ 333	\$ -	\$ -
<b>Total</b>	\$ 8,262	\$ 7,831	\$ 431	\$ -	\$ -

In October 2005, the Company signed an "Assignment of Lease and Amendment to Lease" that assigns and transfers to another tenant (the "assignee") the Company's rights, title and interest in its Columbia, Maryland facility lease. The assignee's obligation to pay rent under the Lease began on February 1, 2006. The Company remains fully liable for the payment of all rent and for the performance of all obligations under the lease through the scheduled expiration of the lease, May 31, 2008, should the assignee default on their obligations. At December 31, 2006, the remaining rental payments under the lease totaled \$1.1 million. The Company relocated its Maryland operations from its Columbia facility to its Baltimore facility in October 2005.

As of December 31, 2006, the Company was contingently liable for five letters of credit totaling \$2.3 million. The letters of credit represent performance bonds on five contracts and have been cash collateralized.

*2007 Liquidity Outlook*

Based on the Company's forecasted expenditures and cash flow, we believe we will need gross cash inflows of \$32.6 million to fund our operations for the twelve months ended December 31, 2007. All of this funding is expected to be generated through our normal operations and the utilization of our current credit facility, and we believe that we will have sufficient liquidity and working capital without additional financing. We expect to generate \$30.0 million of cash in the year ended December 31, 2007 from the Company's milestone billings backlog as of December 31, 2006, including \$12.8 million from the ESA Contract, plus the orders logged by the Company in 2007 through March 30, 2007. The balance of the Company's 2007 cash requirement is expected to be generated by future orders. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

### **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, 2006, except for its operating lease commitments and outstanding letters of credit. See *Contractual Cash Commitments* above.

### **New Accounting Standards.**

On July 13, 2006, FASB Interpretation (FIN) No. 48, *Accounting for Uncertainty in Income Taxes- an Interpretation of FASB Statement No. 109* ("FIN 48") was issued. The provisions of FIN 48 are effective for fiscal years beginning after December 15, 2006. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with FASB Statement No. 109, *Accounting for Income Taxes*. It also prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company is currently evaluating the impact of FIN 48 on its operations, financial condition and cash flows.

In September 2006, the FASB issued Statement No. 157, *Fair Value Measurements*. Statement No. 157 defines fair value, establishes a framework for measuring fair value and expands disclosure requirements regarding fair value measurements. Statement No. 157 does not require any new fair value measurements. We are required to adopt the provisions of Statement No. 157 effective January 1, 2008 although earlier adoption is permitted. We do not believe the adoption of this standard will have a material effect on our financial position, results of operations or cash flows.

In September 2006, the Securities and Exchange Commission issued Staff Accounting Bulletin, or SAB, No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*, which provides interpretive guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of a materiality assessment. SAB No. 108 requires registrants to quantify misstatements using both the balance sheet and income statement approaches and to evaluate whether either approach results in quantifying an error that is material based on relevant quantitative and qualitative factors. The Company adopted SAB No. 108 for the year ended December 31, 2006; the adoption did not have a material impact on the Company's financial statements.

In February 2007, the FASB issued Statement No. 159 (SFAS159), *The Fair Value Option for Financial Assets and Liabilities --- Including an Amendment of FASB Statement No.115*, which permits entities to measure eligible items at fair value. For items where the fair value election is made, the Company will be required to report unrealized gains or losses in earnings. SFAS 159 is effective for fiscal years beginning after November 15, 2007. At this time, we are assessing the impact the adoption of SFAS 159 will have on our consolidated financial statements.

**Other Matters.**

Management believes inflation has not had a material impact on the Company's operations.

47

---

**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, 2006, 18% of the Company's revenue was from contracts which required payments in a currency other than U.S. Dollars, principally Swedish Krona (9%), Japanese Yen (4%), Malaysian Ringgitt (4%) and British Pounds Sterling (1%). For the years ended December 31, 2005 and 2004, a portion of the Company's revenue was denominated in Swedish Krona (6% and 3%, respectively) and Japanese Yen (8% and 13%, respectively). In addition, during the years ended December 31, 2006, 2005 and 2004, 15%, 13% and 16%, 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 utilizes forward foreign currency 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. The principal currency hedged is 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.

At December 31, 2006, the Company had contracts for sale of approximately 142 million Japanese Yen at fixed rates. The contracts expire on various dates through August 2007. The Company has not designated the contracts as hedges and has recorded the estimated change in the fair value of the contracts of (\$24,000) in other income (expense). The estimated fair value of the contracts was \$12,000 at December 31, 2006. The Company recognized unrealized gains (losses) of approximately (\$170,000) and \$203,000 in 2005 and 2004, respectively, on these contracts.

The Company is also subject to market risk related to the interest rate on its existing line of credit. As of December 31, 2006, such interest rate is based on the Prime Rate plus 200 basis-points. A 100 basis-point change in such rate during the year ended December 31, 2006 would have increased or decreased the Company's annual interest expense by approximately \$21,000.

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

**INDEX TO FINANCIAL STATEMENTS**

	Page
<b>GSE Systems, Inc. and Subsidiaries</b>	
Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets as of December 31, 2006 and 2005	F-2
Consolidated Statements of Operations for the years ended December 31, 2006, 2005, and 2004	F-3
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2006, 2005, and 2004	F-4
Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2006, 2005, and 2004	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2006, 2005, and 2004	F-6
Notes to Consolidated Financial Statements	F-7

Report of Independent Registered Public Accounting Firm

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, 2006 and 2005, and the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2006. 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 the standards of the Public Company Accounting Oversight Board (United States). 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, 2006 and 2005, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2006 in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the consolidated financial statements, effective January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment*.

/s/ KPMG LLP

Baltimore, Maryland  
April 2, 2007

**PART I - FINANCIAL INFORMATION****Item 1. Financial Statements****GSE SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED BALANCE SHEETS***(in thousands, except share data)*

	<b>December 31,</b>		
	<b>2006</b>		<b>2005</b>
<b>ASSETS</b>			
Current assets:			
Cash and cash equivalents	\$	1,073	\$ 1,321
Restricted cash		63	-
Contract receivables		10,669	6,896
Prepaid expenses and other current assets		494	376
Total current assets		12,299	8,593
Equipment and leasehold improvements, net		354	329
Software development costs, net		820	940
Goodwill, net		1,739	1,739
Long-term restricted cash		2,291	56
Other assets		945	325
Total assets	\$	18,448	\$ 11,982
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>			
Current liabilities:			
Current portion of long-term debt	\$	2,155	\$ 1,182
Accounts payable		2,455	3,019
Due to GP Strategies Corporation		6	542
Accrued expenses		2,072	1,612
Accrued compensation and payroll taxes		1,535	1,226
Billings in excess of revenue earned		1,867	1,177
Accrued warranty		746	754
Other current liabilities		-	6
Total current liabilities		10,836	9,518
Long-term debt		-	869
Other liabilities		251	698
Total liabilities		11,087	11,085
Commitments and contingencies			
Stockholders' equity:			
Preferred stock \$.01 par value, 2,000,000 shares authorized, shares issued and outstanding 33,920 in 2006 and none issued in 2005		-	-
Common stock \$.01 par value, 18,000,000 shares authorized, shares issued and outstanding 11,013,822 in 2006 and 8,999,706 in 2005		110	90
Additional paid-in capital		37,504	30,915
Accumulated deficit - at formation		(5,112)	(5,112)

Edgar Filing: GSE SYSTEMS INC - Form 10-K

Accumulated deficit - since formation	(24,185)		(23,839)
Accumulated other comprehensive loss	(956)		(1,157)
Total stockholders' equity	7,361		897
Total liabilities and stockholders' equity	\$ 18,448	\$	11,982

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

F-2

---



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

	<b>Years ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Contract revenue	\$ 27,502	\$ 21,950	\$ 29,514
Cost of revenue	19,602	18,603	22,715
Gross profit	7,900	3,347	6,799
Operating expenses			
Selling, general and administrative	4,929	6,958	5,543
Administrative charges from GP Strategies	685	685	974
Depreciation	186	431	280
Total operating expenses	5,800	8,074	6,797
Operating income (loss)	2,100	(4,727)	2
Interest expense, net	(764)	(416)	(176)
Loss on extinguishment of debt	(1,428)	-	-
Other income (expense), net	(105)	497	316
Income (loss) from continuing operations before income taxes	(197)	(4,646)	142
Provision for income taxes	149	149	60
Income (loss) from continuing operations	(346)	(4,795)	82
Income on sale of discontinued operations, net of income taxes	-	-	36
Income from discontinued operations	-	-	36
Net income (loss)	(346)	(4,795)	118
Preferred stock dividends	(279)	-	-
Net income (loss) attributed to common shareholders	\$ (625)	\$ (4,795)	\$ 118
Basic income (loss) per common share			
Continuing operations	\$ (0.07)	\$ (0.53)	\$ 0.01
Discontinued operations	-	-	-
Net income (loss)	\$ (0.07)	\$ (0.53)	\$ 0.01

Edgar Filing: GSE SYSTEMS INC - Form 10-K

Diluted income (loss) per common  
share

Continuing operations	\$	(0.07)	\$	(0.53)	\$	0.01
Discontinued operations		-		-		-
Net income (loss)	\$	(0.07)	\$	(0.53)	\$	0.01

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

F-3

---

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

		<b>2006</b>	<b>Years ended December 31,</b>	<b>2005</b>		<b>2004</b>
Net income (loss)	\$	(346)	\$	(4,795)	\$	118
Foreign currency translation adjustment		201		(354)		148
Comprehensive income (loss)	\$	(145)	\$	(5,149)	\$	266

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)*

	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit At Formation	Accumulated Deficit Since Formation	Accumulated Comprehensive Loss
	Shares	Amount	Shares	Amount				
<b>Balance, January 1, 2004</b>	-	\$ -	8,950	\$ 89	\$ 30,815	(5,112)\$	(19,162)\$	
Foreign currency translation adjustment	-	-	-	-	-	-	-	
Net income	-	-	-	-	-	-	118	
<b>Balance, December 31, 2004</b>	-	-	8,950	89	30,815	(5,112)	(19,044)	
Common stock issued for options exercised	-	-	50	1	100	-	-	
Foreign currency translation adjustment	-	-	-	-	-	-	-	
Net loss	-	-	-	-	-	-	(4,795)	
<b>Balance, December 31, 2005</b>	-	-	9,000	90	30,915	(5,112)	(23,839)	
Issuance of preferred stock	43	-	-	-	3,386	-	-	
Conversion of preferred stock to common stock	(9)	-	485	5	(5)	-	-	
Preferred stock	-	-	-	-	(279)	-	-	

dividends paid							
Stock-based compensation expense	-	-	-	-	202	-	-
Common stock issued for options exercised	-	-	169	2	407	-	-
Tax benefit of options exercised	-	-	-	-	124	-	-
Issuance of restricted common stock	-	-	22	-	96	-	-
Issuance of warrants	-	-	-	-	1,941	-	-
Common stock issued for warrants exercised	-	-	1,338	13	717	-	-
Foreign currency translation adjustment	-	-	-	-	-	-	-
Net loss	-	-	-	-	-	-	(346)
<b>Balance, December 31, 2006</b>	34 \$	-	11,014 \$	110 \$	37,504 \$	(5,112)\$	(24,185)\$

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,**

	<b>2006</b>		<b>2005</b>		<b>2004</b>
<b>Cash flows from operating activities:</b>					
Net income (loss)	\$ (346)	\$	(4,795)	\$	118
Income on sale of discontinued operations	-		-		36
Income (loss) from continuing operations	(346)		(4,795)		82
Adjustments to reconcile income (loss) from continuing operations to net cash used in operating activities:					
Depreciation and amortization	697		1,121		678
Change in fair market value of liabilities for conversion option and warrants	-		(636)		-
Loss on extinguishment of debt	1,428		-		-
Foreign currency transaction (gain) loss	(128)		35		(52)
Deferred income taxes	-		50		(50)
Employee stock based compensation expense	202		-		-
Non-employee stock based compensation expense	96		-		-
Elimination of profit on Emirates Simulation Academy LLC contract	251		-		-
Changes in assets and liabilities:					
Contract receivables	(3,773)		1,827		734
Prepaid expenses and other assets	128		810		547
Accounts payable, accrued compensation and accrued expenses	473		(597)		200
Due to GP Strategies Corporation	(536)		251		191
Billings in excess of revenue earned	690		79		(2,829)
Accrued warranty reserves	(8)		87		158
Other liabilities	(6)		(25)		(50)
Income taxes payable	-		(58)		34
<b>Net cash used in continuing operations</b>	<b>(832)</b>		<b>(1,851)</b>		<b>(357)</b>
<b>Net cash used in discontinued operations</b>	<b>-</b>		<b>-</b>		<b>(36)</b>
<b>Net cash used in operating activities</b>	<b>(832)</b>		<b>(1,851)</b>		<b>(393)</b>
<b>Cash flows from investing activities:</b>					
Capital expenditures	(185)		(182)		(222)
Capitalized software development costs	(333)		(483)		(361)

Edgar Filing: GSE SYSTEMS INC - Form 10-K

Releases (restrictions) of cash as collateral under letters of credit, net	(2,298)	(27)	473
<b>Net cash used in investing activities</b>	<b>(2,816)</b>	<b>(692)</b>	<b>(110)</b>
<b>Cash flows from financing activities:</b>			
Increase in borrowings under lines of credit	2,155	1,182	-
Payoff of line of credit with bank	(1,182)	-	-
Net proceeds from issuance of preferred stock and warrants	3,856	-	-
Proceeds from issuance of common stock	1,139	100	-
Tax benefit from option exercises	124	-	-
Deferred financing costs	(448)	(232)	-
Payment of preferred stock dividends	(279)	-	-
Issuance (paydown) of subordinated convertible note payable	(2,000)	2,000	-
Other financing activities, net	-	(9)	(33)
<b>Net cash provided by (used in) financing activities</b>	<b>3,365</b>	<b>3,041</b>	<b>(33)</b>
Effect of exchange rate changes on cash	35	(45)	16
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(248)</b>	<b>453</b>	<b>(520)</b>
<b>Cash and cash equivalents at beginning of year</b>	<b>1,321</b>	<b>868</b>	<b>1,388</b>
<b>Cash and cash equivalents at end of year</b>	<b>\$ 1,073</b>	<b>\$ 1,321</b>	<b>\$ 868</b>

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

## **1. Business and basis of presentation**

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.

On June 21, 2005, the Board of Directors of GP Strategies Corporation ("GP Strategies") approved plans to spin-off its 57% interest in GSE through a special dividend to the GP Strategies' stockholders. On September 30, 2005, the GP Strategies' stockholders received 0.283075 share of GSE common stock for each share of GP Strategies common stock or Class B stock held on the record date of September 19, 2005. Following the spin-off, GP Strategies ceased to have any ownership interest in GSE. GP Strategies continued to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax pursuant to a Management Services Agreement which expired on December 31, 2006.

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.

Based on the Company's forecasted expenditures and cash flow, we believe we will need \$32.6 million to fund our operations for the twelve months ended December 31, 2007. All of this funding is expected to be generated through our normal operations and the utilization of our current credit facility, and we believe that we will have sufficient liquidity and working capital without additional financing. We expect to generate \$30.0 million of cash in the year ended December 31, 2007 from the Company's milestone billings backlog as of December 31, 2006, including \$12.8 million from the ESA Contract, plus the orders logged by the Company in 2007 through March 30, 2007. The balance of the Company's 2007 cash requirement is expected to be generated by future orders. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

## **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. The Company's most significant estimates relate to revenue recognition, capitalization of software development costs, and the recoverability of deferred tax assets. 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 revenue and earnings as work progresses on the contract and is based on an estimate of the revenue and earnings earned to date, less amounts recognized in prior 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. The Company recognizes revenue arising from contract claims either as income or as an offset against a potential loss only when the amount of the claim can be estimated reliably and realization is probable and there is a legal basis of the claim. In 2006, the Company settled an outstanding claim with a customer for work performed through December 31, 2005 of approximately \$265,000, of which \$120,000 was recognized as revenue in 2005 and the balance was recognized as revenue in 2006. There are no claims outstanding as of December 31, 2006.

F-7

---

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*.

Revenue from the sale of software licenses which do not require significant modifications or customization for the Company's modeling tools are recognized when the license agreement is signed, the license fee is fixed and determinable, delivery has occurred, and collection is considered probable.

Revenue for contracts with multiple elements are recognized in accordance with Emerging Issues Task Force Issue 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*.

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 overnight sweep investments with maturities of three months or less at the date of purchase.

#### *Contract Receivables*

Contract receivables include recoverable costs and accrued profit not billed which represents revenue recognized in excess of amounts billed. The liability, "Billings in excess of revenue earned," represents billings in excess of revenue recognized.

Billed receivables are recorded at invoiced amounts. The allowance for doubtful accounts is based on historical trends of past due accounts, write-offs, and specific identification and review of past due accounts. The activity in the allowance for doubtful accounts is as follows:

	As of and for the		
	Years ended December 31,		
<i>(in thousands)</i>	2006	2005	2004
Beginning balance	\$ 245	\$ 24	\$ 7
Current year provision	3	496	35
Current year write-offs	(245)	(275)	(18)
Ending balance	\$ 3	\$ 245	\$ 24

#### *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 in accordance with SFAS No. 86, *Accounting for the Costs of Computer Software to be Sold, Leased, or Otherwise Marketed*. 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.

#### *Development expenditures*

Development expenditures incurred to meet customer specifications under contracts are charged to contract costs. Company sponsored development expenditures are charged to operations as incurred and are included in selling, general and administrative expenses. The amounts incurred for Company sponsored development activities relating to the development of new products and services or the improvement of existing products and services, were approximately \$871,000, \$758,000, and \$552,000, for the years ended December 31, 2006, 2005, and 2004, respectively. Certain of these expenditures were capitalized as software development costs. See Note 7, Software development costs.

*Impairment of long-Lived Assets*

In accordance with SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets, property and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a disposal group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet.

Goodwill is tested annually, on November 30, for impairment, or more frequently if events and circumstances indicate that the asset might be impaired. An impairment loss is recognized to the extent that the carrying amount exceeds the asset's fair value. For goodwill, the impairment determination is made at the reporting unit level and consists of two steps. First, the Company determines the fair value of a reporting unit and compares it to its carrying amount. Second, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation, in accordance with SFAS No. 141, Business Combinations. The residual fair value after this allocation is the implied fair value of the reporting unit goodwill. No impairment losses were recognized in 2006, 2005 and 2004.

*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 other comprehensive income (loss). 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, 2006, 2005, and 2004, foreign currency transaction gains (losses) were approximately \$128,000, (\$35,000), and \$52,000, respectively.

*Warranty*

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:

	As of and for the		
	Years ended December 31,		
<i>(in thousands)</i>	2006	2005	2004
Beginning balance	\$ 754	\$ 667	\$ 509
Current year provision	568	286	312
Current year claims	(599)	(166)	(154)
Currency adjustment	23	(33)	-
Ending balance	\$ 746	\$ 754	\$ 667

*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.

*Stock Compensation*

In December 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 123R, *Share-Based Payment* (SFAS No. 123R), which revises SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123), and supersedes Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB No. 25), and requires companies to recognize compensation expense for all equity-based compensation awards issued to employees that are expected to vest. The Company adopted SFAS No. 123R on January 1, 2006, using the Modified Prospective Application method without restatement of prior periods. Under this method, the Company would begin to amortize compensation cost for the remaining portion of its outstanding awards for which the requisite service was not yet rendered as of January 1, 2006. However, at January 1, 2006, all of the Company's outstanding options were fully vested and thus there is no compensation expense in 2006 related to the adoption of SFAS No. 123R on these outstanding options. The Company determines the fair value of and accounts for awards that are granted, modified, or settled after January 1, 2006 in accordance with SFAS No. 123R.

Compensation expense related to share based awards is recognized on a straight-line basis based on the value of share awards that are scheduled to vest during the requisite service period. During the twelve months ended December 31, 2006, the Company recognized \$202,000 of pre-tax stock-based compensation expense under the fair value method in

accordance with SFAS No. 123R. As of December 31, 2006, the Company had \$374,000 of unrecognized compensation related to the unvested portion of outstanding stock option awards expected to be recognized through May 2009.

F-11

---

Prior to 2006, the Company applied 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 was recorded on the date of grant only if the current market price of the underlying stock exceeded 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 elected to continue to apply the intrinsic-value-based method of accounting describe above, and had adopted only the disclosure requirements of SFAS No. 123. See Note 13, Stock-Based compensation.

*Income (loss) per share*

Basic income (loss) per share is based on the weighted average number of outstanding common shares for the period. Diluted income (loss) per share adjusts the weighted average shares outstanding for the potential dilution that could occur if stock options, warrants, convertible subordinated debt 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 income (loss) per share was as follows:

[

(in thousands, except for share and per share amounts)

	Years ended December 31,		
	2006	2005	2004
Numerator:			
Net income (loss)	\$ (346)	\$ (4,795)	\$ 118
Preferred stock dividends	(279)	-	-
Net income (loss) attributed to common stockholders	\$ (625)	\$ (4,795)	\$ 118
Denominator:			
Weighted-average shares outstanding for basic earnings per share	9,539,142	8,999,021	8,949,706
Effect of dilutive securities:			
Employee stock options, warrants and convertible preferred stock	-	-	105,736
Adjusted weighted-average shares outstanding and assumed conversions for diluted earnings per share	9,539,142	8,999,021	9,055,442
Shares related to dilutive securities excluded because inclusion would be anti-dilutive:	3,755,457	2,753,213	1,294,826

Conversion of the stock options, warrants, convertible preferred stock and convertible subordinated debt was not assumed for the years ended December 31, 2006 and 2005 because the impact was anti-dilutive. The difference between the basic and diluted number of weighted average shares outstanding for the year ended December 31, 2004 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 loss for the year ended December 31, 2006 was decreased by preferred stock dividends of \$279,000 in calculating the per share amounts.



*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 year ended December 31, 2006, the Emirates Simulation Academy LLC (UAE) provided 21% of the Company's consolidated 2006 revenue (none in 2005 and 2004); Rosenergoatom Federal State Owned Enterprise (Russia) provided 12% of the Company's consolidated 2006 revenue (0% and 5% in 2005 and 2004, respectively), and Battelle's Pacific Northwest National Laboratory accounted for approximately 11% of the Company's consolidated revenue (25% and 24% in 2005 and 2004, respectively). 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. As of December 31, 2006, the contracts receivable balance related to these three significant customers was approximately \$5.6 million, or 52% of contract receivables, of which \$2.4 million 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.

*Deferred Financing Fees*

The Company amortizes the cost incurred to obtain debt financing over the term of the underlying obligations using the effective interest method. The amortization of deferred financing costs is included in interest expense. Unamortized deferred financing costs are classified within other assets in the consolidated balance sheets.

*Derivative Instruments*

The Company utilizes foreign currency forward 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 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.

As of December 31, 2006 and 2005, the Company had contracts for sale of approximately 124 million and 247 million Japanese Yen, respectively, at fixed rates. The contracts expire on various dates through May 2007. The Company has not designated the contracts as hedges and has recorded the estimated fair value of the contracts of \$11,000 and \$31,000 as of December 31, 2006 and 2005, respectively, as an other asset in the consolidated balance sheet. The change in the estimated fair value of the contracts for the years ended December 31, 2006, 2005 and 2004 was approximately (\$23,000), (\$170,000) and \$203,000, respectively, and was recorded in other income (expense) in the consolidated statements of operations.

#### *New Accounting Standards*

On July 13, 2006, FASB Interpretation (FIN) No. 48, Accounting for Uncertainty in Income Taxes- an Interpretation of FASB Statement No. 109 (“FIN 48”) was issued. The provisions of FIN 48 are effective for fiscal years beginning after December 15, 2006. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise’s financial statements in accordance with FASB Statement No. 109, Accounting for Income Taxes. It also prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company is currently evaluating the impact of FIN 48 on its operations, financial condition and cash flows.

In September 2006, the FASB issued Statement No. 157, *Fair Value Measurements*. Statement No. 157 defines fair value, establishes a framework for measuring fair value and expands disclosure requirements regarding fair value measurements. Statement No. 157 does not require any new fair value measurements. We are required to adopt the provisions of Statement No. 157 effective January 1, 2008 although earlier adoption is permitted. We do not believe the adoption of this standard will have a material effect on our consolidated financial statements.

In September 2006, the Securities and Exchange Commission issued Staff Accounting Bulletin, or SAB, No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*, which provides interpretive guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of a materiality assessment. SAB No. 108 requires registrants to quantify misstatements using both the balance sheet and income statement approaches and to evaluate whether either approach results in quantifying an error that is material based on relevant quantitative and qualitative factors. The Company adopted SAB No. 108 for the year ended December 31, 2006; the adoption did not have a material impact on the Company’s financial statements.

In February 2007, the FASB issued Statement No. 159, *The Fair Value Option for Financial Assets and Liabilities --- Including an amendment of FASB Statement No. 115*, which permits entities to measure eligible items at fair value. For items where the fair value election is made, the Company will be required to report unrealized gains or losses in earnings. Statement 159 is effective for fiscal years beginning after November 15, 2007. The Company is currently assessing the impact the adoption of this statement will have on our consolidated financial statements.



### 3. Discontinued operations

In September 2003, the Company completed the sale of substantially all of the assets of Process to Novatech pursuant to an Asset Purchase Agreement, effective as of September 25, 2003. 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.

The \$36,000 of income from discontinued operations in 2004 relates to the favorable resolution of certain contingencies which the Company had provided for at the date of sale net of income taxes.

### 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:

<i>(in thousands)</i>	December 31,	
	2006	2005
Billed receivables	\$ 6,066	\$ 3,445
Recoverable costs and accrued profit not billed	4,606	3,696
Allowance for doubtful accounts	(3)	(245)
Total contract receivables	\$ 10,669	\$ 6,896

### 5. Prepaid expenses and other current assets

Prepaid expenses and other current assets consist of the following:

<i>(in thousands)</i>	December 31,	
	2006	2005
Prepaid expenses	\$ 218	\$ 228
Employee advances	26	40
Other current assets	250	108
Total	\$ 494	\$ 376

**6. Equipment and leasehold improvements**

Equipment and leasehold improvements consist of the following:

<i>(in thousands)</i>	December 31,	
	2006	2005
Computer equipment	\$ 2,422	\$ 2,039
Leasehold improvements	4	-
Furniture and fixtures	446	388
	2,872	2,427
Accumulated depreciation	(2,518)	(2,098)
Equipment and leasehold improvements, net	\$ 354	\$ 329

Depreciation expense was approximately \$186,000, \$431,000, and \$280,000 for the years ended December 31, 2006, 2005, and 2004, respectively. Due to the relocation of the Company's Maryland operations from Columbia, Maryland to Baltimore, Maryland in October 2005, the Company accelerated the depreciation of certain leasehold improvements in 2005.

**7. Software development costs**

Software development costs, net, consist of the following:

<i>(in thousands)</i>	December 31,	
	2006	2005
Capitalized software development costs	\$ 1,600	\$ 1,896
Accumulated amortization	(780)	(956)
Software development costs, net	\$ 820	\$ 940

Software development costs capitalized were approximately \$333,000, \$483,000, and \$361,000 for the years ended December 31, 2006, 2005 and 2004, respectively. Amortization of software development costs capitalized was approximately \$453,000, \$452,000, and \$398,000 for the years ended December 31, 2006, 2005 and 2004, respectively, and were included in cost of revenue.

**8. Investment in Emirates Simulation Academy, LLC**

On November 8, 2005, the Emirates Simulation Academy, LLC ("ESA"), headquartered in Abu Dhabi, United Arab Emirates, was formed to build and operate simulation training academies in the Arab Gulf Region. These simulation training centers will be designed to train and certify indigenous workers for deployment to critical infrastructure facilities including power plants, oil refineries, petro-chemical plants, desalination units and other industrial facilities. The members of the limited liability company include Al Qudra Holding PJSC of the United Arab Emirates (60% ownership), the Centre of Excellence for Applied Research and Training of the United Arab Emirates (30% ownership) and GSE (10% ownership). At December 31, 2006, GSE's investment in ESA totaled \$238,000 and was classified on the balance sheet as an other asset. The Company accounts for its investment in ESA using the equity method.

In January 2006, GSE received a \$15.1 million contract from ESA to supply five simulators and an integrated training program. For the year ended December 31, 2006, the Company recognized \$5.7 million of contract revenue on this project using the percentage-of-completion method, which accounted for 20.7% of the Company's consolidated revenue.

In accordance with the equity method, the Company has eliminated 10% of the profit from this contract as the training simulators are assets that will be recorded on the books of ESA, and the Company is thus required to eliminate its proportionate share of the profit included in the asset value. The profit elimination totaled \$251,000 for the year ended December 31, 2006, respectively, and has been recorded as an other expense in the income statement and as an other liability on the balance sheet. Once ESA begins to amortize the training simulators on their books, GSE will begin to amortize the other liability to other income.

The Company issued an invoice for \$1.7 million to ESA in August 2006 which is still outstanding at December 31, 2006. In March 2007, ESA established a line of credit with a bank. Payment will be made to GSE as soon as all required documents have been received by the bank. No bad debt reserve has been established for the outstanding receivable at December 31, 2006. In addition, the Company had an unbilled receivable of \$1.9 million for the ESA contract at December 31, 2006. Under the terms of the contract, the Company provided a \$2.1 million performance bond to ESA that will remain outstanding until the end of the warranty period on October 31, 2008.

See Note 20, Subsequent Events.

## 9. Long-term debt

The Company's long-term debt consists of the following:

<i>(in thousands)</i>	December 31,	
	2006	2005
Line of credit with bank	\$ -	\$ 1,182
Line of credit with Laurus Master Fund, Ltd.	2,155	-
Senior convertible secured subordinated note payable	-	2,000
Total notes payable and financing arrangements	2,155	3,182
Less warrant related discount, net of accretion	-	(318)
Less convertible option discount, net of accretion	-	(813)
	2,155	2,051
Less current portion	(2,155)	(1,182)
Long-term debt, less current portion	\$ -	\$ 869

### *Line of Credit*

The Company had a line of credit with a bank through General Physics Corporation, a wholly owned subsidiary of GP Strategies. Under the terms of the agreement, \$1.5 million of General Physics' available credit facility was carved out for use by GSE. The line was collateralized by substantially all of the Company's assets and provided for borrowings up to 80% of eligible accounts receivable and 80% of eligible unbilled receivables. GP Strategies guaranteed GSE's borrowings under the credit facility, which continued in place after the spin-off from GP Strategies. The interest rate

on the line of credit was based upon the Daily LIBOR Market Index Rate plus 3%, with interest only payments due monthly. A portion of the proceeds from the Company's sale of Series A Cumulative Convertible Preferred Stock on February 28, 2006 (see Note 12) was used to pay off the outstanding balance of the line of credit, \$1.2 million.

F-18

---

On March 7, 2006, the Company entered into a new loan and security agreement with Laurus Master Fund, Ltd (“Laurus”) and terminated its existing \$1.5 million bank line of credit. The new agreement established a \$5.0 million line of credit for the Company. The line is collateralized by substantially all of the Company’s assets and provides for borrowings up to 90% of eligible accounts receivable and 40% of eligible unbilled receivables (up to a maximum of \$1.0 million). The interest rate on this line of credit is based on the prime rate plus 200-basis points (10.25% as of December 31, 2006), with interest only payments due monthly. The credit facility does not require the Company to comply with any financial ratios and expires on March 6, 2008. Because the Laurus line of credit agreement includes both a subjective acceleration clause and a requirement to maintain a lock-box arrangement whereby remittances for GSE’s customers reduce the outstanding debt, the borrowings under the line of credit have been classified as short-term obligations on the balance sheet. On May 18, 2006, Laurus Master Fund agreed to temporarily increase the Company’s borrowing capability by \$2.0 million over and above the funds that were available to the Company based upon its normal borrowing base calculation. The over advance was used to collateralize a \$2.1 million performance bond that the Company issued to ESA in the form of a standby letter of credit. One half of the increased borrowing capability expired on July 18, 2006, and the balance expires on April 13, 2007. The Company’s borrowings over and above the normal borrowing base calculation bear additional interest of 1.5% per month over and above the normal interest rate on the line of credit. At December 31, 2006, the Company’s available borrowing base was \$4.2 million of which \$2.2 million had been utilized. The Company issued to Laurus a warrant to purchase up to 367,647 shares of GSE common stock at an exercise price of \$.01 per share. At the date of issuance, the fair value of the Laurus warrant, which was established using the Black-Scholes Model, was \$603,000 and was recorded as paid-in capital with the offset recorded as deferred financing charges. Deferred financing charges are classified as an other asset and are amortized over the term of the credit facility through a charge to interest expense. On July 31, 2006, Laurus exercised the warrant through a cashless exercise procedure as defined in the warrant. Laurus received 366,666 shares of GSE common stock.

*Senior Convertible Secured Subordinated Note Payable*

On May 26, 2005, GSE issued and sold to Dolphin Direct Equity Partners, LP (“Dolphin”) a Senior Subordinated Secured Convertible Note in the aggregate principal amount of \$2,000,000 which was to mature on March 31, 2009 (the “Dolphin Note”), and a seven-year warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share (the “GSE Warrant”). The Dolphin Note was convertible into 1,038,961 shares of GSE common stock at an exercise price of \$1.925 per share and accrued interest at 8% payable quarterly. Both the Convertible Note and the Warrant were subject to anti-dilution provisions. The aggregate purchase price for the Dolphin Note and GSE Warrant was \$2,000,000. At the date of issuance, the fair value of the GSE Warrant and Conversion Option, which was established using the Black-Scholes Model, was \$375,000 and \$959,000, respectively, both of which were recorded as noncurrent liabilities, with the offset recorded as original issue discount (OID). OID was accreted over the term of the Dolphin Note and charged to interest expense, and the unamortized balance was netted against long-term debt in the accompanying consolidated balance sheets. The GSE Warrant and Conversion Option liabilities were marked to market through earnings on a quarterly basis in accordance with EITF No. 00-19, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in a Company’s Common Stock*.



On February 28, 2006, the Company and Dolphin entered into a Cancellation and Warrant Exchange Agreement (the "Cancellation Agreement") under which Dolphin agreed to cancel its Senior Subordinated Secured Convertible Promissory Note and cancel its outstanding warrant to purchase 380,952 shares of GSE common stock at an exercise price of \$2.22 per share. In exchange for Dolphin's agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction discussed in Note 12, the Company repaid the Dolphin Note and agreed to issue a new warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share (the "Dolphin Warrant"). At the date of issuance, the fair value of the Dolphin Warrant was \$868,000, as established using the Black-Scholes Model, and was recorded in paid-in capital with the offset recorded as loss on extinguishment of debt. In accordance with the terms of the warrant agreement, Dolphin exercised the Dolphin Warrant on November 8, 2006 upon the Company's certification that, among other things, the underlying shares of GSE common stock were registered with the Securities and Exchange Commission on October 31, 2006, that the current stock price was greater than \$1.25 per share, and that the average of the current stock prices for each trading day of the prior 30 calendar day period was not less than \$1.25 per share. The Company received cash proceeds of \$603,000.

In conjunction with the early payoff of the Dolphin Note and the cancellation of the 380,952 warrants, the Company wrote off the remaining unamortized Original Issue Discount of \$1.1 million, wrote off the remaining unamortized deferred financing charges of \$185,000, recognized a credit of \$698,000 from the write-off of the liabilities related to the Dolphin Note conversion feature and the related warrants, and took an \$868,000 charge for the value of the 900,000 new warrants issued to Dolphin. The total loss on extinguishment of the Dolphin Note and the cancellation of the related warrants totaled \$1.4 million.

## 10. Income taxes

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

<i>(in thousands)</i>	Years ended December 31,		
	2006	2005	2004
Domestic	\$ (466)	\$ (3,733)	\$ 42
Foreign	269	(913)	166
Total	\$ (197)	\$ (4,646)	\$ 208

The provision for income taxes is as follows:

<i>(in thousands)</i>	Years ended December 31,		
	2006	2005	2004
Current:			
Federal	\$ 103	\$ -	\$ 1
State	29	(4)	18
Foreign	17	103	121
Subtotal	149	99	140
Deferred:			
Federal and state	-	-	-
Foreign	-	50	(50)
Subtotal	-	50	(50)
Total	\$ 149	\$ 149	\$ 90

The allocation of the provision for income taxes to continuing and discontinued operations is as follows:

Continuing operations	\$ 149	\$ 149	\$ 60
Discontinued operations	-	-	30
	\$ 149	\$ 149	\$ 90

The difference between the provision for income taxes included in income (loss) from continuing operations computed at the applicable U.S. statutory rate and the reported provision for income taxes is as follows:

	Effective tax rate percentage (%)		
	2006	2005	2004
Statutory U.S. tax rate	(34.0)%	(34.0)%	34.0%
State income tax, net of federal tax benefit	9.8	-	5.7
Effect of foreign operations	(2.3)	3.1	(6.0)
Change in valuation allowance	(95.2)	34.0	1.0
Other, principally permanent differences	197.6	0.1	7.6
Effective tax rate	75.9%	3.2%	42.3%

Included within permanent differences are certain elements of the loss on extinguishment of debt (see Note 9) that are not tax deductible.

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:

<i>(in thousands)</i>	December 31,		
	2006	2005	2004
Deferred tax assets:			
Net operating loss carryforwards	\$ 7,611	\$ 8,035	\$ 6,246
Investments	1,658	1,658	1,658
Foreign tax credits	378	378	378
Accrued expenses	192	138	260
Expenses not currently deductible for tax purposes	300	449	285
Alternative minimum tax credit carryforwards	162	162	162
Other	179	(107)	145
Total deferred tax asset	10,480	10,713	9,134
Valuation allowance	(10,173)	(10,361)	(8,733)
Total deferred tax asset less valuation allowance	307	352	401
Deferred tax liabilities:			
Tax in excess of book depreciation	(6)	(7)	(29)
Software development costs	(301)	(345)	(322)
Total deferred tax liabilities:	(307)	(352)	(351)
Net deferred tax asset	\$ -	\$ -	\$ 50

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. Management believes that the Company will achieve profitable operations in future years that will enable the Company to recover the benefit of its net deferred tax assets. However, the Company presently does not have sufficient objective evidence to support management's belief, and accordingly, the Company has established a \$10,173,000 valuation allowance for the deferred tax assets as of December 31, 2006. The valuation allowance for deferred tax assets decreased by \$188,000 in 2006, and increased by \$1,628,000 in 2005 and by \$152,000 in 2004.

At December 31, 2006, the Company had available \$19,325,000 and \$1,708,000 of domestic and foreign net operating loss carryforwards, respectively, which expire between 2007 and 2026. The amount of loss carryforward which can be used by the Company may be significantly limited due to changes in the Company's ownership which have occurred subsequent to the spin-off of GSE by GP Strategies, including the equity transactions that occurred in 2006. Thus, a portion of the Company's loss carryforward may expire unutilized.

## 11. 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.

As of December 31, 2006, the Company has reserved 4,762,529 shares of common stock for issuance upon exercise of stock options and warrants and the conversion of the Series A Convertible Preferred Stock.

## 12. Series A Convertible Preferred Stock

On February 28, 2006, the Company raised \$3.9 million, net of associated fees of \$395,000, through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to “accredited investors”, as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stock was convertible at any time into a total of 2,401,133 shares of GSE common stock at a conversion price of \$1.77 per share. The conversion price was equal to 110% of the closing price of the Company’s Common Stock on February 28, 2006, the date the sale of the Convertible Preferred Stock was completed. Each investor received a five-year warrant to purchase GSE common stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of \$1.77 per share. In aggregate, the Company issued warrants to purchase a total of 480,226 shares of GSE common stock. The Convertible Preferred Stockholders are entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid dividends totaling \$279,000 to the preferred stockholders. At the date of issuance, the fair value of the warrants was \$342,000 and the fair value of the preferred stock was \$3.9 million. The fair value of the warrants and the preferred stock was determined by the use of the relative fair value method, in which the \$4.25 million gross proceeds was allocated based upon the fair values of the warrants, as determined by using the Black-Scholes Model, and the preferred stock, as determined by an independent appraisal. At any time after March 1, 2007, the Company has the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeds 200% of the Series A Conversion Price. See Note 20, Subsequent events. The holders of the Convertible Preferred Stock are entitled to vote on all matters submitted to the stockholders for a vote, together with the holders of the voting common stock, all voting together as a single class. The holders of the Convertible Preferred Stock are entitled to the number of votes equal to the number of GSE common stock that they would receive upon conversion of their Convertible Preferred Stock.

The Company paid the placement agent for the Convertible Preferred Stock and Warrants 6% of the gross proceeds received by the Company from the offering (\$255,000) plus five-year warrants to purchase 150,000 shares of the Company’s common stock at an exercise price of \$1.77 per share. In addition to the placement agent fee, the Company paid \$140,000 of other transaction fees related to the offering. At the date of issuance, the fair value of the placement agent warrants was \$128,000, as established using the Black-Scholes Model, and was recorded in paid-in capital, with the offset recognized as a reduction of the preferred stock proceeds.

The proceeds were used to payoff the Dolphin Note and the Company’s line of credit balance and for other working capital purposes.

At December 31, 2006, 33,920 shares of the Series A Convertible Preferred Stock were still outstanding.

On October 23, 2003, ManTech International, Inc. converted all of its preferred stock to common stock in conjunction with the sale of its ownership in GSE to GP Strategies. The Company had accrued dividends payable to ManTech of \$316,000 and \$366,000 as of December 31, 2006 and December 31, 2005, respectively. The unpaid dividends accrue interest at 6% per annum. At December 31, 2006 and December 31, 2005, the Company had an accrual for interest payable of \$80,000 and \$60,000, respectively.

**13. Stock-Based compensation***Accounting Standard Adopted*

In December 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 123R, *Share-Based Payment* (SFAS No. 123R), which revises SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123), and supersedes Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB No. 25), and requires companies to recognize compensation expense for all equity-based compensation awards issued to employees that are expected to vest. The Company adopted SFAS No. 123R on January 1, 2006, using the Modified Prospective Application method without restatement of prior periods. Under this method, the Company would begin to amortize compensation cost for the remaining portion of its outstanding awards for which the requisite service was not yet rendered as of January 1, 2006. However, at January 1, 2006, all of the Company's outstanding options were fully vested and thus there is no compensation expense in 2006 related to the adoption of SFAS No. 123R on these outstanding options. The Company determines the fair value of and accounts for awards that are granted, modified, or settled after January 1, 2006 in accordance with SFAS No. 123R.

The following table presents the impact of SFAS No. 123R on operating income, loss before income tax expense, net loss, basic and diluted loss per share, and cash flows from operating and financing activities:

<i>(In thousands, except per share data)</i>	As Reported		
Year Ended December 31, 2006	Including SFAS No. 123R Adoption	Excluding SFAS No. 123R Adoption	Impact
Operating income	\$ 2,100	\$ 2,302	\$ (202)
Loss before income tax expense	(197)	5	(202)
Net loss	(346)	(144)	(202)
Basic loss per common share	(0.07)	(0.04)	(0.02)
Diluted loss per common share	(0.07)	(0.04)	(0.02)
Net cash used in operating activities	(832)	(832)	-
Net cash provided by financing activities	3,365	3,365	-

*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. As of December 31, 2006, the Company had 224,186 shares of common stock reserved for future grants under the Plan.

Under SFAS No. 123R, the Company recognizes compensation expense on a straight-line basis over the requisite service period for stock-based compensation awards with both graded and cliff vesting terms. The Company applies a forfeiture estimate to compensation expense recognized for awards that are expected to vest during the requisite service period, and revises that estimate if subsequent information indicates that the actual forfeitures will differ from the estimate. The Company recognizes the cumulative effect of a change in the number of awards expected to vest in compensation expense in the period of change. The Company has not capitalized any portion of its stock-based compensation.

F-24

---

During the year ended December 31, 2006, the Company recognized \$202,000 of pre-tax stock-based compensation expense under the fair value method in accordance with SFAS No. 123R.

*Stock option and warrant activity*

During the year ended December 31, 2006, the Company granted stock options to purchase 660,000 shares of common stock to GSE directors, officers, and employees. In addition, the Company granted the following warrants:

- “ In conjunction with the establishment of a new credit facility on March 7, 2006 (See Note 9), the Company issued a five-year warrant to purchase up to 367,647 shares of GSE common stock at an exercise price of \$.01 per share to Laurus Master Fund, Ltd. The warrant vested immediately.
- “ Each investor in the Preferred Stock transaction discussed in Note 12 received a five-year warrant to purchase GSE common stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of \$1.77 per share. In aggregate, the Company issued warrants to purchase a total of 480,226 shares of GSE common stock. The warrants vested immediately.
- “ In exchange for Dolphin’s agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, LP in the Preferred Stock transaction discussed in Note 12, the Company issue a five-year warrant to purchase 900,000 shares of GSE common stock at an exercise price of \$0.67 per share to Dolphin Offshore Partners, LP. The warrant vested immediately.
- “ The Company issued to the placement agent for the Preferred Stock transaction discussed in Note 12 five-year warrants to purchase 150,000 shares of the Company’s common stock at an exercise price of \$1.77 per share. The warrants vested immediately.



Edgar Filing: GSE SYSTEMS INC - Form 10-K

Information with respect to stock option and warrant activity and stock options and warrants outstanding at December 31, 2006, 2005 and 2004 is as follows:

	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
Shares under option and warrant, January 1, 2004	1,903,976	\$ 3.95	
Options and warrants granted	-	-	
Options and warrants exercised	-	-	-
Options and warrants canceled	(37,200)	3.79	
Shares under option and warrant, December 31, 2004	1,866,776	\$ 3.96	
Options and warrants granted	980,952	1.99	
Options and warrants exercised	(50,000)	2.00	\$ 37
Options and warrants canceled	(281,598)	6.91	
Shares under option and warrant, December 31, 2005	2,516,130	\$ 2.90	
Options and warrants granted	2,557,873	1.13	
Options and warrants exercised	(1,507,146)	0.76	\$ 4,285
Options and warrants canceled	(972,677)	3.06	
Shares under option and warrant, December 31, 2006	2,594,180	\$ 2.34	\$ 6,075
Options and warrants exercisable at December 31, 2006	1,934,180	\$ 2.53	\$ 4,902

A summary of the status of the Company's nonvested options and warrants as of and for the year ended December 31, 2006 is presented below:

	Number of Shares	Weighted Average Fair Value
Nonvested options and warrants at January 1, 2006	-	\$ -
Options and warrants granted	2,557,873	1.05
Options and warrants vested during the period	(1,897,873)	1.02
Options and warrants cancelled and expired	-	-
Nonvested options and warrants at December 31, 2006	660,000	\$ 1.13



The weighted average fair value of stock options and warrants granted in 2005 was \$1.15 per share. There were no options or warrants issued in 2004.

Information concerning shares under stock options and warrants exercisable and shares under stock options expected to vest at December 31, 2006:

	Options Exercisable	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
Stock options and warrants exercisable	1,934,180	2.88	2.53 \$	4,902
Stock options expected to vest	660,000	6.22	1.78 \$	1,173
Shares under options and warrants exercisable and expected to vest	2,594,180			

The fair value of the options and warrants granted in 2006 was estimated on the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Year ended December 31, 2006
Risk- free interest rates	4.73% - 4.99%
Dividend yield	0%
Expected life	5.0 years
Volatility	72.88% - 73.97%
Weighted Average Volatility	73.90%

As of December 31, 2006, the Company had \$374,000 of unrecognized compensation expense related to the unvested portion of outstanding stock options expected to be recognized through May 2009.

*Pro-Forma Information*

Edgar Filing: GSE SYSTEMS INC - Form 10-K

The following table presents the pro-forma effect on net income and earnings per share for all outstanding stock-based compensation awards for the years ended December 31, 2005 and 2004 in which the fair value provisions of SFAS No. 123R were not in effect:

(in thousands, except per share data)	Years ended December 31,	
	2005	2004
Net income (loss) attributed to common stockholders, as reported	\$ (4,795)	\$ 118
Add stock-based employee compensation expense included in reported net loss	-	-
Deduct total stock-based employee compensation expense determined under fair-value-method for all awards, net of tax	(672)	(51)
Pro forma net loss	\$ (5,467)	\$ 67
Net loss per share, as reported:		
Basic	\$ (0.53)	\$ 0.01
Diluted	\$ (0.53)	\$ 0.01
Net loss per share, proforma:		
Basic	\$ (0.61)	\$ 0.01
Diluted	\$ (0.61)	\$ 0.01

The fair value of each option was estimated on the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumptions:

	Year ended December 31,	
	2005	2004
Risk-free interest rate	4.0%	3.4%
Dividend yield	0.0%	0%
Expected life	4.4 years	4.2 years
Volatility	74.6%	73.6%

*Common Stock Issued for Services Provided*

On April 20, 2006, the Company entered into an Investor Relations Consulting Agreement (the “Consulting Agreement”) with Feagans Consulting, Inc. As compensation for services rendered pursuant to the Consulting Agreement, the Company agreed to issue 50,000 shares of Common Stock (the “Feagans Shares”). The Feagans Shares vest in monthly increments of 2,778 shares month commencing May 2006 and ending October 2007. As of December 31, 2006, 22,224 shares had vested. The price per share is based on the price per share on the last day of each month and corresponds to the shares vested on the last day of the month. For the eight months ending December 31, 2006, the average price per share was \$4.34; the total compensation expense recognized by the Company was \$96,000 in the twelve months ended December 31, 2006. The Company will deliver the 50,000 common shares to Feagans Consulting, Inc. on October 31, 2007.

F-28

---

**14. 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, 2006 are as follows:

<i>(in thousands)</i>	<b>Gross future minimum lease payments</b>	<b>Assignment of lease</b>	<b>Net future minimum lease payments</b>
2007	\$ 1,470	\$ (666)	\$ 804
2008	790	(457)	333
	\$ 2,260	\$ (1,123)	\$ 1,137

Total rent expense under operating leases for the years ended December 31, 2006, 2005, and 2004 was approximately \$856,000, \$1.3 million, and \$1.2 million, respectively.

The Company subleased 3520 sq. ft. of space in the Columbia, Maryland facility which sublease terminated in October 2005. For the years ended December 31, 2005 and 2004, such sublease rentals amounted to \$71,000 and \$80,000, respectively.

In October 2005, the Company signed an "Assignment of Lease and Amendment to Lease" that assigns and transfers to another tenant (the "assignee") the Company's rights, title and interest in its Columbia, Maryland facility lease. The assignee's obligation to pay rent under the Lease began on February 1, 2006. The Company remains fully liable for the payment of all rent and for the performance of all obligations under the lease through the scheduled expiration of the lease, May 31, 2008, should the assignee default on their obligations. The Company relocated its Maryland operations from its Columbia facility to its Baltimore facility in October 2005.

*Letters of credit and performance bonds*

As of December 31, 2006, the Company was contingently liable for approximately \$2.3 million under five letters of credit used as performance bonds on contracts, which were secured by a cash deposit classified as restricted cash in the consolidated balance sheet.

*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.

**15. Related party transactions**

Prior to the spin-off discussed in Note 1, Business and basis of presentation, GP Strategies owned 57% 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. GSE was charged \$685,000 for GP Strategies' services in 2006, 2005 and 2004. The agreement terminated on December 31, 2006. In addition, in 2004 GSE was charged \$289,000 by GP Strategies for compensation and benefits of the Company's CEO who was an employee of GP Strategies until December 16, 2004.

#### **16. 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. The Company's contributions to the plan were approximately \$124,000, \$93,000, and \$110,000 for the years ended December 31, 2006, 2005, and 2004, respectively.

#### **17. Segment information**

The Company has one reportable business segment that provides simulation solutions and services to the nuclear and fossil electric utility industry, and to the chemical and petrochemical industries. Contracts typically range from 10 months to three years.

For the years ended December 31, 2006, 2005, and 2004, 60%, 83%, and 85% 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. Revenue, operating income (loss) and total assets for the Company's United States, European, and Asian subsidiaries as of and for the years ended December 31, 2006, 2005, and 2004 are as follows:



Edgar Filing: GSE SYSTEMS INC - Form 10-K

*(in thousands)*

	Year ended December 31, 2006					Consolidated
	United States	Europe	Asia	Eliminations		
Contract revenue	\$ 23,975	\$ 3,527	\$ -	\$ -	\$ -	\$ 27,502
Transfers between geographic locations	329	70	166	(565)		-
Total contract revenue	\$ 24,304	\$ 3,597	\$ 166	\$ (565)	\$ -	\$ 27,502
Operating income (loss)	\$ 1,928	\$ 184	\$ (12)	\$ -	\$ -	\$ 2,100
Total assets, at December 31	\$ 37,827	\$ 2,583	\$ 80	\$ (22,042)	\$ -	\$ 18,448

*(in thousands)*

	Year ended December 31, 2005					Consolidated
	United States	Europe	Asia	Eliminations		
Contract revenue	\$ 19,045	\$ 2,899	\$ 6	\$ -	\$ -	\$ 21,950
Transfers between geographic locations	34	57	56	(147)		-
Total contract revenue	\$ 19,079	\$ 2,956	\$ 62	\$ (147)	\$ -	\$ 21,950
Operating loss	\$ (3,995)	\$ (647)	\$ (85)	\$ -	\$ -	\$ (4,727)
Total assets, at December 31	\$ 37,803	\$ 2,282	\$ 31	\$ (28,134)	\$ -	\$ 11,982

*(in thousands)*

	Year ended December 31, 2004					Consolidated
	United States	Europe	Asia	Eliminations		
Contract revenue	\$ 24,774	\$ 4,724	\$ 16	\$ -	\$ -	\$ 29,514
Transfers between geographic locations	132	10	70	(212)		-
Total contract revenue	\$ 24,906	\$ 4,734	\$ 86	\$ (212)	\$ -	\$ 29,514
Operating income (loss)	\$ 89	\$ (7)	\$ (80)	\$ -	\$ -	\$ 2
Total assets, at December 31	\$ 38,711	\$ 3,618	\$ 33	\$ (28,134)	\$ -	\$ 14,228

Approximately 74%, 63%, and 65% of the Company's 2006, 2005 and 2004 revenue, respectively, was derived from international sales of its products and services from all of its subsidiaries.

**18. Supplemental disclosure of cash flow information**

*(in thousands)*

	Years ended December 31,		
	2006	2005	2004

Cash paid:					
Interest	\$	312	\$	156	\$ 96
Income taxes	\$	194	\$	157	\$ 94

F-31

---

**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, 2006 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	\$ 5,584	\$ 6,556	\$ 7,292	\$ 8,070
Operating income	212	439	686	763
Net income (loss)	\$ (1,322)	\$ 124	\$ 422	\$ 430
Basic income (loss) per common share:	\$ (0.12)	\$ -	\$ 0.04	\$ 0.03
Diluted income (loss) per common share:	\$ (0.12)	\$ -	\$ 0.03	\$ 0.03

*(in thousands, except  
per share data)*

	Year ended December 31, 2005 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	\$ 6,293	\$ 6,717	\$ 4,607	\$ 4,333
Operating loss	(1,023)	(374)	(1,430)	(1,900)
Net income (loss)	\$ (1,042)	\$ (556)	\$ (1,047)	\$ (2,150)
Basic income (loss) per common share:	\$ (0.12)	\$ (0.06)	\$ (0.12)	\$ (0.24)
Diluted income (loss) per common share:	\$ (0.12)	\$ (0.06)	\$ (0.12)	\$ (0.24)

**20. Subsequent events**

Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006, and 13,920 shares of Preferred Stock in 2007. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock convert to 1,129,946 shares of GSE common stock.

On March 18, 2007, the Company agreed to deposit \$1,180,000 in a restricted, interest-bearing account at the Union National Bank ("UNB") in the United Arab Emirates as a partial guarantee for the \$11.8 million credit facility that UNB has extended to ESA. The guarantee will be in place until the expiration of the ESA credit facility on December 31,

2014 or earlier if ESA pays down and terminates the credit facility.

F-32

---

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

None.

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

**Evaluation of Disclosure Controls and Procedures**

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed by it in its reports filed or submitted pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that information required to be disclosed by the Company in its Exchange Act reports is accumulated and communicated to management, including the Company's Chief Executive Officer ("CEO"), who is its principal executive officer, and Chief Financial Officer ("CFO"), who is its principal financial officer, to allow timely decisions regarding required disclosure.

The Company's CEO and CFO are responsible for establishing and maintaining adequate internal control over the Company's financial reporting. They have reviewed the Company's disclosure controls and procedures as of December 31, 2006 in order to comply with the SEC's requirements for certification of this Form 10-K. Throughout 2006, the Company relied on the advice of an outside tax consultant; however, this tax consultant died unexpectedly in early 2007. Based upon the impact of the death of the Company's outside tax consultant, and their evaluation as of the end of the period covered by this Form 10-K, the Company's CEO and CFO identified a material weakness in that the Company's accounting department does not currently have sufficient expertise to analyze the accounting for complex tax matters. (A material weakness is a significant deficiency, or combination of significant deficiencies, that result in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.)

The Company is seeking a new outside tax consultant to ensure that it has access to an expert that can handle complex tax matters and analyze the related accounting. Until such time as the Company successfully retains a new outside tax consultant, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) presently are not effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, and summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms.

The Company is not an accelerated filer and, accordingly, it is required to comply with the SEC's enhance requirements for certification and attestation of internal control over financial reporting for its Form 10-K for its fiscal year ending December 31, 2007.

**Limitation of Effectiveness of Controls**

It should be noted that any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system will be met. The design of any control system is based, in part, upon the benefits of the control system relative to its costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of control. In addition, over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events. Because of inherent limitation in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. The Company's controls and procedures are designed to provide a reasonable level of assurance of achieving their objectives.

**ITEM 9B. OTHER INFORMATION.**

None.

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.**

The information required by this item, including items 401, 405 406 and 407 of Regulation S-K, is incorporated by reference to the sections captioned “*Directors and Executive Officers*” and “*Section 16(A) Beneficial Ownership Reporting Compliance*” in the definitive Proxy Statement for the Company’s 2007 Annual Meeting of Shareholders to be held June 6, 2007 and incorporated herein by reference or will be provided in an amendment to this Form 10-K.

The Company has adopted a Code of Business Ethics and Policy that applies to its directors, officers and employees, including its principal executive officer, and principal financial officer. The code of Business Ethics and Policy is available on our website at [www.gses.com](http://www.gses.com). The Company will post on its website information about any amendment to, or waiver from, any provision of the Code of Business Ethics and Policy that applies to its principal executive officer, principal financial officer, or principal accounting officer.

**ITEM 11. EXECUTIVE COMPENSATION.**

The information required by this item will either be set forth under the “*Compensation of Directors and Executive Officers*” or “*Employment Contracts and Termination of Employment and Change-in-Control*” sections in the definitive Proxy Statement for the 2007 Annual Meeting of Shareholders to be held June 6, 2007 and incorporated herein by reference or will be provided in an amendment to this Form 10-K.

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

The information required by this item will be either set forth under the sections captioned “*Voting Securities and Principal Holders Thereof*”, “*Grants of Plan Based Awards During 2006*”, and “*Outstanding Equity Awards at December 31, 2006*” in the definitive Proxy Statement for the 2007 Annual Meeting of Shareholders to be held June 6, 2007 and incorporated herein by reference or will be provided in an amendment to this Form 10-K.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.**

The information required by this item will be either set forth under the “*Directors and Executive Officers*”, “*Related Party Transactions*” or “*Director Independence*” sections in the definitive Proxy Statement for the 2007 Annual Meeting of Shareholders to be held June 6, 2007 and incorporated herein by reference or will be provided in an amendment to this Form 10-K.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.**

The information required by this item will be either set forth under the “*Audit Committee Pre-Approval of Audit and Non-Audit Services*” or “*Principal Accounting Fees and Services*” sections in the definitive Proxy Statement for the 2007 Annual Meeting of Shareholders to be held June 6, 2007 and incorporated herein by reference or will be provided in an amendment to this Form 10-K.



**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) (1) List of Financial Statements

The following financial statements are included in Item 8:

**GSE Systems, Inc. and Subsidiaries**

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2006 and 2005

Consolidated Statements of Operations for the years ended December 31, 2006, 2005, and 2004

Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2006, 2005, and 2004

Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2006, 2005, and 2004

Consolidated Statements of Cash Flows for the years ended December 31, 2006, 2005, and 2004

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.

**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 2, 2007 /s/ JOHN MORAN

John Moran, Chief Executive Officer

(Principal Executive Officer)

Date: April 2, 2007 /s/ JEFFERY G. HOUGH

Jeffery G. Hough, Senior Vice President

and Chief Financial Officer

(Principal Financial and Accounting Officer)

Date: April 2, 2007 (Jerome I. Feldman, Chairman of the Board) By: /s/ JEFFERY G. HOUGH

(Michael D. Feldman, Director) Jeffery G. Hough

(Dr. Sheldon L. Glashow, Director) Attorney-in-Fact

(Scott N. Greenberg, Director)

(Dr. Roger Hagenruber, Director)

(Joseph W. Lewis, Director)

(George J. Pedersen, Director)

(Orrie Lee Tawes III, Director)

A Power of Attorney, dated February 28, 2007 authorizing Jeffery G. Hough to sign this Annual Report on Form 10-K for the fiscal year ended December 31, 2006 on behalf of certain of the directors of the Registrant is filed as Exhibit 24 to this Annual Report.

**Exhibit Description of Exhibit**

**3 Articles of Incorporation and Bylaws**

3(i) 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.

3(ii) 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.**

4.1 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.

4.2 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.

4.3 Cancellation and Warrant Exchange Agreement dated February 28, 2006 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.

4.4 Registration Rights Agreement dated February 28, 2006 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.



**Exhibit Description of Exhibit**

- 4.5 Senior Subordinated Secured Convertible Note and Warrant Purchase Agreement dated as of May 26, 2005 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.6 Form of Senior Subordinated Secured Convertible Promissory Note dated as of May 26, 2005 issued by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP in the aggregate principal amount of \$2,000,000. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.7 Form of Warrant to Purchase 900,000 shares of Common Stock of GSE Systems, Inc. dated as of February 28, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.8 Form of Warrant to Purchase 380,952 shares of Common Stock of GSE Systems, Inc. dated as of May 26, 2005. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.9 Form of Warrant to Purchase 150,000 shares of Common Stock of GSE Systems, Inc. dated as of February 28, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.10 Certificate of Designation, Preferences and Rights of Series A Cumulative Preferred Stock dated as of February 28, 2006 providing for the issuance of a series of 42,500 shares of Series A Cumulative Convertible Preferred Stock, par value \$0.01 per share. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
- 4.11 Form of Warrant to Purchase 367,647 shares of the Company's Common Stock dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.



**Exhibit Description of Exhibit**

- 4.12 Grant of Security Interest in Patents and Trademarks by and among GSE Systems, GSE Power Systems, Inc. and Laurus Master Fund, Ltd. dated March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.13 Subsidiary Guaranty by and among GSE Company Services LLC, MSHI, Inc., GSE Power Systems, Inc., GSE Erudite Software Inc., GSE Government & Military Simulation Systems, Inc., and GSE Process Solutions, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.14 Control Agreement by and among GSE Systems, Inc., Laurus Master Fund Ltd. and GSE Services Company LLC dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.15 Security Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.16 Registration Rights Agreement by and among GSE Systems, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.17 Stock Pledge Agreement by and among the Company, MSHI, Inc., GSE Power Systems, Inc., GSE Process Solutions, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
- 4.18 Secured Non-Convertible Revolving Note dated as of March 7, 2006. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.





**Exhibit Description of Exhibit**

**10. Material Contracts**

- 10.1 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.
- 10.2 GSE Systems, Inc. 1995 Long-Term Incentive Plan, amended as of April 28, 2005. Previously filed in connection with the GSE Systems, Inc. Form DEF 14A as filed with the Securities and Exchange Commission on May 31, 2005 and incorporated herein by reference. \*
- 10.3 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. \*
- 10.4 Office Lease Agreement between Sterling Rutherford Plaza, LLC 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.
- 10.5 Office Lease Agreement between Red Branch Road, LLC 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.
- 10.6 Assignment of Lease and Amendment of Lease between GSEM, LLC and GSE Systems, Inc. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 31, 2006 and incorporated herein by reference.
- 10.7 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.

10.8 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.

**Exhibit Description of Exhibit**

- 10.9 Management Services Agreement between GSE Systems, Inc. and GP Strategies Corporation dated January 1, 2004. Previously filed in connection with the GSE Systems, Inc. Form 10-K filed with the Securities and Exchange Commission on April 14, 2004 and incorporated herein by reference.
- 10.10 Memorandum of Association of Limited Liability Company dated November 8, 2005 by and between Al Qudra Holding PJSC, Centre of Excellence for Applied Research and Training, and GSE Systems, Inc. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.
- 10.11 Supply Agreement Contract by and between Emirates Simulation Academy, LLC and GSE Power Systems, Inc. dated January 3, 2006. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.
- 10.12 License and Technology Transfer Agreement by and Between GSE Power Systems, Inc. and Emirates Simulation Academy, LLC dated January 3, 2006. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.

**14. Code of Ethics**

- 14.1 Code of Ethics for Principal Executive Officer and Senior Financial Officers. Previously filed in connection with the GSE Systems, Inc. Form 10-K file with the Securities and Exchange Commission on March 31, 2006 and incorporated herein by reference.

**21. Subsidiaries.**

- 21.1 List of Subsidiaries of Registrant at December 31, 2006, filed herewith.

**23. Consents of Experts and Counsel**

- 23.1. Consent of KPMG LLP, filed herewith.

**24. Power of Attorney**

24.1 Power of Attorney for Directors' and Officers' Signatures on SEC Form 10-K, filed herewith.

59

---

**Exhibit Description of Exhibit**

**31. Certifications**

31.1 Certification of Chief Executive Officer of the Company pursuant to Securities and Exchange Act Rule 13d-14(a)/15(d-14(a), as adopted pursuant to Section 302 and 404 of the Sarbanes-Oxley Act of 2002, filed herewith.

31.2 Certification of Chief Financial Officer of the Company pursuant to Securities and Exchange Act Rule 13d-14(a)/15(d-14(a), as adopted pursuant to Section 302 and 404 of the Sarbanes-Oxley Act of 2002, filed herewith.

**32. Section 1350 Certifications**

**32.1** Certification of Chief Executive Officer and Chief Financial Officer of the Company pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, file herewith.

**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.