

# GSE SYSTEMS INC

## FORM 10-K (Annual Report)

Filed 03/31/98 for the Period Ending 12/31/97

Address	1332 LONDONTOWN BLVD SYKESVILLE, MD 21784
Telephone	4109707874
CIK	0000944480
Symbol	GVP
SIC Code	7372 - Prepackaged Software
Industry	Software
Sector	Technology
Fiscal Year	12/31

# GSE SYSTEMS INC

## FORM 10-K (Annual Report)

Filed 3/31/1998 For Period Ending 12/31/1997

Address	9189 RED BRANCH ROAD COLUMBIA, Maryland 21045
Telephone	410-772-3500
CIK	0000944480
Industry	Software & Programming
Sector	Technology
Fiscal Year	12/31

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 1997

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from to

*Commission File Number 0-26494*

**GSE Systems, Inc.**

(Exact name of registrant as specified in its charter)

Delaware

52-1868008

-----  
(State of incorporation)

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

8930 Stanford Boulevard, Columbia, Maryland

21045

-----  
(Address of principal executive offices)

-----  
(Zip Code)

Registrant's telephone number, including area code: (410) 312-3700

**SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: NONE**

**SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:**

**Common Stock, \$.01 par value**

(Title of each class)

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

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.

The aggregate market value of Common Stock held by non-affiliates as of March 6, 1998 was \$5,739,857 based on closing price of such stock on that date.

Number of shares of Common Stock outstanding as of March 6, 1998:  
5,065,688.

**DOCUMENTS INCORPORATED BY REFERENCE**

Part III incorporates certain information by reference from the Registrant's definitive proxy statement to be filed for its 1998 annual meeting of shareholders.



GSE SYSTEMS, INC.

FORM 10-K

For the Year Ended December 31, 1997

TABLE OF CONTENTS

	Page
	----
PART I	
Item 1. Business.....	3
Item 1A. Risk Factors.....	8
Item 2. Properties.....	12
Item 3. Legal Proceedings.....	12
Item 4. Submission Matters to a Vote of Security Holders.....	12
PART II	
Item 5. Market for the Registrant's Common Equity and Related Stockholder Matters.....	13
Item 6. Selected Financial Data.....	14
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.....	16
Item 7A. Quantitative and Qualitative Disclosures About Market Risk.....	22
Item 8. Financial Statements and Supplementary Data.....	23
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.....	25
PART III	
Item 10. Directors and Executive Officers of the Company*.....	26
Item 11. Executive Compensation*.....	26
Item 12. Security Ownership of Certain Beneficial Owners and Management*.....	26
Item 13. Certain Relationships and Related Transactions*.....	26
PART IV	
Item 14. Exhibits, Financial Statement Schedules, and Reports on Form 8-K.....	27
SIGNATURES.....	28

\* to be incorporated by reference from the Proxy Statement for the registrant's 1998 Annual Meeting of Stockholders.

**GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**Cautionary Statement Regarding Forward-Looking Statements.**

This Form 10-K contains certain "forward-looking statements," within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the safe harbors created by those Acts. These statements include the plans and objectives of management for future operations, including plans and objectives relating to the development of the Company's business in the domestic and international marketplace. All forward-looking statements involve risks and uncertainties, including, without limitation, risks relating to the Company's ability to enhance existing software products and to introduce new products in a timely and cost-effective manner, reduced development of nuclear power plants that may utilize the Company's products, a long pay-back cycle from the investment in software development, uncertainties regarding the ability of the Company to grow its revenues and successfully integrate operations through expansion of its existing business and strategic acquisitions, the ability of the Company to respond adequately to rapid technological changes in the markets for process control, data acquisition and simulation software and systems, significant quarter-to-quarter volatility in revenues and earnings as a result of customer purchasing cycles and other factors, dependence upon key personnel, and general market conditions and competition. See Item 1A. Risk Factors. The forward-looking statements included herein are based on current expectations that involve numerous risks and uncertainties as set forth herein, the failure of any one of which could materially adversely affect the operations of the Company. The Company's plans and objectives are also based on the assumptions that market conditions and competitive conditions within the Company's business areas will not change materially or adversely and that there will be no material adverse change in the Company's operations or business. Assumptions relating to the foregoing involve judgments with respect, among other things, to future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of the Company. Although the Company believes that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could be inaccurate and there can, therefore, be no assurance that the forward-looking statements included in this Form 10-K will prove to be accurate. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation by the Company or any other person that the objectives and plans of the Company will be achieved.

**PART I**

**ITEM 1. BUSINESS.**

GSE Systems, Inc. ("GSE Systems" or the "Company") designs, develops and delivers business and technology solutions by applying high-technology-related process control, data acquisition, high fidelity simulation, systems and services into applications for worldwide industries including energy and process manufacturing. The Company's solutions and services assist customers in improving quality, safety and throughput; reducing operating expenses; and enhancing overall productivity.

The Company's products are used in over 700 applications, representing over 250 customers in 30 countries, in the following industries: specialty chemical, food & beverage, petroleum refining, oil & gas pipelines, pharmaceutical, fossil and nuclear power generation, metals and water treatment.

## **Recent Developments.**

In 1997, the Company had poor financial results. The senior management of the Company has been substantially changed in the last twelve months and the current management has set a course to reduce costs and to return the Company's focus to its core businesses of controls and simulation.

The Company had previously acquired Erudite Software & Consulting, Inc. ("Erudite Software"), a regional provider of client/server technology, custom application software development, training services, hardware/software sales, and network design and implementation services. This acquisition was made to facilitate the Company's efforts to enter the client/server IT solutions market. However, as a result of the Company's decision to re-focus its strategy on its core businesses, the Company has taken steps toward the divestiture of Erudite Software upon the receipt of an appropriate purchase offer. The Company's current plan is to complete such a divestiture during the second quarter of 1998, however, there can be no assurance that such a divestiture will occur within this time.

The Company had previously sought to expand its presence in overseas markets, especially in Asia. Although the Company has made inroads in the Asia-Pacific region from its base in Singapore, the Company has decided, as a result of the instability caused by the recent Asian economic crisis, to significantly reduce its presence in the region for at least the next twelve months. The Company believes that such action will reduce its business risk and cost in this region.

For the last several years, the Company has occupied a facility of approximately 154,000 square feet in Columbia, Maryland. However, in order to better meet the Company's expected facilities requirements for the foreseeable future, the Company has entered into commitments whereby the lease for its existing Columbia facility will be terminated and the affected operations are scheduled to relocate into two separate facilities during the second quarter of 1998; one of these facilities will be in Columbia, Maryland (approximately 53,000 square feet); the other facility will be in Baltimore, Maryland (approximately 33,000 square feet). The Company believes it can achieve an annualized savings in excess of \$1 million by the implementation of these facilities arrangements.

The Company believes these actions will result in an ongoing, viable enterprise more closely focused on its core businesses.

## **Background.**

GSE Systems was formed on April 13, 1994, by ManTech International Corporation ("ManTech"), GP Strategies Corporation ("GP Strategies" and formerly known as "National Patent Development Corporation" or "NPDC") and its affiliates, General Physics Corporation ("GPC") and SGLG, Inc. ("SGLG" and formerly known as "GPS Technologies, Inc." or "GPS"); and Vattenfall AB ("Vattenfall") to consolidate the simulation and related businesses of their affiliates, GSE Power Systems, Inc. ("Power Systems" and formerly known as "Simulation, Systems & Services Technologies Company" or "S3 Technologies"), GP International Engineering & Simulation, Inc. ("GPI") and GSE Power Systems AB ("Power Systems AB" and formerly known as "EuroSim AB" or "EuroSim"). 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 ("TI"), which the Company operates as GSE Process Solutions, Inc. ("Process Solutions").

In April 1996, the Company aligned its operating groups into three strategic business units (SBUs) to better serve its primary vertical markets - Power, Process and Oil & Gas. The realignment allowed the Company to focus on providing all of its technologies to these markets, while addressing the specific needs of each market and delivering industry specific solutions.

In May 1996, the Company acquired Erudite Software, a regional provider of client/server technology, custom application software development, training services, hardware/software sales, and network design and implementation services. Erudite Software was subsequently combined with a small pre-existing consulting group within the Company to form the Company's Business Systems unit. See "Recent Developments".

In December 1997, the Company acquired 100% of the outstanding common stock of J.L. Ryan, Inc., ("Ryan"), a small provider of engineering modifications and upgrade services to the power plant simulation market, for an initial purchase price of \$1 million (\$600,000 of which was paid in cash upon the closing of the transaction and the remainder through a promissory note payable in four annual installments of \$100,000 each beginning on January 2, 1999) and an amount equal to 50% of the earnings before interest, taxes and amortization of the acquired business from 1998 to 2002; a minimum of \$250,000 of such earnings payments for each of 1998 and 1999 has been guaranteed by the Company. The combination of the Company's pre-existing technology with the technical staff of the acquired Ryan business positions the Company to be more competitive for modifications and upgrade services projects within the nuclear simulation market. This acquisition has been accounted for under the purchase method. The acquisition was part of a comprehensive settlement of claims among Power Systems, Ryan and certain individuals affiliated with Ryan which had been pending in connection with a lawsuit filed by Power Systems in early 1997. See Item 3. Legal Proceedings.

### **Business Strategy.**

Users in the markets served by the Company want to focus their resources on their own customers and wish to spend less resources on managing non-core-competency areas such as control and simulation systems.

At the same time, rapid change brought on by the popularity of Microsoft(R) operating systems has offered users the promise of historically equivalent technology at greatly reduced costs and/or improved technology at equal costs. The emergence of open standards portends a future where applications and systems adhering to these standards will work together seamlessly regardless of what combination of software the user desires. However, this multi-vendor systems environment is very complicated and users with fewer resources now need more assistance to manage this new technology to meet the specific requirements of their enterprises.

Furthermore, the Company believes change with respect to governmental controls is occurring as a result of industry and utilities moving to a more decentralized and unregulated posture worldwide. The Company believes the governmental role will shift from direct control/intervention/regulation to audit/assurance. Therefore, industrial and utility customers may be required to train and certify their operations staffs using an approved training program such as simulation technology, of which the Company is a worldwide leader.

By strategically focusing its products and services offerings on opportunities created by these three convergent trends - greater reliance by the market on key vendors, greater complexity of application and solution integration, and growing demand for simulation technology and services - the Company believes its prospects for the future will be strengthened.

### **Services and Products.**

GSE Systems has a wide range of knowledge of control and simulation systems and the processes those systems are intended to improve, control and model. The Company's knowledge is concentrated heavily in the process industries, which include the chemicals, food & beverage, oil & gas; and pharmaceuticals fields, as well as in the power generation industry, where the Company is a world leader in nuclear power plant simulation.



As the Microsoft Windows NT(R) operating environment technology evolves to have the robustness, features and benefits necessary for the requirements of the Company's target industries, the Company has continued the migration of its products to this platform in such a way as to assure current customers' legacy applications will function properly while at the same time offering the advantages of the new technology. Although the Company uses open standards for its products, the Company's standard system configurations are based on proprietary technology and know-how which are necessary to meet the requirements of its customers in the controls and simulation markets. Since the Company's business model is based on recovering income via software licensing and value-added services rather than the common industry practice of embedding software costs inside the hardware sold, the Company can maintain its business model in an environment of rapidly decreasing hardware costs.

The Company's proprietary products include a Distributed Control System ("DCS") product, known as the D/3 DCS(TM) that is highly flexible and open and a family of real-time dynamic simulation tools. This product is a real-time system, which uses multiple process control modules to monitor, measure, and automatically control variables in both continuous and complex batch processes. Other products include the following: FlexBatch(R), a flexible batch manufacturing system used to facilitate the rapid creation of various batch production processes; TotalVision(TM), which is a graphical system that provides a client/server-based human machine interface for real-time process and plant information; and SABL(TM), which is a sophisticated batch and sequential manufacturing software language that permits the scheduling and tracking of raw materials and finished products, data collection and emergency shutdown procedures.

The Company's proprietary technology also includes real-time dynamic simulation tools and products that are used to develop high fidelity simulations for nuclear and fossil power plants, petroleum refineries, oil & gas pipelines, chemical processing plants and other industrial plants. This technology is both licensed by the Company to its customers as well as used by the Company to develop simulations for its customers. The most prominent products and tools are known as SimSuite Pro(TM), SimSuite Pipeline(TM) and SimSuite Power(TM). Each of these tools facilitates design verification, process optimization and operator training.

The Company also provides value-added 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.

#### **Customers.**

The Company has provided over 700 simulation, process control and data acquisition, and business systems to an installed base of over 250 customers worldwide. In 1997, approximately 36.5% of the Company's worldwide revenue was generated from customers outside the United States.

The Company's customers include, among others, Algonquin Gas Transmission Company, Alyeska Pipeline Service Company, Archer Daniels Midland Company, BASF Corporation, Cargill Incorporated, Exxon Company USA, Kraftwerks Simulator Gesellschaft (Germany), Miller Brewing Company, PECO Energy, Tokyo Electric Power Company (Japan) and USX-US Steel Group.

No individual customer represented more than 10% of the Company's 1997 revenue.

## **Strategic Alliances.**

In recent years, a high portion of the Company's international business has come from major contracts in Europe, 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 or partnerships with various entities including: Siemens AG (Europe), All Russian Research Institute for Nuclear Power Plant Operation (Russia), Kurchatov Institute (Russia), Beijing Aerospace Industrial Control Automation Group Company (China), Samsung Electronics (Korea), Toyo Engineering Corporation (Japan), and Institute for Information Industry (Taiwan). These alliances have enabled the Company to penetrate work in these regions by combining its technological expertise with the regional or local presence and knowledge of its partners.

Also, the Company continues to believe that it must have strong solutions partners as well as strong technology partners in order for it to address the myriad of systems needs of its customers in the various geographical areas in which they do business.

## **Sales and Marketing.**

The Company markets its products and services through a network of direct sales staff, agents and representatives, systems integrators and strategic alliance partners. The Company also employs personnel that support corporate advertising, literature development and exhibit/conference participation.

GSE Systems employs a direct sales force in the continental United States which is regionally based, market focused and trained on its product and service offerings. Market-oriented business and customer development teams define and implement specific campaigns to pursue opportunities in the power, process and client/server solutions marketplaces. This effort is supported by an extensive, regionally-based support organization focused on the current customer installed base. The Company's ability to support its multi-facility, international and/or multinational clients, is facilitated by its network of offices throughout the U.S. and overseas. Within the U.S., the Company maintains offices in: Maryland, Utah, Arizona, New Jersey, North Carolina, Georgia, Louisiana, Texas, and Pennsylvania. Outside the U.S., the Company has offices in Sweden, Belgium, Singapore, Taiwan and Korea. In addition to its offices located overseas, the Company's ability to conduct international business is enhanced by its multilingual and multicultural work force.

Strategic alliance partners, systems integrators and agents represent the Company's interests in Russia, Germany, Switzerland, Spain, Czech Republic, Slovakia, United Arab Emirates, India, South Africa, Venezuela, Mexico, Argentina, and the Peoples Republic of China.

## **Product Development.**

In 1997, the Company continued investment in the conversion of its D/3

*DCS(TM) product to the Microsoft Windows NT(R) platform, enhancement of its S/3 SCADA(TM) system and the productization of its SimSuite(TM) software tools. During the years ended December 31, 1997, 1996 and 1995, gross research and product development expenditures for the Company were \$5.1 million, \$5.8 million and \$4.6 million, respectively. Capitalized software development costs totaled \$3.5 million, \$3.9 million and \$1.6 million during the years ended December 31, 1997, 1996 and 1995. See Note 2 of "Notes to Consolidated Financial Statements" for a discussion of the Company's policy regarding capitalization of software development costs.*

### Industries Served.

The following chart illustrates the approximate percentage of the Company's 1997 and 1996 revenues, respectively, attributable to each of the major industries served by the Company:

	1997	1996
Power.....	31%	45%
Process.....	46%	32%
Other.....	23%	23%

### 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, 1997, the Company's aggregate contract backlog totaled approximately \$39.0 million. At December 31, 1996, contract backlog totaled \$35.2 million.

### Employees.

As of February 28, 1998, the Company had approximately 530 employees, which represents a decrease of approximately 13% compared to February 1997. GSE Systems' operations are dependent on the efforts of its technical personnel and its senior management. Thus, recruiting and retaining capable personnel, particularly engineers, computer scientists and other personnel with expertise in computer software and hardware, as well as particular customer processes, are critical to the future performance of the Company. Competition for qualified technical and management personnel is substantial. Certain of the Company's senior executives are subject to employment agreements which include non-competition covenants. Although the Company's other key personnel are not subject to long-term employment or non-competition agreements, they are subject to standard confidentiality agreements.

## ITEM 1A. RISK FACTORS.

### Fluctuations in Quarterly Operating Results, Market Price.

The Company's operating results have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of new products and enhancements by the Company and its competitors, and fluctuating foreign economic conditions. Since the Company's expense levels are based in part on its expectations as to future revenues, the Company may be unable to adjust spending in a timely manner to compensate for any revenue shortfall and any revenue shortfalls would likely have a disproportionate adverse effect on net income. The Company believes that these factors may cause the market price for 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. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

### **International Sales and Operations.**

Sales of products and the provision of services to customers outside the United States accounted for approximately 36.5% of the Company's revenues in fiscal year 1997. The Company anticipates that international sales and services will continue to account for a significant portion of its revenues in the foreseeable future. As a result, the Company may be subject to certain risks, including risks associated with the application and imposition of protective legislation and regulations relating to import or export (including export of high technology products) or otherwise resulting from trade or foreign policy and risks associated with exchange rate fluctuations. Additional risks include potentially adverse tax consequences, tariffs, quotas and other barriers, potential difficulties involving the Company's strategic alliances and managing foreign sales agents or representatives and potential difficulties in accounts receivable collection. The Company currently sells products and provides services to customers in emerging market economies such as Russia, Ukraine, Bulgaria, and the Czech Republic, as well as customers in countries whose economies have suffered in the recent Asian financial crisis. 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. Furthermore, the Company's ability to expand its business into certain emerging international markets is dependent, in part, on the ability of its customers to obtain financing.

### **Revenues in the Nuclear Power Industry.**

Although, the Company has reduced its reliance on the development of large application systems having multi-year delivery schedules, such as full-scope nuclear power plant simulation projects, the Company will continue to derive a significant portion of its revenues from customers in the nuclear power industry, particularly the international 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 affects 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, general economic conditions and the ability of customers to obtain adequate financing.

### **Revenues in the Chemicals Industry.**

The Company derives a portion of its revenues from companies in the chemicals industry. Accordingly, the Company's future performance is dependent to a certain extent upon the demand for the Company's products by customers in the chemical industry. The Company's revenues may be subject to period-to-period fluctuations as a consequence of industry cycles, as well as general domestic and foreign economic conditions and other factors affecting spending by companies in the Company's target process industries. There can be no assurance that such factors will not have a material adverse effect on the Company's business, operating results and financial condition.

## **Product Development and Technological Change.**

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, process control and data acquisition technologies. The life cycles for software modeling tools, display system software, process control, data acquisition and simulation technologies are variable and largely determined by competitive pressures. Consequently, the Company will need to continue to make significant investments in research and development to enhance and expand its capabilities in these areas and to maintain its competitive advantage.

The Company's products are offered in markets affected by technological change and emerging standards which are influenced by customer preferences. The Company has expended significant resources in developing versions of its core products which operate in the increasingly-popular Windows NT environment, however, there can be no assurance of customer acceptance of these Windows NT-based products or that these products will be competitive with products offered by the Company's competitors. Although the Company believes that no significant trends to migrate to other operating platforms currently affect the markets for the Company's products, there can be no assurance that customers will not require compatibility with such other operating platforms in the future.

## **Intellectual Property Rights.**

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 generally 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 generally 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.

## **Competition.**

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 and process automation 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.

### **Emergence of New Requirements.**

The Company is aware of general industry concerns that software products provide consistent operation through and after the year 2000. The Company has established a compliance program to test and, if necessary, modify new versions of its products which are designed for use in connection with applications for actual plant operations. An evaluation of the Company's products which are not designed for use in connection with actual plant operations has also been commenced. Any failure or delay in testing and/or modifying its products to be year 2000 compliant could affect the Company's competitive position or lead to product obsolescence.

### **Reliance on Key Technical and Executive Personnel.**

The Company's operations are dependent on the efforts of its technical personnel and its senior management. Thus, recruiting and retaining capable personnel, particularly engineers, computer scientists and other personnel with expertise in computer software and hardware, are critical to the future performance of the Company. Competition for qualified technical and management personnel is substantial, and there can be no assurance that the Company will be successful in attracting and retaining the personnel it requires to continue to operate profitably. Certain of the Company's senior executives are subject to employment agreements which include noncompetition covenants. Although the Company's other key personnel are not generally subject to long-term employment or noncompetition agreements, they are subject to standard confidentiality agreements.

### **Legal Liability.**

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. The failure or malfunction of one of the Company's systems or devices could create potential liability for substantial monetary damages and environmental cleanup costs. Such damages or claims could exceed the applicable coverage of the Company's insurance. Although management has no knowledge of material liability claims against the Company to date, such potential future claims could have a material adverse effect on the business or financial condition of the Company. Certain of the Company's products and services are used by the nuclear power industry; although the Company believes that it does not have significant liability exposure associated with such use as nearly all such products and services relate to training, and 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.

### **Influence of Affiliate Stockholders.**

As of the date of this report, certain directors, executive officers and other parties which are affiliates of the Company own in excess of 50% of the Common Stock of the Company. If these stockholders vote together as a group, they will be able to effectively control the business and affairs of the Company, including the election of individuals to the Company's Board of Directors, and the outcome of actions which require stockholder approval.

## **ITEM 2. PROPERTIES.**

As of the date of this report, GSE Systems maintains its headquarters and leases a facility of approximately 154,000 square feet in Columbia, Maryland. However, in order to better meet the Company's expected facilities requirements for the foreseeable future, the Company has entered into commitments whereby the lease for its existing Columbia facility will be terminated and the operations presently occupying such facility are scheduled to relocate into two separate facilities during the second quarter of 1998; one of these facilities will be in Columbia, Maryland (approximately 53,000 square feet) and will be occupied by the Company's corporate headquarters offices, the operations of Power Systems, as well as various other Company operations; the other facility will be in Baltimore, Maryland (approximately 33,000 square feet) and will be occupied by the operations of Process Solutions. Each of the leases for these smaller facilities has a term of ten (10) years.

In addition, the Company also leases office space domestically in Arizona, Georgia, Louisiana, Texas, Pennsylvania, New Jersey, North Carolina, and Utah, as well as in Belgium, Japan, Korea, Singapore, Sweden and Taiwan. The Company leases these facilities for terms ending between 1998 and 2002.

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

In December 1997, Power Systems, Ryan, and certain individuals affiliated with Ryan reached a comprehensive settlement of the previously-reported lawsuit pending among them; pursuant to this settlement, Power Systems acquired all the capital outstanding stock of Ryan and all claims among the parties were dismissed. See Item 1. Business - "Background."

Various other 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 of the Company.

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

No matter was submitted to a vote of security holders during the quarter ended December 31, 1997.

## PART II

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

#### STOCKHOLDER MATTERS.

The following table sets forth for the periods indicated the high and low sale prices for the Common Stock reported by the Nasdaq National Market System.

1996 ----	High ----	Low ---
First Quarter.....	\$ 16	\$ 13 1/4
Second Quarter.....	\$ 17 3/4	\$ 12
Third Quarter.....	\$ 14 7/8	\$ 9 1/4
Fourth Quarter.....	\$ 11 3/4	\$ 6 1/2
1997 ----	High ----	Low ---
First Quarter.....	\$ 11	\$ 5 3/4
Second Quarter.....	\$ 7 1/4	\$ 4 3/8
Third Quarter.....	\$ 6 3/4	\$ 3 3/4
Fourth Quarter.....	\$ 6 3/4	\$ 3

There were approximately 50 holders of record of the Common Stock as of March 6, 1998. Based upon information available to it, the Company believes there are approximately 600 beneficial holders of the Common Stock. The Company has never declared or paid a cash dividend on its Common Stock. The Company currently intends to retain future earnings to finance the growth and development of its business, and therefore does not anticipate paying any cash dividends in the foreseeable future.

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.

In 1997, the Company granted one of its senior executives a stock option to acquire 25,000 shares of Common Stock at an exercise price of \$11.25. In 1996, in exchange for services, the Company granted stock options to two consultants to acquire 10,000 shares of Common Stock in the aggregate at an exercise price of \$14.00. None of the aforementioned stock option grants were made pursuant to the Company's 1995 Long-Term Incentive Plan. Such transactions were exempt from the registration requirements of the Securities Act of 1933, as amended, pursuant to Section 4(2) thereunder.



## **ITEM 6. SELECTED FINANCIAL DATA.**

The following tables present selected unaudited combined financial data of Power Systems, GPI, Power Systems AB and Erudite Software with respect to the periods beginning January 1, 1993 through April 13, 1994 and of the Company for periods after April 13, 1994. Historical results of the Company from April 13, 1994 through December 31, 1994 include the operations of Power Systems, GPI, Power Systems AB and Erudite Software. Power Systems, GPI, Power Systems AB and Erudite Software are collectively referred to as the "Predecessors" with respect to all periods between January 1, 1993 and April 13, 1994. The balance sheet data of the Company as of December 31, 1994 includes the Predecessors and Process Solutions which was acquired on December 30, 1994, except for certain international operations of the TI process systems business which were acquired by the Company in the second quarter of 1995. Historical results of operations and balance sheet data for 1997, 1996 and 1995 include the Predecessors and Process Solutions. The financial information has been derived from the historical financial statements of the Predecessors and the Company. Erudite Software was acquired on May 22, 1996 through a merger. The merger was accounted for by using the pooling of interests method. Accordingly the Company's and Predecessors' financial statements have been restated to include on a historical cost basis the accounts and operations of Erudite Software for all periods presented. The balance sheet data of the Company as of December 31, 1997 includes the operations of Ryan which was acquired by Power Systems as of December 1, 1997. The statement of operations data for the year ended December 31, 1997 includes the activity of Ryan since the date of its acquisition.

	Predecessors (1)		Company			
	Year Ended Dec. 31, 1993	Jan.1 through April 13, 1994	Apr. 14 through Dec. 31, 1994 (2)	Year Ended December 31,		
			1995 (3)	1996 (3)	1997 (3) (4)	
(in thousands, except per share data)						
Statement of Operations Data:						
Revenues .....	\$50,242	\$14,659	\$37,085	\$96,060	\$96,033	\$79,711
Cost of revenue .....	45,656	10,380	27,932	65,592	63,679	58,326
Gross profit .....	4,586	4,279	9,153	30,468	32,354	21,385
Operating expenses:						
Selling, general and administrative .....	11,342	2,628	6,313	21,815	24,192	27,320
Depreciation and amortization .....	1,041	420	1,125	2,341	2,111	2,368
Business combination costs .....	--	--	--	--	1,206	--
Employee severance and termination costs.....	--	--	--	--	--	1,124
Total operating expenses .....	12,383	3,048	7,438	24,156	27,509	30,812
Operating income (loss) .....	(7,797)	1,231	1,715	6,312	4,845	(9,427)
Interest expense .....	48	41	402	983	387	765
Other expense (income), net .....	57	(43)	(192)	(364)	(394)	1,228
Income (loss) before income taxes .....	(7,902)	1,233	1,505	5,693	4,852	(11,420)
Provision (benefit) for income taxes .....	(849)	678	552	2,017	709	(2,717)
Net income (loss) .....	\$ (7,053)	\$ 555	\$ 953	\$ 3,676	\$4,143	\$ (8,703)
Earnings (loss) per common share - Basic .....			\$ 0.26	\$ 0.91	\$ 0.82	\$ (1.72)
- Diluted .....			\$ 0.26	\$ 0.91	\$ 0.82	\$ (1.72)
Weighted average common shares outstanding						
- Basic .....			3,341	4,049	5,066	5,066
- Diluted...			3,341	4,059	5,073	5,066
	As of Dec. 31, 1993	As of Apr. 13, 1994	As of December 31,			
			1994	1995	1996	1997
Working capital.....	(\$2,039)	(\$434)	\$ 1,269	\$16,077	\$13,867	\$ 1,646
Total assets.....	29,588	35,655	42,312	54,688	51,006	48,362
Long-term liabilities.....	10,326	15,570	15,783	6,055	2,580	2,369
Series A Preferred Stock.....	--	--	2,400	--	--	--
Stockholders' equity (deficit).....	(3,128)	(2,563)	(4,229)	20,532	24,693	15,924

(1) Historical results of operations and balance sheet data for the Predecessors include the combined results of operations and the combined balances on a historical cost basis of Power Systems (as a wholly-owned subsidiary of Bicoastal Corporation until August 31, 1993 and of ManTech thereafter), GPI, Power Systems AB and Erudite Software.

(2) Statement of operations data for the period April 14 through December 31, 1994 include the results of operations of the Company and its wholly-owned subsidiaries Power Systems, GPI, Power Systems AB and Erudite Software. Balance sheet data as of December 31, 1994 also includes the domestic operations of Process Solutions, which was acquired on December 30, 1994.

(3) Statement of operations data for the year ended December 31, 1995, 1996 and 1997 includes the operations of Power Systems, GPI, Power Systems AB, Erudite Software, the domestic operations of Process Solutions and the international operations of Process Solutions, substantially all of which the Company acquired in the second quarter of 1995. Balance sheet data as of December 31, 1995, 1996 and 1997 includes Power Systems, GPI, Power Systems AB, Erudite Software, the domestic and international operations of Process Solutions.

(4) Statement of operations data for the year ended December 31, 1997 also includes the operations of Ryan since its acquisition by Power Systems as of December 1, 1997.

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

**Results of Operations.**

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

	Year Ended December 31,					
	1997		1996		1995	
Contract revenue .....	\$ 79,711	100.0%	\$ 96,033	100.0%	\$ 96,060	100.0%
Cost of revenue .....	58,326	73.2	63,679	66.3	65,592	68.3
Gross profit .....	21,385	26.8	32,354	33.7	30,468	31.7
Selling, general and administrative.....	27,320	34.3	24,192	25.2	21,815	22.7
Depreciation and amortization .....	2,368	3.0	2,111	2.2	2,341	2.4
Business combination costs .....	--	--	1,206	1.3	--	--
Employee severance and termination costs..	1,124	1.4	--	--	--	--
Operating (loss) income .....	(9,427)	(11.8)	4,845	5.0	6,312	6.6
Interest expense .....	765	1.0	387	0.4	983	1.0
Other expense (income) .....	1,228	1.5	(394)	(0.4)	(364)	(0.4)
(Loss) income before income taxes .....	(11,420)	14.3	4,852	5.0	5,693	5.9
(Benefit from) provision for income taxes .....	(2,717)	(3.4)	709	0.7	2,017	2.1
Net (loss) income .....	\$ (8,703)	(10.9)%	\$ 4,143	4.3%	\$ 3,676	3.8%

**Comparison of 1997 to 1996.**

**Contract Revenue.** Total contract revenue was \$79.7 million and \$96.0 million for the years ended December 31, 1997 and 1996, respectively. This \$16.3 million (17%) decrease in revenue was primarily attributable to a significant decrease in power plant simulation revenue, resulting from the conclusion of several full-scope nuclear power plant simulation projects in the first half of 1997, and a decrease in third party hardware sales by the Company's Business Systems unit, which decreases were only partially offset by a 12% increase in the domestic revenue of the Company's Process business. The Company as a whole continues its transition towards smaller and shorter-term projects that often include licenses of the Company's proprietary tools.

Revenues from fixed price contracts constitute approximately 90% of the Company's revenues for the past three years. Any unexpected costs or unanticipated delays in connection with the performance of fixed priced contracts could adversely affect the Company's financial results.

International sales were approximately \$29.1 million or 36.5% of total revenues in 1997 and \$48.2 million or 50.2% of total revenues in 1996, a decrease which reflects the significant reduction in power plant simulation revenue in 1997. This decrease notwithstanding, the Company expects that international sales will continue to represent a significant portion of its total revenues. The Company currently sells products and services to customers in emerging market economies such as Russia, Ukraine, Bulgaria, and the Czech Republic, as well as customers in countries whose economies have suffered in the recent Asian financial crisis. The Company's international

operations are subject to various risks, including exposure to currency fluctuation, regulatory requirements, political and economic instability and trade restrictions. The Company has taken steps to reduce these risks, particularly risks associated with doing business in emerging markets, but there can be no assurance that the above mentioned risk factors will not have a material adverse affect on the Company's business, financial condition or results of operations.

**Gross Profit.** Gross profit decreased to \$21.4 million in 1997 from \$32.4 million in 1996, a decline of 33.9%, primarily due to lower revenues generated by power plant simulation contracts. Gross profit percentage was 26.8% in 1997 compared to 33.7% in 1996, reflecting a higher percentage of government contract-related revenues in the power simulation business with corresponding lower margins, an increase to the amortization of software development costs capitalized, lower labor utilization within the Business Systems unit, as well as reserves taken against certain contracts in 1997.

**Selling, General and Administrative Expenses.** Selling, general and administrative expenses increased to \$27.3 million, or 34.3% of revenues, during the year ended December 31, 1997 from \$24.2 million, or 25.2% of revenues, during the corresponding period in 1996. The increase in these expenses in 1997 consists of increased sales and marketing costs, primarily within the Business Systems unit, increased recruiting and relocation costs, and increased costs for professional services related to the lawsuit referred to in Part I, Item 3. Legal Proceedings. Additionally, the increase reflects a reserve of \$600,000 recorded to reduce certain Korean receivables to their estimated realizable value as a result of the Asian financial crisis. In the fourth quarter of 1997, the Company also recorded costs of \$852,000 associated primarily with the future lease commitments on the unused portion of the current Columbia, Maryland leased facility for which the Company will derive no future benefit.

Gross research and product development expenditures were \$5.1 million and \$5.8 million for the years ended December 31, 1997 and 1996, respectively. Capitalized software development costs totaled \$3.5 million and \$3.9 million, during the years ended December 31, 1997 and 1996, respectively. Net research and development costs expensed and included within selling, general and administrative expenses were \$1.6 million and \$1.9 million during the years ended December 31, 1997 and 1996, respectively. The Company continued investing in the conversion of its D/3 DCS(TM) product to the Microsoft Windows NT(R)

*platform, enhancement of its S/3 SCADA(TM) System for the Microsoft Windows NT(R) platform and the productization of its SimSuite(TM) software tools.*

*Employee Severance and Termination Costs. The Company recorded a net charge for severance and other employee obligations of \$1.1 million in connection with cost reduction efforts initiated to offset the impact of a decrease in contract revenues. Of this charge, \$976,000 has been expended as of December 31, 1997.*

**Depreciation and Amortization.** Depreciation expense amounted to \$2.1 million and \$1.9 million during the years ended December 31, 1997 and 1996, respectively. This increase was attributable to higher capital expenditures made in 1997 and 1996.

Amortization of goodwill and intangibles was \$219,000 and \$168,000 during the years ended December 31, 1997 and 1996, respectively. This increase resulted from amortization of certain intangible assets which were fully amortized as of December 31, 1997.

**Business Combination Costs.** In 1996, business combination costs related to the acquisition of Erudite Software, which consist primarily of consulting fees, legal and accounting expenses, and compensation expense for the shares issued to employees by the owners of Erudite Software pursuant to stock transfer agreements, amounted to approximately \$1.2 million and were charged to operating expenses.

**Operating (Loss) Income.** Operating loss amounted to (\$9.4) million, or (11.8)% of revenues, and operating income amounted to \$4.9 million, or 5% of revenues, during the years ended December 31, 1997 and 1996, respectively. This significant decrease in operating income reflects the reduction in margin from power plant simulation projects, increased sales and marketing costs and employee severance and termination costs as well as several other fourth quarter adjustments. See Note 18 of "Notes to Consolidated Financial Statements".

**Interest Expense.** Interest expense increased to \$765,000 in 1997 from \$387,000 in 1996. This increase is attributable primarily to a significant increase in the Company's borrowings under its lines of credit made during the period to fund working capital requirements.

**Other Expense (Income).** Other expenses amounted to \$1.2 million in 1997, resulting almost exclusively from recognized foreign exchange losses of the Company's Asian operations. During 1996, \$394,000 in interest income was earned from short-term investments of excess cash during the year as well as proceeds from the sale of an equity interest in a joint venture.

**(Benefit from) Provision for Income Taxes.** Due to the loss experienced in 1997, the Company recognized a tax benefit of \$2.7 million as compared to the tax provision of \$709,000 recognized in 1996. The effective tax rate was different in 1997 as a result of reductions in the valuation allowance recognized as income by the Company in 1996.

### **Comparison of 1996 to 1995.**

**Contract Revenue.** Total contract revenue was \$96.0 million and \$96.1 million for the years ended December 31, 1996 and 1995. There was an increase in 1996 revenues from the Company's growing client/server solutions business of 82% or \$8.8 million, which was offset by a reduction in nuclear simulation project revenues by 14% or \$7.0 million, due in part to the maturing of the nuclear simulation business and the stoppage on a large Eastern European project due to lack of customer funding.

Contract backlog at December 31, 1996 and 1995 totaled \$35.2 million and \$60.1 million, respectively.

International sales were approximately \$48.2 million or 50.2% of total revenues in 1996 and \$50.8 million or 52.8% of total revenues in 1995.

**Gross Profit.** Gross profit increased to \$32.4 million, a gross margin of 33.7% for the year ended December 31, 1996 from \$30.5 million, a gross margin of 31.7%, in the corresponding period of 1995. The increased gross margin was primarily attributable to declining volume of certain low margin contracts, settlement of claims on two international contracts, changes in contract and warranty estimates and cost containment measures.

**Selling, General and Administrative Expenses.** Selling, general and administrative expenses increased to \$24.2 million, or 25.2% of revenues, during the year ended December 31, 1996 from \$21.8 million, or 22.7% of revenues, during the corresponding period in 1995. The increase in selling, general and administrative expenses for 1996 was primarily attributable to increased sales force, bid and proposal activities, a full year charge attributable to the international operations of Process Solutions, a one time charge for severance and employee related obligations as a result of the Company's alignment into strategic business units and business expansion efforts. These expenses were offset, in part, by a significant decrease in net research and development expenses as discussed below and to a one-time \$1.1 million adjustment in connection with consolidation of duplicate facilities.

Gross research and product development expenditures were \$5.8 million and \$4.6 million for the years ended December 31, 1996 and 1995, respectively. Capitalized software development costs totaled \$3.9 million and

\$1.6 million, during the years ended December 31, 1996 and 1995, respectively. Net research and development costs expensed and included within selling, general and administrative expenses were \$1.9 million and \$3.0 million during the years ended December 31, 1996 and 1995, respectively. During 1996, the Company continued investing in its FlexBatch(R) recipe and process management system,

*conversion of the S/3 SCADA(TM) System to Microsoft Windows NT(R) platform and productization of SimSuite(TM) software tools.*

*Depreciation and Amortization. Depreciation expense amounted to \$1.9 million and \$1.6 million during the years ended December 31, 1996 and 1995, respectively. This increase was attributable to higher levels of capital expenditure in 1996.*

Amortization of goodwill and intangibles was \$168,000 and \$766,000 during the years ended December 31, 1996 and 1995, respectively. This decrease was attributable to the significant reduction in goodwill and other intangible assets at December 31, 1995, as fully discussed in Note 8 of "Notes to Consolidated Financial Statements".

**Business Combination Costs.** Business combination costs related to the acquisition of Erudite Software, which consisted primarily of consulting fees, legal and accounting expenses, and compensation expense for the shares issued to employees by the owners of Erudite Software pursuant to stock transfer agreements, amounted to approximately \$1.2 million and were charged to operating expenses in 1996.

**Operating Income.** Operating income amounted to \$4.9 million and \$6.3 million during the years ended December 31, 1996 and 1995, respectively. During 1996, excluding the non-recurring acquisition costs, operating income was \$6.1 million, or 6.3% of revenues, as compared with \$6.3 million, or 6.6% of revenues during the corresponding period of 1995. The decrease in operating income for 1996 was attributable to higher expenses relating to sales and marketing efforts and business expansion activities, which were partially offset by higher margins on contracts, continued cost control initiatives, lower net research and development expenses and one-time facility adjustment.

**Interest Expense.** Interest expense decreased to \$387,000 during the year from \$983,000, during 1995. This decrease is attributable primarily to the repayment in August 1995 of a five year promissory note to finance the Process Solutions acquisition and temporary pay-down of the working capital bank lines with the Company's initial public offering of Common Stock in mid-1995 ("IPO") proceeds.

**Other Expense (Income).** Other income amounted to \$394,000 from interest earned from short-term investments of excess cash during the year ending December 31, 1996 as well as proceeds from the sale of an equity interest in a joint venture. During the corresponding period of 1995, \$364,000 in interest income was earned from short-term investments of cash proceeds from the IPO.

**Income Tax Expense.** The Company's effective tax rate decreased to 14.6% in 1996 from 35.4% in 1995. The 1996 rate was decreased as a result of a one time reduction of the tax provision of \$1.1 million. This reduction reflected the Company's assessment that it would be able to utilize previous net operating loss carry forwards generated by its power business unit.

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

The Company has funded its activities primarily from operations and from borrowings under lines of credit. In 1997, the Company's operating activities used cash totaling approximately \$3.8 million, primarily

related to the 1997 net loss of \$8.7 million, together with an increase in deferred income tax assets associated with a net operating loss carryforward, partially offset by non-cash items such as depreciation and amortization. For the year ended December 31, 1996, the Company's operating activities used cash of approximately \$1.9 million. At December 31, 1997, the Company had cash and cash equivalents of \$334,000 compared to \$2.4 million as of December 31, 1996.

The Company used approximately \$4,449,000 in cash for investing activities, made up primarily of \$3,474,000 of capitalized software development costs and \$918,000 of capital expenditures.

The Company generated cash flows from financing activities of approximately \$6,167,000, made up primarily of \$6,450,000 in borrowings under the Company's lines of credit.

The Company maintains, through its subsidiaries, two lines of credit that provide for borrowings up to a total of \$14.0 million to support foreign letters of credit, margin requirements or foreign exchange contracts and working capital needs. The first line for \$7.0 million is 90% guaranteed by the Export-Import Bank of the United States ("EXIM"), is collateralized by Power Systems' contract receivables and inventory, and provides for borrowings up to 90% of eligible receivables and 60% of unbilled receivables. The second line, also for \$7.0 million, is collateralized by substantially all of Process Solutions' assets, and provides for borrowing up to 85% of eligible receivables and 20% of inventory (not to exceed \$500,000). The lines require the Company to comply with certain financial ratios and preclude the Company from paying dividends and making acquisitions beyond certain limits without the bank's consent.

In November 1997, the Process Solutions line was amended to permit the use of loan proceeds to support the working capital needs of Erudite Software. In connection with this amendment, Erudite Software became fully liable for amounts outstanding under the line and substantially all of its assets were pledged as collateral.

In March 1998, the Company entered into agreements with the bank whereby each of the Power Systems and Process Solutions lines of credit was conditionally extended through June 30, 1998 and a temporary \$1.5 million over-advance limit was established for the Process Solutions line. In connection with the aforementioned agreement concerning the Process Solutions line, the Company has arranged for certain guaranties to be provided on its behalf to the bank by GP Strategies and ManTech. In consideration for the guaranties, the Company has agreed to grant both GP Strategies and ManTech warrants to purchase shares of the Company's Common Stock; the number of shares of Common Stock and other provisions for such warrants have not been finalized as of the date of this report. The aforementioned agreement concerning the Process Solutions line also provides for: (i) an increase of the applicable interest rate from the prime rate to the prime rate plus 1.00% or from LIBOR plus 1.0% to LIBOR plus 3.00%, as the case may be, and (ii) a reduction in the available borrowing level, and a repayment of outstanding borrowings above such level, in the event of the Company's sale or transfer of certain assets. The Power Systems line continues to bear interest at the prime rate or LIBOR plus 1.5%, as the case may be.

Although the Company was not in compliance with its cash flow coverage ratio or minimum tangible net worth ratio covenants as of December 31, 1997, the Company has received a written waiver of such covenants from its bank.

In 1997, the Company entered into an equipment lease arrangement which provided for up to \$1.2 million of available credit to be used for the procurement of certain computer hardware and office equipment. The Company had utilized \$610,000 of credit under this arrangement, of which \$521,000 related to a sale and lease-back of equipment previously purchased by the Company, prior to expiration of the availability of credit on December 31, 1997. The terms of the lease provide for the Company's payment of monthly lease charges for a term of 36 months.

The Company's additional commitments as of December 31, 1997 consisted primarily of leases on its headquarters and other facilities. Further, the performance of certain of the Company's customer contracts are secured by performance guaranties, amounting to \$548,000, and letters of credit, amounting to \$318,000, as of December 31, 1997, furnished by its subsidiaries' respective former parent organizations in accordance with the

agreement among ManTech, GP Strategies, GPC, SGLG, Vattenfall and the Company dated April 13, 1994 (the "Formation Agreement"). Letters of credit are issued by the Company in the ordinary course of business through commercial banks as required by certain contracts and proposal requirements.

During the year ended December 31, 1997, the Company generated a net loss of \$8.7 million. The Company's credit facilities expire at June 30, 1998, and currently the Company does not have the financial wherewithal to repay these loans. The Company plans to reduce its borrowings through the proceeds from the sale of Erudite Software, which sale the Company is currently actively pursuing. Further, the Company is exploring other options to enhance its liquidity through an additional restructuring of its operations. Although the Company intends to seek to renegotiate or replace its expiring credit facilities in connection with these liquidity enhancing actions, there can be no assurance that such financing will be available to the Company, or if available, will be on terms favorable to the Company.

In the event that the sale of Erudite Software does not result in sufficient proceeds to meet the Company's current obligations as they become due, or in the event that the sale of Erudite Software does not occur before June 30, 1998, certain of the Company's principal stockholders ManTech and GP Strategies have agreed to provide working capital support to the Company through credit enhancements, a portion of which is subject to bank approval which is expected to be received, or by taking actions that would result in additional liquidity to the Company. Although the specific form(s) of this working capital support has not yet been determined, such support may be in the form of credit enhancements, corporate guaranties and/or purchases of certain of the Company's assets.

Management believes that the above actions will result in sufficient liquidity and working capital resources necessary for planned business operations, debt service requirements, planned investments and capital expenditures.

Although the terms of the aforementioned credit working capital support arrangements have not yet been determined, such arrangements could have a dilutive effect on the interests of other holders of the Company's Common Stock.

### **Foreign Exchange.**

A portion of the Company's international sales revenue is received in a currency other than the currency in which the expenses relating to such revenue are paid. The Company manages its foreign currency exposure primarily by entering into foreign currency exchange agreements and purchasing foreign currency options. The former requires the Company, on a specified date or during a specified period, to exchange a set amount of foreign currency for United States dollars or another base currency. The latter provides the Company with the option to exchange foreign currency for United States dollars or another base currency on a specified date or during a specified period. The Company utilizes these foreign exchange agreements and options only to reduce the impact of foreign currency fluctuations on its operating results and does not engage in foreign currency speculation. Foreign exchange contracts do not expose the Company to material risk because any losses on the contracts are calibrated to be offset by gains on the value of the foreign receivables being hedged. Foreign exchange options do not expose the Company to material risk since the Company has the right not to exercise the option.

At December 31, 1997, the Company had forward option contracts of \$460,000 to hedge future German mark receipts and the Company's Swedish subsidiary had forward exchange contracts of Swedish krona 7.0 million, or approximately \$900,000 to hedge future Japanese yen and German mark receipts. Gains and losses on such contracts are recognized as part of the cost of the underlying transactions being hedged. Foreign exchange contracts have an element of risk that the counterparty may not be able to meet the terms of the agreement. However, the Company minimizes such risk exposure by limiting counterparties to NationsBank and Nordbanken AB. Management believes that the risk of incurring such losses is immaterial. The Company has also entered into foreign exchange option contracts with NationsBank, which permit, but do not require, the Company to exchange foreign currencies at a future date with the bank at a contracted exchange rate. Costs associated with such contracts are amortized over the life of the contract matching the underlying receipts.

### **Other Matters.**

The Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130,



"Reporting Comprehensive Income," and Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information," in June 1997, which are both effective for the year ending December 31, 1998. SFAS No. 130 establishes standards for reporting comprehensive income in a full set of general purpose financial statements either in the income statement or in a separate statement. SFAS No. 131 establishes standards for reporting information about operating segments, including related disclosures about products and services, geographic areas and major customers. These standards are not expected to have a material impact on the financial reporting or disclosures of the Company.

Statement of Position 97-2 ("SOP 97-2") regarding Software Revenue Recognition will be effective for transactions entered into in fiscal years beginning after December 15, 1997. SOP 97-2 addresses contract accounting issues in the context of the software industry. Adoption of SOP 97-2 is not expected to have a material impact on the Company.

The Company is in the process of assessing its computer applications to ensure their functionality with respect to the year 2000 millennium change. At present, the Company does not anticipate that material incremental costs will be incurred in any single future year.

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

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

Not applicable.

GSE Systems, SimSuite Pro, SimSuite Pipeline, SimSuite Power,

*FlexBatch, TotalVision, SABL, D/3 DCS and S/3 SCADA are trademarks of GSE Systems, Inc. All other trademarks and/or registered trademarks are the property of their respective owners.*

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

**INDEX TO FINANCIAL STATEMENTS**

	Page
GSE Systems, Inc. and Subsidiaries	----
Report of Independent Accountants.....	F-1
Consolidated Balance Sheets as of December 31, 1997 and 1996.....	F-2
Consolidated Statements of Operations for the years ended	
December 31, 1997, 1996 and 1995.....	F-3
Consolidated Statements of Stockholders' Equity (Deficit) for the years ended	
December 31, 1997, 1996 and 1995.....	F-4
Consolidated Statements of Cash Flows for the years ended	
December 31, 1997, 1996 and 1995.....	F-5
Notes to Consolidated Financial Statements.....	F-6

## **REPORT OF INDEPENDENT ACCOUNTANTS**

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

We have audited the accompanying consolidated balance sheets of GSE Systems, Inc. and Subsidiaries (the Company) as of December 31, 1997 and 1996, and the related consolidated statements of operations, changes in stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. 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 financial statements referred to above present fairly, in all material respects, the consolidated financial position of GSE Systems, Inc. and Subsidiaries as of December 31, 1997 and 1996, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1997, in conformity with generally accepted accounting principles.

**COOPERS & LYBRAND L.L.P.**

McLean, Virginia  
March 31, 1998

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**CONSOLIDATED BALANCE SHEETS**  
(in thousands, except share data)

**ASSETS**

	December 31, 1997	December 31, 1996
	-----	-----
Current assets:		
Cash and cash equivalents .....	\$ 334	\$ 2,450
Contract receivables .....	24,371	27,457
Inventories .....	2,700	3,538
Prepaid expenses and other current assets .....	1,739	2,701
Deferred Income taxes .....	2,570	1,454
	-----	-----
Total current assets .....	31,714	37,600
Property and equipment, net .....	3,864	5,318
Investment in joint venture .....	252	--
Software development costs, net .....	7,526	5,176
Goodwill and other intangible assets, net .....	2,974	2,059
Deferred income taxes .....	1,730	569
Other assets .....	302	284
	-----	-----
Total assets .....	\$48,362	\$51,006
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Lines of credit .....	\$ 9,032	\$ 2,582
Accounts payable .....	7,919	8,604
Accrued expenses .....	4,304	4,430
Obligations under capital lease .....	208	186
Accrued severance costs .....	148	--
Billings in excess of revenue earned .....	6,719	5,358
Accrued contract reserves .....	287	233
Accrued warranty reserves .....	625	1,408
Other current liabilities .....	513	281
Income taxes payable .....	313	651
	-----	-----
Total current liabilities .....	30,068	23,733
Notes payable to related parties .....	185	202
Obligations under capital lease .....	234	420
Billings in excess of revenue earned .....	--	803
Accrued contract and warranty reserves .....	675	687
Other liabilities .....	1,276	468
	-----	-----
Total liabilities .....	32,438	26,313
	-----	-----
Stockholders' equity:		
Common stock \$.01 par value, 8,000,000 shares authorized, 5,065,688 shares issued and outstanding .....	50	50
Additional paid-in capital .....	21,378	21,378
Retained earnings (deficit) - at formation .....	(5,112)	(5,112)
Retained earnings (deficit) - since formation .....	(239)	8,464
Cumulative translation adjustment.....	(153)	(87)
	-----	-----
Total stockholders' equity .....	15,924	24,693
	-----	-----
Total liabilities & stockholders' equity .....	\$48,362	\$51,006
	=====	=====

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

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

(in thousands, except per share data)

	Years ended December 31,		
	1997	1996	1995
	----	----	----
Contract revenue.....	\$79,711	\$96,033	\$96,060
Cost of revenue.....	58,326	63,679	65,592
	-----	-----	-----
Gross profit.....	21,385	32,354	30,468
	-----	-----	-----
Operating expenses:			
Selling, general and administrative.....	27,320	24,192	21,815
Depreciation and amortization.....	2,368	2,111	2,341
Business combination costs.....	--	1,206	--
Employee severance and termination costs.....	1,124	--	--
	-----	-----	-----
Total operating expenses.....	30,812	27,509	24,156
	-----	-----	-----
Operating (loss) income .....	(9,427)	4,845	6,312
Interest expense, net.....	765	387	983
Other (income) expense .....	1,228	(394)	(364)
	-----	-----	-----
(Loss) income before income taxes.....	(11,420)	4,852	5,693
(Benefit from) provision for income taxes.....	(2,717)	709	2,017
	-----	-----	-----
Net (loss) income.....	\$ (8,703)	\$ 4,143	\$ 3,676
	=====	=====	=====
Basic and diluted (loss) earnings per common share....	\$ (1.72)	\$ 0.82	\$ 0.91
	=====	=====	=====

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

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)**

(in thousands)

	Common Stock		Additional Paid-in Capital	Retained Earnings (Deficit)	
	-----	-----		-----	-----
	Shares	Amount		At Formation	Since Formation
-----	-----	-----	-----	-----	
Balance January 1, 1995.....	3,341	\$ 33	\$ --	\$(5,048)	\$ 874
Issuance of common stock.....	1,725	17	21,121	--	--
Distribution to shareholder....	--	--	--	(64)	(229)
Reductions in notes receivable..	--	--	--	--	--
Foreign currency translation....	--	--	--	--	--
Pension liability adjustment....	--	--	--	--	--
Net income... ..	--	--	--	--	3,676
Balance, December 31, 1995.....	5,066	50	21,121	(5,112)	4,321
Compensation expense.....	--	--	257	--	--
Foreign currency translation....	--	--	--	--	--
Pension liability adjustment....	--	--	--	--	--
Net income.....	--	--	--	--	4,143
Balance, December 31, 1996.....	5,066	50	21,378	(5,112)	8,464
Foreign currency translation....	--	--	--	--	--
Net loss.....	--	--	--	--	(8,703)
Balance, December 31, 1997.....	5,066	\$ 50	\$21,378	\$(5,112)	\$ (239)
	=====	=====	=====	=====	=====

  

	Notes	Pension	Foreign	Total
	Receivable from Stockholders	Liability Adjustment	Currency Translation	
-----	-----	-----	-----	-----
Balance January 1, 1995.....	\$ (75)	\$ (73)	\$ 60	\$(4,229)
Issuance of common stock.....	--	--	--	21,138
Distribution to shareholder....	--	--	--	(293)
Reductions in notes receivable..	75	--	--	75
Foreign currency translation....	--	--	194	194
Pension liability adjustment....	--	(29)	--	(29)
Net income... ..	--	--	--	3,676
Balance, December 31, 1995.....	--	(102)	254	20,532
Compensation expense.....	--	--	--	257
Foreign currency translation....	--	--	(341)	(341)
Pension liability adjustment....	--	102	--	102
Net income.....	--	--	--	4,143
Balance, December 31, 1996.....	--	--	(87)	24,693
Foreign currency translation....	--	--	(66)	(66)
Net loss.....	--	--	--	(8,703)
Balance, December 31, 1997.....	\$ --	\$ --	\$ (153)	\$15,924
	=====	=====	=====	=====

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,		
	1997	1996	1995
	-----	-----	-----
<b>Cash Flows From Operating Activities</b>			
Net (loss) income .....	\$(8,703)	\$ 4,143	\$ 3,676
Adjustments to reconcile net (loss) income to net cash provided by (used in) operating activities:			
Depreciation and amortization.....	3,492	2,747	2,813
Accrued facility reserve.....	852	(1,451)	(348)
Provision for doubtful contract receivables .....	723	--	102
Foreign currency transaction loss.....	1,275	--	--
Non-cash stock compensation.....	--	257	--
Deferred income taxes .....	(2,277)	71	627
Interest imputed on discounted note payable .....	--	--	17
Changes in assets and liabilities:			
Contract receivables.....	1,464	2,103	(7,962)
Inventories.....	727	(1,245)	271
Prepaid expenses and other current assets.....	836	355	(1,208)
Other assets.....	(17)	(181)	(150)
Accounts payable and accrued expenses.....	(2,152)	1,399	3,645
Accrued severance .....	148	--	--
Billings in excess of revenue earned.....	644	(6,933)	617
Accrued contract and warranty reserves.....	(710)	(1,927)	(2,605)
Other current liabilities.....	200	(780)	(157)
Income taxes payable .....	(315)	(520)	676
Other liabilities.....	(2)	41	(1)
	-----	-----	-----
Net cash provided by (used in) operating activities.....	(3,815)	(1,921)	13
	-----	-----	-----
<b>Cash Flows From Investing Activities:</b>			
Capital expenditures.....	(918)	(2,834)	(1,501)
Capitalization of software development costs.....	(3,474)	(3,890)	(1,664)
Purchase of business, net of cash acquired.....	(578)	--	--
Proceeds from sale/leaseback transaction.....	521	--	--
	-----	-----	-----
Net cash used in investing activities.....	(4,449)	(6,724)	(3,165)
	-----	-----	-----
<b>Cash Flows From Financing Activities:</b>			
Increase in (repayments under) lines of credit with bank.....	6,450	2,369	(4,024)
Cash overdraft .....	--	--	(13)
Repayment to Vattenfall .....	--	--	(1,411)
Repayments under capital lease obligations.....	(266)	(37)	(75)
Principal payments under term-note.....	--	--	(7,882)
Decrease in notes payable to related parties .....	(17)	--	(38)
Payments to shareholder at formation .....	--	--	(64)
Net proceeds from sale of common stock .....	--	--	21,138
Redemption of preferred stock .....	--	--	(2,400)
Net repayment of amounts due from stockholders.....	--	(204)	2,473
	-----	-----	-----
Net cash provided by (used in) financing activities.....	6,167	2,128	7,704
Effect of exchange rate changes on cash.....	(19)	(49)	112
	-----	-----	-----
Net increase (decrease) in cash and cash equivalents.....	(2,116)	(6,566)	4,664
Cash and cash equivalents at beginning of period.....	2,450	9,016	4,352
	-----	-----	-----
Cash and cash equivalents at end of period.....	\$ 334	\$ 2,450	\$ 9,016
	=====	=====	=====

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

# GSE SYSTEMS, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### 1. Business

GSE Systems, Inc. (the "Company") designs, develops and delivers business and technology solutions by applying process control, data acquisition, simulation, client/server and business software, systems and services to the energy, process and manufacturing industries worldwide. The Company was formed on April 13, 1994 through the consolidation of operations of GSE Power Systems, Inc. ("Power Systems" and formerly "Simulation, Systems & Services Technologies Company" and its immediate parent MSHI, Inc.), GP International Engineering & Simulation, Inc. ("GPI") and GSE Power Systems AB ("Power Systems AB" and formerly "EuroSim AB"). In December 1994 and in the second quarter of 1995, the Company expanded into the process control and data acquisition business through the acquisition of the net assets of the process control systems division of Texas Instruments Incorporated ("TI"), which now does business as GSE Process Solutions, Inc. ("Process Solutions"). In May 1996, the Company acquired all of the outstanding shares of capital stock of Erudite Software & Consulting, Inc. ("Erudite Software"), a provider of client/server solutions through custom application software development, training services, hardware-software sales and network design and implementation. In December 1997, the Company acquired all of the outstanding shares of capital stock of J.L. Ryan, Inc. ("Ryan"), a provider of engineering modifications and upgrade services to the power plant simulation market.

During the year ended December 31, 1997, the Company generated a net loss of \$8.7 million. The Company's credit facilities expire at June 30, 1998, and currently the Company does not have the financial wherewithal to repay these loans. The Company plans to reduce its borrowings through the proceeds from the sale of Erudite Software, which sale the Company is currently actively pursuing. Further, the Company is exploring other options to enhance its liquidity through an additional restructuring of its operations. Although the Company intends to seek to renegotiate or replace its expiring credit facilities in connection with these liquidity enhancing actions, there can be no assurance that such financing will be available to the Company, or if available, will be on terms favorable to the Company.

In the event that the sale of Erudite Software does not result in sufficient proceeds to meet the Company's current obligations as they become due, or in the event that the sale of Erudite Software does not occur before June 30, 1998, certain of the Company's principal stockholders ManTech and GP Strategies have agreed to provide working capital support to the Company through credit enhancements, a portion of which is subject to bank approval which is expected to be received, or by taking actions that would result in additional liquidity to the Company. Although the specific form(s) of this working capital support has not yet been determined, such support may be in the form of credit enhancements, corporate guaranties and/or purchases of certain of the Company's assets.

Management believes that the above actions will result in sufficient liquidity and working capital resources necessary for planned business operations, debt service requirements, planned investments and capital expenditures.

Although the terms of the aforementioned credit working capital support arrangements have not yet been determined, such arrangements could have a dilutive effect on the interests of other holders of the Company's Common Stock.

### 2. Summary of significant accounting policies

#### **Formation of the Company**

The Company was formed through the contribution of the businesses of Power Systems (and its immediate parent), GPI and Power Systems AB by their parent organizations, ManTech and certain of its employees and related parties, GP Strategies and GP Strategies' affiliates, SGLG, Inc. ("SGLG" and formerly "GPS Technologies, Inc." or "GPS") and General Physics Corporation ("GPC"), and Vattenfall Engineering AB ("Vattenfall"). In exchange, the contributors received shares of Common Stock of the Company. In addition, ManTech received shares of preferred stock of the Company and Vattenfall received cash and notes. In light of the equality of interests of the Company's principal stockholders, there was no identifiable acquirer in the consolidation. Thus, the assets and liabilities of each of the businesses contributed were recorded at historical cost.

#### Principles of consolidation

The accompanying consolidated financial statements include the results of operations of the Company and its wholly-owned subsidiaries: Power Systems, GPI, Power Systems AB, Process Solutions, Erudite Software and Ryan. All inter-company balances and transactions have been eliminated.



**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

Accounting estimates

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

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and short-term highly liquid investments with original maturities of less than three months at the date of purchase.

Supplemental disclosures of cash flow information (in thousands):

	Year Ended December 31,		
	1997	1996	1995
Non cash investing & financing activities:			
Obligations under capital leases.....	\$ 102	\$ 313	\$ 90
	=====	=====	===
Notes payable to related party for investment in joint venture.....	\$ 252	\$ --	\$ --
	=====	=====	=====
Cash paid:			
Interest.....	741	228	882
	=====	=====	=====
Income taxes.....	233	285	767
	=====	=====	=====

As discussed in Note 3 the Company acquired Process Solutions' international operations in the second quarter of 1995 and the operations of J. L. Ryan in December of 1997. In conjunction with these acquisitions, the purchase price consisted of the following: (in thousands)

Cash paid.....	\$ 600	--	\$ --
Long-term note payable issued.....	900	--	1,043
	-----	-----	-----
Total purchase price.....	\$1,500	--	\$ 1,043
	=====	=====	=====

**Inventories**

Inventories are stated at the lower of cost, as determined by the average cost method, or market. Obsolete or unsaleable inventory is reflected at its estimated net realizable value. Inventory costs include raw materials and purchased parts.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

A summary of inventories is as follows (in thousands):

	December 31,	
	1997	1996
Raw materials.....	\$ 1,610	\$ 2,115
Service parts.....	1,090	1,423
	\$ 2,700	\$ 3,538
	=====	=====

**Property and equipment**

Property and equipment are 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 is eliminated from the respective accounts and any resulting gain or loss is included in operations. Maintenance and repairs are charged to expense as incurred.

**Software development costs**

Certain computer software development costs are capitalized in the accompanying consolidated balance sheets. Capitalization of computer software development costs begins upon the establishment of technological feasibility. Capitalization ceases and amortization of capitalized costs begins when the software product is commercially available for general release to customers. Amortization of capitalized computer software development costs is included in cost of revenue and is provided at the greater of the amount computed using (a) the ratio of current gross revenues for a product to the total of current and anticipated future gross revenue or (b) the straight-line method over the remaining estimated economic life of the product, not to exceed five years.

**Research and development**

Development expenditures incurred to meet customer specifications under contracts accounted for under the percentage of completion method are charged to contract costs. Company sponsored research and development expenditures are charged to operations as incurred and are included in selling, general and administrative expenses. The amounts incurred for Company sponsored research and development activities relating to the development of new products and services or the improvement of existing products and services, exclusive of amounts capitalized, were approximately \$1,580,000, \$1,861,000 and \$2,945,000 for the years ended December 31, 1997, 1996 and 1995, respectively.

**Goodwill**

Goodwill represents the excess of purchase price over the fair value of net tangible and intangible assets acquired. These amounts are amortized on a straight-line basis over periods ranging from seven to fifteen years.

**Asset Impairments**

At each balance sheet date, management evaluates the recoverability of identifiable tangible and intangible assets using certain financial indicators, such as historical and future ability to generate income from operations. The Company's policy is to record an impairment loss against the net unamortized cost of the asset in the period when it is determined that the carrying amount of the asset may not be recoverable. This determination is based on an evaluation of such factors as the occurrence of a significant event, a significant change in the environment in which the business operates, or if the expected future net cash flows (undiscounted and without interest) would become

## GSE SYSTEMS, INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

less than the carrying amount of the asset. Measurement of the impairment loss is based on the estimated fair value of the asset.

#### 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 as a separate component of stockholders' equity. Transaction gains and losses, resulting from changes in exchange rates, are included in operations in the period in which they are incurred. For the year ended December 31, 1997, the foreign currency transaction loss, which is included in other (income) expense, was approximately \$1,275,000. This transaction loss is primarily the result of intercompany transactions which have been negatively impacted by the poor financial condition of Asian markets. Foreign currency transaction gains and losses were not material in 1996 and 1995.

#### Revenue recognition

Revenue under fixed-price contracts generally is accounted for on the percentage-of-completion method, based on contract costs incurred to date and estimated costs to complete. Estimated contract earnings are reviewed and revised periodically as the work progresses and the cumulative effect of any change is recognized in the period in which the change is determined. Estimated losses are charged against earnings in the period such losses are identified. The remaining liability for contract costs to be incurred in excess of contract revenue is reflected as accrued contract reserves in the Company's consolidated balance sheets. Revenue from sales of other products is recorded when the products are shipped, and for software products, upon execution of a licensing agreement, shipment of the product and the determination by management that the resulting receivable is deemed collectible. Revenue 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. The Company has no significant vendor obligations or collectibility risk associated with its product sales.

#### Warranties

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. During 1997 and 1996, the Company revised its estimate for future warranty costs. The effect of these changes in estimates was to decrease gross profit in 1997 by approximately \$(230,000) and increase gross profit in 1996 by approximately \$601,000.

#### 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 basis 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. Income tax expense consists of the Company's current liability for federal, state and foreign income taxes and the change in the Company's deferred income tax assets and liabilities. No provision has been made for the undistributed earnings of the Company's foreign subsidiaries as they are considered permanently invested. Amounts of undistributed earnings are not material to the overall consolidated financial statements.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

Earnings per share

Effective December 31, 1997, the Company adopted Statement of Financial Accounting Standards No. 128, "Earnings Per Share," which requires the presentation of basic earnings per share and diluted earnings per share. Basic earnings per share is based on the weighted average number of outstanding common shares for the period. Diluted earnings per share adjusts the weighted average for the potential dilution that could occur if stock options, warrants or other convertible securities were exercised or converted into common stock. Diluted earnings per share is the same as basic earnings per share for the year ended December 31, 1997 because the effects of such items were anti-dilutive. The earnings per share computations have been restated for all periods presented to conform to FAS 128.

The number of common shares and common share equivalents used in the determination of basic and diluted earnings (loss) per share was as follows. The difference between these amounts in 1996 and 1995 represents dilutive options to purchase shares of common stock computed under the treasury stock method.

	1997 ----	1996 ----	1995 ----
Basic.....	5,065,700 =====	5,065,700 =====	4,049,000 =====
Diluted.....	5,065,700 =====	5,073,700 =====	4,059,000 =====

**New Accounting Standards**

The Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income," and Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information," in June 1997, which are both effective for the year ending December 31, 1998. SFAS No. 130 establishes standards for reporting comprehensive income in a full set of general purpose financial statements either in the income statement or in a separate statement. SFAS No. 131 establishes standards for reporting information about operating segments, including related disclosures about products and services, geographic areas and major customers.

Statement of Position 97-2 (SOP 97-2) regarding Software Revenue Recognition will be effective for transactions entered into in fiscal years beginning after December 15, 1997. SOP 97-2 addresses contract accounting issues in the context of the software industry. Adoption of SOP 97-2 is not expected to have a material impact on the Company.

Concentration of credit risk

Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of 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 and manufacturing industries. No single customer accounted for a significant (greater than 10%) amount of the Company's revenue during the years ended December 31, 1997, 1996 and 1995 and there were no significant contract receivables from a single customer at December 31, 1997 and 1996. The Company typically performs a credit evaluation before extending credit and may require letters of credit, bank guarantees or advance payments. Thereafter, the Company continues to monitor its contract receivables exposure after giving effect to letters of credit, bank guarantees, the status of work performed on contracts, and its customers' financial condition.

Off balance sheet risk and foreign exchange contracts

The Company enters into forward exchange contracts, options and swaps as hedges against certain foreign currency commitments. The Company also enters into letters of credit and performance guarantees in the ordinary course of business as required by certain contracts and proposal requirements. The Company does not hold any derivative financial instruments for trading purposes.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

Gains and losses on foreign exchange contracts and swaps are recognized as part of the cost of the underlying transactions being hedged in the period in which the exchange rates changed. Foreign exchange contracts have an element of risk that the counterparty may not be able to meet the terms of the agreement. However, the Company minimizes such risk exposure by limiting counterparties to nationally recognized financial institutions. Foreign exchange options contracts permit but do not require the Company to exchange foreign currencies at a future date with counterparties at a contracted exchange rate. Costs associated with such contracts are amortized over the life of the contract matching the underlying receipts.

**3. Acquisitions**

The Company acquired the net assets of the domestic operations of Process Solutions on December 30, 1994 and the international operations in the second quarter of 1995 for an aggregate purchase price of \$9,882,000. This acquisition was accounted for under the purchase method. The financial results of Process Solutions have been included in the results of operations from the dates of acquisition. The acquisition was financed through a promissory note payable in the amount of \$5,882,000 with a five year term (the "TI Five-Year Note"), a short-term promissory note payable in the amount of \$2,000,000 and cash from operations of the Company in the amount of \$2,000,000. The TI Five-Year Note, which was guaranteed by the Company and certain of its stockholders, and the short-term promissory note, bore interest at a rate of 8% and were fully repaid in 1995. The Company is also required to make quarterly performance payments to TI equal to 15% of the revenue earned through December 30, 1999 attributable to the Real Time Business Controls portion of the acquired business with a minimum payment of \$750,000 and a maximum payment of \$4,000,000. The minimum amount of \$750,000 has been accrued and recorded as goodwill, and all additional payments above \$750,000 will be recorded as goodwill if paid. The acquisition resulted in total goodwill of \$2,427,000, which is being amortized over fifteen years.

On May 22, 1996, the Company acquired all of the outstanding shares of capital stock of Erudite Software. The acquisition was accomplished through a merger of Erudite Software into a wholly owned subsidiary of the Company in which 840,688 shares of the Company's Common Stock were exchanged for all outstanding shares of capital stock of Erudite Software. The acquisition has been accounted for using the pooling-of-interests method of accounting and accordingly, the Company's consolidated financial statements have been restated to include the accounts and operations of Erudite Software for all periods prior to the merger.

Combined and separate results of the Company and Erudite Software during the periods preceding the merger were as follows (in thousands):

	The Company -----	Erudite Software -----	Combined -----
<b>Three Months Ended March 31, 1996:</b>			
Revenue.....	\$ 18,545	\$ 3,758	\$ 22,303
	=====	=====	=====
Net income.....	\$ 860	\$ 231	\$ 1,091
	=====	=====	=====
<b>Year Ended December 31, 1995:</b>			
Revenue.....	\$ 85,302	\$ 10,758	\$ 96,060
	=====	=====	=====
Net income.....	\$ 3,490	\$ 186	\$ 3,676
	=====	=====	=====

On December 1, 1997, the Company acquired 100% of the outstanding common stock of J.L. Ryan, Inc. ("Ryan") for an initial purchase price of \$1,000,000 and contingent consideration based on the performance of the business from 1998 to 2002; a minimum of \$250,000 of such earnings payments for each of 1998 and 1999 has been guaranteed by the Company. The Company paid \$600,000 in cash upon the closing of the transaction and entered into a promissory note payable in four annual installments of \$100,000 each beginning on January 2, 1999. This

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

acquisition has been accounted for under the purchase method. The financial results of Ryan have been included in the results of operations from the date of acquisition. The acquisition resulted in total goodwill of \$1,133,976, which is being amortized over seven years. The following unaudited pro forma information has been prepared assuming that the acquisition was consummated on January 1, 1996.

**Pro Forma Information (Unaudited)**

	Year Ended	
	1997	1996
	-----	-----
	1997	1996
	----	----
	(In thousands, except per share data)	
	(Unaudited)	
Revenues .....	\$ 81,239	\$ 98,310
Net income .....	\$ (8,861)	\$ 4,505
Basic and diluted (loss) earnings per share.....	\$ (1.75)	\$ .89
Weighted Average Number of Shares Outstanding - Basic.....	5,066	5,066
	=====	=====

The pro forma results are not necessarily indicative of what actually would have occurred if the acquisition and the payment of debt had been made at the beginning of the above periods. In addition, they are not intended to be a projection of future results.

**4. Fair values of financial instruments**

The carrying amounts of cash and cash equivalents and short-term debt approximate fair value because of the short-term maturity of these instruments. The carrying amount of long-term debt approximates fair value based on either market prices for the same or similar issues or the current rates offered to the Company for similar debt of the same maturities. Fair value estimates of foreign currency instruments, which are included in prepaid expenses and other current assets in the consolidated balance sheet, were based on quotes from financial institutions, as set forth below (in thousands):

	December 31, 1997			December 31, 1996		
	Carrying Amount	Fair Value	Notional/ Contract Value	Carrying Amount	Fair Value	Notional/ Contract Value
	-----	-----	-----	-----	-----	-----
Foreign currency instruments:						
Options.....	\$ 55	\$ 62	\$ 520	\$ 333	\$ 231	\$ 3,973
Forward contracts.....	\$ -	\$ -	\$1,410	\$ 370	\$ 409	\$ 4,665
Swaps.....	\$ -	\$ -	\$ -	\$ 106	\$ 89	\$ 594

**5. Contract receivables and billings in excess of revenue earned**

Contract receivables represent balances due from a broad base of both domestic and international customers. Due to the various billing and payment terms, none of these individual customer balances is significant (more than 10%). All contract receivables are considered to be collectible within twelve months. The components of contract receivables are as follows (in thousands):

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

	December 31,	
	1997	1996
Billed receivables.....	\$ 16,994	\$ 18,041
Recoverable costs and accrued profit - not billed.....	8,398	9,714
Allowance for doubtful accounts.....	(1,021)	(298)
	-----	-----
Total contract receivables.....	\$ 24,371	\$ 27,457
	=====	=====

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.

Revisions in estimated contract costs at completion are reflected in the period during which facts and circumstances necessitating such a change first become known. The effect of changes in estimates of contract profits was to decrease gross profit by approximately \$410,000 for the year ended December 31, 1997 and to increase gross profit by approximately \$1,900,000 and \$1,019,000 during the years ended December 31, 1996 and 1995 respectively.

For the year ended December 31, 1995, the total estimated contract revenue and costs at completion for two international contracts included claims revenue, which was equal to estimated future costs, of \$1,200,000. During 1996, the Company received contract modifications totaling \$2,200,000 for the claims recognized in 1995 and for additional claims in 1996. In connection with these contract modifications, the Company incurred total costs of approximately \$1,600,000, including costs related to the claims recognized in 1995. Accordingly, the Company recognized additional gross profit of approximately \$600,000 during 1996.

Additionally, in early 1997, the Company settled claims and counterclaims with its consortium partner on these international contracts for which there was no net impact to the Company.

6. Property and equipment

Property and equipment consists of the following (in thousands):

	December 31,	
	1997	1996
Computer equipment.....	\$ 7,771	\$ 7,101
Leasehold improvements.....	1,889	1,829
Furniture and fixtures.....	1,652	1,521
	-----	-----
Accumulated depreciation and amortization.....	(7,448)	(5,133)
	-----	-----
Property and equipment, net.....	\$ 3,864	\$ 5,318
	=====	=====

Depreciation and amortization expense was \$2,149,000, \$1,943,000 and \$1,575,000 for the years ended December 31, 1997, 1996 and 1995, respectively.

The Company has \$962,000 and \$860,000 in assets held under capital lease as of December 31, 1997 and 1996, respectively. Accumulated amortization on these assets was \$384,000 and \$190,000 as of December 31, 1997 and 1996, respectively.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

**7. Software development costs**

Software development costs, net, consist of the following (in thousands):

	December 31,	
	1997	1996
Capitalized software development costs.....	\$ 9,028	\$ 5,554
Accumulated amortization.....	(1,502)	(378)
Software development costs, net.....	\$ 7,526	\$ 5,176

Software development costs capitalized were \$3,474,000, \$3,890,000 and \$1,664,000 for the years ended December 31, 1997, 1996 and 1995, respectively. Amortization of software development costs capitalized was \$1,124,000, \$635,000, \$471,000 for the years ended December 31, 1997, 1996 and 1995, respectively, and are included within cost of revenue. During 1996, the Company wrote-off approximately \$2.4 million in fully amortized capitalized software development costs.

**8. Goodwill**

Goodwill consists of the following (in thousands):

	December 31,	
	1997	1996
Cost.....	\$ 3,559	\$ 2,425
Accumulated amortization.....	(585)	(366)
Total.....	\$ 2,974	\$ 2,059

Amortization expense for goodwill was approximately \$219,000, \$168,000 and \$270,000 for the years ended December 31, 1997, 1996 and 1995, respectively. For the year ended December 31, 1995, the Company recorded amortization expense of \$496,000 for other intangible assets that were fully amortized by December 31, 1995.

As discussed in Note 11, during 1996 and 1995, the Company reduced the valuation allowance (against deferred tax assets) that was set up in connection with the acquisition of Power Systems in August 1993. This resulted in a corresponding reduction of goodwill of \$109,000 and \$525,000 during the years ended December 31, 1996 and 1995, respectively, and other intangible assets by \$829,000 during the year ended December 31, 1995.

**9. Accrued expenses**

Accrued expenses consist of the following (in thousands):

	December 31,	
	1997	1996
Accrued vacation, severance and other benefits.....	\$ 1,771	\$ 2,456
Accrued compensation and payroll taxes.....	1,260	1,504
Other accrued expenses.....	1,273	470
Total.....	\$ 4,304	\$ 4,430



**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

10. Notes payable and financing arrangements

Notes payable and financing arrangements consist of the following (in thousands):

	December 31,	
	1997	1996
Lines of credit with bank.....	\$ 9,032	\$ 2,582
Notes payable to related parties.....	185	202
Capital lease obligations.....	442	606
	9,659	3,390
Total notes payable and financing arrangements.....	(9,240)	(2,768)
Less amounts payable within one year.....	\$ 419	\$ 622
Long-term portion.....	=====	=====

**Lines of Credit**

The Company maintains, through its subsidiaries, two lines of credit that provide for borrowings up to \$14.0 million to support foreign letters of credit, margin requirements or foreign exchange contracts and working capital needs. The first line, through Power Systems, of \$7.0 million is 90% guaranteed by the Export-Import Bank of the United States ("EXIM") and is collateralized by Power Systems' contract receivables and inventory. The line provides for borrowings up to 90% of eligible receivables and 60% of unbilled receivables. The outstanding borrowings under the Power Systems line at December 31, 1997 were \$4,943,000. The second line, through Process Solutions, of \$7.0 million is collateralized by substantially all of Process Solutions' assets and provides for borrowings up to 85% of eligible receivables and 20% of inventory (limited to \$500,000). The outstanding borrowings under the Process Solutions line at December 31, 1997 were \$4,090,000. The weighted average interest rate on these borrowings was 8.3%, 8.25% and 8.5% for the years ended December 31, 1997, 1996 and 1995, respectively.

In November 1997, the Process Solutions line was amended to permit the use of loan proceeds to support the working capital needs of Erudite Software. In connection with this amendment, Erudite Software became fully liable for amounts outstanding under the line and substantially all of its assets were pledged as collateral.

In March 1998, the Company entered into agreements with the bank whereby each of the Power Systems and Process Solutions lines of credit was conditionally extended through June 30, 1998 and a temporary \$1.5 million over-advance limit was established for the Process Solutions line. In connection with the aforementioned agreement concerning the Process Solutions line, the Company has arranged for certain guaranties to be provided on its behalf to the bank by GP Strategies and ManTech. The aforementioned agreement concerning the Process Solutions line also provides for: (i) an increase of the applicable interest rate from the prime rate to the prime rate plus 1.00% or from LIBOR to LIBOR plus 3.00%, as the case may be, and (ii) a reduction in the available borrowing level, and a repayment of outstanding borrowings above such level, in the event of the Company's sale or transfer of certain assets. The Power Systems line continues to bear interest at the prime rate or LIBOR, at the Company's option.

The aforementioned lines of credit also contain certain covenants which restrict the Company from, among other things, incurring additional indebtedness, entering into merger, consolidation or acquisition transactions, disposing of all or substantially all of its assets, creating liens on assets, and creating guaranty obligations. Further, the Company is required to comply with certain financial ratios, including minimum levels of tangible net worth and cash flow to fixed obligations, and is also required to provide the bank with certain periodic financial reports. The Company was in violation of the cash flow coverage ratio and the tangible net worth covenants as of December 31, 1997 and is probable of violating these covenants as of March 31, 1998. The bank has waived such covenant

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

violations at December 31, 1997 and March 31, 1998. Should a violation of any loan covenant occur at any future measurement date, the bank would have the right to declare an event of default, and the loans would be payable on demand.

Other debt

The Company entered into capital lease agreements for property, furniture and equipment, totaling \$102,000, \$313,000, and \$90,000 during the years ended December 31, 1997, 1996 and 1995, respectively. These obligations bear interest at between 9% and 11% per annum and expire between 1998 and 2000.

Debt maturities

Aggregate maturities of debt as of December 31, 1997 are as follows: 1998, \$9,240,000; 1999, \$169,000; 2000, \$32,000; 2001, \$25,000; 2002, \$27,000; and \$166,000 thereafter.

11. Income taxes

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

	Year Ended December 31,		
	1997	1996	1995
Domestic.....	(\$ 8,850)	\$ 3,884	\$ 3,844
Foreign.....	(\$ 2,570)	968	1,849
	-----	-----	-----
Total	(\$11,420)	\$ 4,852	\$ 5,693
	=====	=====	=====

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

	Year Ended December 31,		
	1997	1996	1995
Current:			
Federal.....	\$ (27)	\$ (23)	\$ 210
State.....	--	29	40
Foreign.....	(413)	642	508
	-----	-----	-----
	(440)	648	758
	-----	-----	-----
Deferred:			
Federal.....	(2,388)	186	1,160
State.....	(229)	23	99
Foreign.....	340	(148)	--
	-----	-----	-----
	(2,277)	61	1,259
	-----	-----	-----
	\$(2,717)	\$ 709	\$ 2,017
	=====	=====	=====

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

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

(loss) income as a result of the following:

	Year Ended December 31,		
	1997	1996	1995
	-----	-----	-----
Statutory U.S. tax rate.....	(34.0)%	34.0%	34.0%
State income tax, net of federal tax benefit.....	(2.7)	2.7	2.8
Effect of foreign operations.....	3.8	(6.6)	2.3
Amortization of goodwill and other intangible assets.....	--	--	.5
Change in valuation allowance.....	7.8	(19.5)	(3.4)
Research and development credit.....	--	--	(1.4)
Others.....	1.3	4.0	.6
	-----	-----	-----
Effective tax rate.....	(23.8)%	14.6%	35.4%
	=====	=====	=====

At December 31, 1997, the Company had available \$20,912,000 of federal net operating loss carryforwards which expire between 2007 and 2017. In addition, the Company had \$338,000 of foreign tax credit carryforwards which expire between 2000 and 2001. These carryforwards will be utilized to reduce taxable income in subsequent years. A portion of the net operating losses were generated by certain of the Predecessors prior to the formation of the Company and, as a result, there are limitations on the amounts that can be utilized to offset taxable income in a given year.

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

	December 31,	
	1997	1996
	-----	-----
	Deferred Tax Asset/(Liability)	Deferred Tax Asset/(Liability)
	-----	-----
Contract loss reserves.....	\$ 46	\$ --
Property and equipment.....	135	(135)
Accrued expenses.....	207	230
Net operating loss carryforwards.....	7,152	2,013
Book reserves not deductible for tax purposes.....	458	859
Software development costs.....	(2,762)	(1,753)
Deferred revenue.....	--	777
Cash to accrual adjustment.....	(71)	(142)
Foreign tax credits .....	338	214
Others.....	(125)	147
	-----	-----
Valuation allowance.....	5,378	2,210
	(1,078)	(187)
	-----	-----
	\$ 4,300	\$ 2,023
	=====	=====

During 1996 and 1995, the Company reduced the valuation allowance by \$1,033,000 and \$1,619,000, respectively, of which \$109,000 and \$1,354,000, respectively, reduced goodwill and other intangibles arising out of the acquisition of Power Systems. The valuation allowance at December 31, 1997 primarily relates to the future utilization of foreign net operating loss carryforwards and foreign tax credits that the Company has determined are not realizable at this time.

Management believes that it is more likely than not that the net deferred tax asset as of December 31, 1997 is realizable. The Company has tax planning strategies available that include deferral of certain expenses for tax purposes and the sale of certain assets, net of liabilities, of Erudite Software to generate tax gains.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

When combined with expected future taxable income, the tax planning strategies will enable the Company to realize its net deferred tax asset. Management will take these actions, if necessary, to preserve the net deferred tax asset.

12. Capital Stock

As of December 31, 1997, the Company had 10,000,000 total shares of capital stock authorized, of which 8,000,000 are common stock and 2,000,000 are preferred stock. As of December 31, 1997 and 1996, there are no shares of preferred stock outstanding. 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.

13. Stock options

Long term incentive plan

During 1995, the Company established the 1995 Long-Term Incentive Stock Option Plan (the "Plan"), which includes all officers, key employees and non-employee members of the Company's Board of Directors. All options to purchase shares of the Company's common stock under the Plan expire ten 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. Under the original terms of the Plan, the Company had reserved 425,000 shares of common stock for issuance of stock options, which amount was increased to 625,000 shares in 1996 by action of the Company's directors and stockholders.

Upon a determination in 1997 by the executive and compensation committees of the Company's board of directors that the purposes of the Company's 1995 Long-Term Incentive Plan were no longer being met with respect to those individuals holding nonstatutory stock options with exercise prices greater than the then-current market value of the Company's Common Stock, the Company offered certain employees and non-management directors who were holders of outstanding options under the 1995 Long-Term Incentive Plan as of December 1, 1997 the opportunity to exchange such options for replacement stock options at an exercise price of \$3.875 per share, the fair market value of the Company's Common Stock at the close of business on that date. Each option holder accepting such offer was required to surrender his or her existing option and enter into new stock option agreements whereby each option's three-phased vesting period (40% vested as of the first anniversary of the date of grant, 70% vested as of the second anniversary of the date of grant, and 100% vested as of the third anniversary of the date of grant) would re-commence as of December 1, 1997, the new date of grant. A total of 84 individuals were eligible to participate in this replacement of options, and those individuals' existing options had an average exercise price of \$13.26 per share prior to the replacement. Of such individuals, 81 participated in the replacement of options, representing a total of 295,837 options which are included in the stock option activity table as new options granted and options cancelled.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

Stock option activity under the Plan is as follows:

	Year Ended December 31,					
	1997		1996		1995	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Options outstanding, beginning of period.....	413,366	\$ 13.61	297,516	\$ 14.00	--	\$ --
Options canceled.....	(306,044)	(11.57)	(26,150)	(14.07)	--	--
Options granted.....	487,693	4.12	142,000	12.89	297,516	14.00
Options outstanding, end of period..	595,015	6.89	413,366	13.61	297,516	14.00

The Company accounts for grants under the Plan in accordance with APB 25, "Accounting for Stock Issued to Employees," and related interpretations. Had compensation expense been determined based on the fair value at the grant dates for awards under the Plan consistent with the method of SFAS 123, "Accounting for Stock Based Compensation," the Company's net income (loss) and basic and diluted net income (loss) per share would have been reduced (increased) to approximately \$(10,276,000) (\$2.03 per share), \$3,601,000 (\$0.71 per share), and \$3,219,000 (\$0.79 per share) for the years ended December 31, 1997, 1996 and 1995, respectively.

The fair value of each option is estimated on the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumptions used for grants during the years ended December 31, 1997, 1996, and 1995, respectively: dividend yield of 0%, expected volatility of 80%, risk-free interest rates of 6.51%, 6.31%, and 6.15%, and expected terms of 6 years.

As of December 31, 1997, 1996, and 1995, respectively, there were 86,442, 119,000, and 0 stock options exercisable under the Plan, and the Company had 211,634 shares of common stock reserved for the future grants under the Plan. The weighted average fair value of options granted during 1997, 1996 and 1995 was \$3.00 per share, \$9.55 per share and \$10.44 per share, respectively. As of December 31, 1997, the weighted average remaining contractual life of the options outstanding was approximately 8 years.

In 1997, the Company granted one of its senior executives a stock option to acquire 25,000 shares of Common Stock at an exercise price of \$11.25. This grant was not made pursuant to the Plan. This option expires ten years from the date of grant and becomes exercisable in three installments with 40% vesting on the first anniversary of the date of grant and 30% vesting on each of the second and third anniversaries of the date of grant.

In 1996, in exchange for services, the Company granted stock options to two consultants to acquire 10,000 shares of Common Stock in the aggregate at an exercise price of \$14.00. These grants were not made pursuant to the Plan. These options expire on December 31, 2000 and became exercisable in two installments with 50% vesting as of January 1, 1997 and the remaining 50% vesting as of January 1, 1998.

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, 1997 are approximately as follows (in thousands):

1998.....	2,765
1999.....	2,128
2000.....	1,806
2001.....	1,502
2002.....	1,130
2003 and thereafter.....	\$6,500
Total.....	\$15,831

The Company maintains its headquarters and leases a facility of approximately 154,000 square feet in Columbia, Maryland. However, in order

to better meet the Company's expected facilities requirements for the foreseeable future, the Company has entered into agreements whereby the lease for its

## GSE SYSTEMS, INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

existing Columbia facility will be terminated and the operations presently occupying such facility are scheduled to relocate into two separate facilities during the second quarter of 1998; one of these facilities will be in Columbia, Maryland (approximately 53,000 square feet) and will be occupied by the Company's corporate headquarters offices, the operations of Power Systems, as well as various other Company operations; the other facility will be in Baltimore, Maryland (approximately 33,000 square feet) and will be occupied by the operations of Process Solutions. Each of the leases for these smaller facilities has a term of ten (10) years. The Company recorded an accrual of \$852,000 related primarily to future lease commitments on the excess space of the current corporate headquarters that will provide no future economic benefit to the Company.

During 1997, the Company sold equipment to a leasing company for approximately \$521,000 and leased back the equipment under an operating lease. The future minimum rental payments are included in the schedule above. The Company did not record a gain or loss associated with this transaction.

Total rent expense under operating leases was \$3,220,000, \$1,876,000, and \$2,487,000 for the years ended December 31, 1997, 1996 and 1995. Rent expense in 1996 is net of amortization of \$348,000 and reversal of \$1,103,000 of remaining excess facility costs. Rent expense in 1995 is net of amortization of \$348,000 of excess facility costs. At December 31, 1995, the Company had accrued \$1,451,000 of excess facility costs.

Letters of credit

As of December 31, 1997, the Company and certain of its subsidiaries were contingently liable under letters of credit totaling \$318,000. Further, the performance of certain of the Company's customer contracts is collateralized by performance guarantees totaling \$548,000 by its subsidiaries' respective former parent organizations.

#### 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 of the Company.

#### 15. Related party transactions

In 1997, a subsidiary of the Company entered into certain agreements regarding the formation of a joint venture with a company organized in the People's Republic of China. In connection with the initial capitalization of this joint venture, each of ManTech and GP Strategies made advances of \$126,000 on behalf of the Company. The liability for these amounts is included in accrued expenses. These advances were made in exchange for future considerations, including the option for direct investment in the joint venture by ManTech and/or GP Strategies subject to necessary approvals and consents in the People's Republic of China. The operations of this joint venture were immaterial during the year ended December 31, 1997.

During 1997, ManTech entered into arrangements for the consulting services of a member of the Company's finance staff. Payments to the Company for such services were \$92,000 for the year ended December 31, 1997.

A subsidiary of the Company subleases office space to ManTech at market price based on square footage used. For the years ended December 31, 1997, 1996 and 1995, such charges amounted to \$117,000, \$67,000 and \$46,000, respectively. A subsidiary of the Company purchased computer run-time from ManTech until April 1996; such charges amounted to \$36,000 and \$63,000 in 1996 and 1995, respectively. GPC historically has performed services as a subcontractor on certain contracts of a subsidiary of the Company and that subsidiary may continue to subcontract with GPC from time to time. For the years ended December 31, 1997, 1996 and 1995, such subcontract costs amounted to \$0, \$0, and \$51,000, respectively.

One of the Company's subsidiaries' bi-weekly payroll is processed by a company whose owner is also a shareholder of the Company. Expenses incurred for such payroll processing for the years ended December 31, 1997, 1996 and 1995 were \$69,000, \$62,000, and \$42,000, respectively. The Company subleases a portion of one of its facilities to this related party. Sublease payments by the related party were approximately \$4,700, \$4,000 and \$3,000 for the years ended December 31, 1997, 1996 and 1995, respectively.

## GSE SYSTEMS, INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

In November 1993, the three founding stockholders of Erudite Software sold an aggregate of 2,000 shares of common stock on a pro-rata basis to two other individuals in exchange for demand notes totaling \$200,000 with no stated interest rate. These notes were collateralized by the shares of common stock received by the two individuals. The founding stockholders immediately transferred the \$200,000 in notes receivable from the new stockholders to Erudite Software in exchange for notes due from Erudite Software on demand with no stated interest rate. For financial reporting purposes, the notes receivable from the new stockholders were included as a part of stockholders' equity in the accompanying financial statements until such time as the notes receivable were fully collected and the shares of common stock no longer represented collateral against the notes. For the year ended December 31, 1995, the notes receivable from stockholders were reduced through cash receipts of \$15,000 and through services provided to Erudite Software of \$58,000. The services provided to Erudite Software have been valued based upon salaries, bonuses and commissions earned by these two individuals. These notes receivable were reduced to \$0 during the year ended December 31, 1995. For the years ended December 31, 1996 and 1995, cash payments to the founding stockholders in satisfaction of the note payable totaled \$189,000 and \$11,000, respectively.

#### 16. Employee benefits

In 1996, the Company began the process of terminating its defined benefit plan for the union employees. The assets in this plan were distributed on September 3, 1997. The Company has recognized expense of \$124,000 during 1996 related to the termination of the plan. Net periodic pension expense of \$29,000 was recognized for the year ended December 31, 1995.

The Company also has a qualified defined contribution plan that covers substantially all employees and complies with Section 401(k) of the Internal Revenue Code. Under this plan, the Company's stipulated basic contribution matches a portion of the participants' contributions based upon a defined schedule. Contributions are invested by an independent investment company in one or more of several investment alternatives. The choice of investment alternatives is at the election of each participating employee. The Company's contributions to the plan were approximately \$524,000, \$671,000, and \$484,000 the years ended December 31, 1997, 1996 and 1995, respectively.

The Company recorded a net charge for severance and other employee obligations of \$1.1 million in connection with cost reduction efforts initiated to offset the impact of a decrease in contract revenues. Of this charge, \$976,000 was expended as of December 31, 1997.



**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

17. Financial information by geographic area

The Company operates in a single industry segment: it designs, develops and delivers business and technology solutions to the energy, process and manufacturing industries worldwide. Revenue, operating income and identifiable assets for the Company's United States, European and Asian operations are as follows (in thousands):

	Year Ended December 31, 1997				
	United States	Europe	Asia	Eliminations	Consolidated
Revenue.....	\$ 70,580	\$ 5,907	\$ 3,224	\$ --	\$ 79,711
Transfers between geographic locations.....	1,582	--	1,314	(2,896)	--
Total revenue.....	\$ 72,162	\$ 5,907	\$ 4,538	\$ (2,896)	\$ 79,711
Loss from operations.....	\$ (6,930)	\$ (324)	\$ (2,173)	\$ --	\$ (9,427)
Identifiable assets.....	\$ 50,296	\$ 3,686	\$ 2,111	\$ (7,731)	\$ 48,362

	Year Ended December 31, 1996				
	United States	Europe	Asia	Eliminations	Consolidated
Revenue.....	\$ 83,263	\$ 9,026	\$ 3,744	\$ --	\$ 96,033
Transfers between geographic locations.....	659	--	622	(1,281)	--
Total revenue.....	\$ 83,922	\$ 9,026	\$ 4,366	\$ (1,281)	\$ 96,033
Income from operations.....	\$ 3,832	\$ 1,267	\$ (452)	\$ 198	\$ 4,845
Identifiable assets.....	\$ 54,584	\$ 6,416	\$ 3,057	\$ (13,051)	\$ 51,006

	Year Ended December 31, 1995				
	United States	Europe	Asia	Eliminations	Consolidated
Revenue.....	\$ 87,009	\$ 7,050	\$ 2,001	\$ --	\$ 96,060
Transfers between geographic locations.....	1,173	--	--	(1,173)	--
Total revenue.....	\$ 88,182	\$ 7,050	\$ 2,001	\$ (1,173)	\$ 96,060
Income from operations.....	\$ 5,028	\$ 1,628	\$ 7	\$ (351)	\$ 6,312
Identifiable assets.....	\$ 49,958	\$ 7,298	\$ 2,337	\$ (4,905)	\$ 54,688

The Company has intercompany distribution arrangements with its subsidiaries. The basis of these arrangements, disclosed as transfers between geographic locations, is principally at market prices.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

Domestic and export sales from the Company's United States operations in thousands of dollars and as a percentage of revenue are as follows:

	Year Ended December 31, 1997		Year Ended December 31, 1996		Year Ended December 31, 1995	
	-----	-----	-----	-----	-----	-----
Domestic.....	\$ 52,365	72.6%	\$ 47,868	57.5%	\$ 45,222	52.0%
Export:						
Germany.....	2,791	3.9	9,236	11.1	8,039	9.2
Remaining Western Europe.....	1,748	2.4	2,806	3.4	12,400	14.3
Russia.....	6,074	8.4	7,716	9.2	9,135	10.5
Remaining Eastern Europe.....	6,481	9.0	11,070	13.3	4,547	5.2
Asia.....	1,278	1.8	3,910	4.7	6,853	7.9
South America and others.....	1,425	1.9	657	.8	813	0.9
	-----	-----	-----	-----	-----	-----
	\$ 72,162	100.0%	\$ 83,263	100.0%	\$ 87,009	100.0%
	=====	=====	=====	=====	=====	=====

18 Fourth quarter data

During the fourth quarter of 1997, the Company made several adjustments which are material to the fourth quarter results. These adjustments include an \$852,000 accrual related primarily to future lease commitments on excess space of the corporate headquarters that will provide no future economic benefit to the Company, \$450,000 in litigation costs, an additional \$230,000 in amortization of capitalized software development costs, additional allowances of approximately \$800,000 to reduce accounts receivable and inventory to their estimated net realizable value, approximately \$1,000,000 in foreign currency transaction losses associated with intercompany transactions which have been negatively impacted by the poor financial conditions of Asian markets and approximately \$240,000 to reduce certain non-current assets to their estimated net realizable value. The aggregate impact of these adjustments was to increase the loss before income taxes, net loss and basic and diluted loss per common share for the fourth quarter by approximately \$3,572,000, \$2,250,000 and \$.44 per common share, respectively.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

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

None.

**GSE SYSTEMS, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)**

**PART III**

The information required in response to Items 10, 11, 12 and 13 is hereby incorporated by reference to the information under the captions "Election of Directors", "Principal Executive Officers of the Company Who Are Not Also Directors", "Executive Compensation", "Voting Securities and Principal Stockholders", "Security Ownership of Management", and "Certain Related Transactions" in the Proxy Statement for the Company's 1998 Annual Meeting of Stockholders.

**PART IV**

**ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K.**

(a)(1) List of Financial Statements

The following financial statements are included in Item 8:

GSE Systems, Inc. and Subsidiaries

Report of Independent Accountants

Consolidated Balance Sheets as of December 31, 1997 and 1996 Consolidated Statements of Operations for each of the three years in the period ended December 31, 1997

Consolidated Statements of Stockholders' Equity (Deficit) for the years ended December 31, 1997 and 1996 and 1995 Consolidated Statements of Cash Flows for the years ended December 31, 1997 and 1996 and 1995

Notes to Consolidated Financial Statements

(a)(2) List of Schedules

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

(a)(3) List of Exhibits

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

(b) Reports on Form 8-K:

No reports on Form 8-K were filed during the quarter ended December 31, 1997.

## 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/ CHRISTOPHER M. CARNAVOS

-----  
Christopher M. Carnavos  
Director and President

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.

Signatures -----	Title -----	Date -----
/s/ JEROME I. FELDMAN ----- Jerome I. Feldman	Chairman of the Board	March 31, 1998
/s/ CHRISTOPHER M. CARNAVOS ----- Christopher M. Carnavos	Director and President (Principal Executive Officer)	March 31, 1998
/s/ ROBERT W. STROUP ----- Robert W. Stroup	Executive Vice President, Secretary & Treasurer (Principal Financial and Accounting Officer)	March 31, 1998
/s/ EUGENE D. LOVERIDGE ----- Eugene D. Loveridge	Director and Senior Vice-President	March 31, 1998

/s/ HANS I. EBENFELT ----- Hans I. Ebenfelt	Director	March 31, 1998
/s/ SHELDON L. GLASHOW ----- Sheldon L. Glashow	Director	March 31, 1998
/s/ JOHN A. MOORE, JR. ----- John A. Moore, Jr.	Director	March 31, 1998
/s/ GEORGE J. PEDERSEN ----- George J. Pedersen	Director	March 31, 1998
/s/ MARTIN M. POLLAK ----- Martin M. Pollak	Director	March 31, 1998
/s/ SYLVAN SCHEFLER ----- Sylvan Scheffler	Director	March 31, 1998

## EXHIBIT INDEX

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

Exhibit Number -----	Note -----	Description -----
2.1	(5)	Agreement and Plan of Reorganization dated as of May 17, 1996 by and among GSE Systems, Inc., GSE Erudite Software, Inc., Erudite Software and Consulting, Inc., Eugene Loveridge, Daniel Masterson, Douglas Austin, Gary Gray and Dennis Fairclough effective May 21, 1996.
2.2	(5)	Agreement and Plan of Merger dated as of May 17, 1996 by and between Erudite Software and Consulting, Inc. effective May 22, 1996.
3.1	(1)	Second Amended and Restated Certificate of Incorporation of the Company
3.2	(2)	Form of Amended and Restated Bylaws of the Company
4.1	(3)	Specimen Common Stock Certificate of the Company
10.1	(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)
10.2	(1)	Asset Purchase Agreement among Texas Instruments Incorporated, GSE Systems, Inc. and GSE Process Solutions, Inc. concerning the Process Systems Business of Texas Instruments Incorporated (dated as of December 28, 1994)
10.3	(3)	* Form of Employment Agreement between William E. Kuhlmann and GSE Systems, Inc.
10.4	(3)	* Form of Employment Agreement between Rolf M. G. Falkenberg and GSE Systems, Inc.
10.5	(3)	* Form of Employment Agreement between Robert W. Stroup and GSE Systems, Inc.
10.6	(3)	* Form of Employment Agreement between Chian-Li Jen and GSE Systems, Inc.
10.8	(6)	* GSE Systems, Inc. 1995 Long-Term Incentive Plan, as amended as of February 12, 1997.
10.9	(4)	* Form of Option Agreement Under the GSE Systems, Inc. 1995 Long-Term Incentive Plan
10.10	(2)	Letter of Credit, Loan and Security Agreement among Maryland National Bank (now NationsBank, N.A.), MSHI, Inc., and Simulation, Systems & Services Technologies Company (dated as of March 17, 1994 and amended as of June 29, 1994 and April 27, 1995)
10.11	(2)	Letter of Credit, Loan and Security Agreement among NationsBank, N.A., MSHI, Inc., and Simulation, Systems & Services Technologies Company (dated as of September 29, 1994)
10.12	(2)	Letter of Credit, Loan and Security Agreement between CoreStates Bank, N.A. and GSE Process Solutions, Inc. (dated as of January 31, 1995)
10.13	(4)	Amended and Restated Letter of Credit, Loan and Security Agreement between CoreStates Bank, N.A. and GSE Process Solutions, Inc. (dated as of October 13, 1995 and as amended as of February 23, 1996)
10.14	(4)	Letter of Credit, Loan and Security Agreement among CoreStates Bank, N.A., MSHI, Inc., and Simulation, Systems & Services Technologies Company (dated as of January 30, 1996)
10.15	(1)	Amended and Restated Lease Agreement between CCP Development Limited Partnership No. 7 and Simulation, Systems & Services Technologies Company (dated as of January 27, 1993)
10.16	(5)	* Employment Agreement dated as of May 17, 1996 by and between GSE Systems, Inc. and Eugene Loveridge effective May 22, 1996



10.17	(5)	*	Employment Agreement dated as of May 17, 1996 by and between GSE Systems, Inc. and Daniel Masterson effective May 22, 1996
10.18	(6)	*	Employment Agreement dated as of May 2, 1996 by and between EuroSim AB and Lars-Goran Mejvik effective July 1, 1996
10.19	(7)	*	Letter Agreement dated January 8, 1997 between GSE Systems, Inc. and Christopher M. Carnavos
10.20	(7)	*	Agreement dated as of April 3, 1997 between GSE Systems, Inc. and William E. Kuhlmann
10.21	(7)		Amendment Number Two to Amended and Restated Letter of Credit, Loan and Security Agreement between CoreStates Bank, N.A. and GSE Process Solutions, Inc. (dated as of November 11, 1997)
10.22	(7)		Lease Termination Agreement between 8930 Stanford Boulevard, L.L.C. and GSE Power Systems, Inc. (dated as of January 30, 1998)
10.23	(7)		Indemnification Agreement between Genus Corporation and GSE Power Systems, Inc. (dated as of February 2, 1998)
10.24	(7)		Office Lease Agreement between Sterling Rutherford Plaza, L.L.C. and GSE Systems, Inc. (dated as of February 10, 1998.)
10.25	(7)		Lease Agreement between Red Branch Road, L.L.C. and GSE Systems, Inc. (dated February 10, 1998)
10.26	(7)		Letter Agreement dated March 6, 1998 between CoreStates Bank, N.A. and GSE Power Systems, Inc.
10.27	(7)		Letter Agreement dated March 6, 1998 between CoreStates Bank, N.A. and GSE Process Solutions, Inc.
11.1	(7)		Statement regarding computation of earnings per share
21.1	(7)		Subsidiaries of Registrant
23.1	(7)		Consent of Independent Accountants
24.1	(7)		Power of Attorney for Directors' and Officers' Signatures on SEC Form 10-K
99.1	(3)		Form of Right of First Refusal Agreement

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- (1) 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.
- (2) 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.
- (3) 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) 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.
- (5) Previously filed in connection with the GSE Systems, Inc. Forms 8-K and 8-K-A as filed with the Securities and Exchange Commission on June 5, 1996 and June 13, 1996, respectively, and incorporated herein by reference.
- (6) Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 31, 1997 and incorporated herein by reference.
- (7) Filed herewith.

\* Management contract or compensatory plan.

**EXHIBIT 10.19  
GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

January 8, 1997

**Mr. Christopher M. Carnavos**

Dear Chris:

I am pleased to confirm our offer and your acceptance of employment with GSE Systems, Inc., in the position of Senior Vice President. Your responsibilities will be to act as the general manager of the Company's Process Industry Strategic Business Unit and other matters as reasonably requested. In this capacity you will report directly to me.

I have set forth below the specifics of our offer. As we have discussed, the precise terms of any stock option grant and any bonus plan are the purview of the Executive Compensation Committee of the Board of Directors. Therefore, we are not currently in a position to bind the Company regarding those matters. However, the reference below to those two matters is intended to describe what my recommendation will be to the Committee upon employment.

Your compensation shall include an annual salary of \$175,000 per year. You will also receive a hiring bonus in the gross amount of \$30,000. This will be paid in two equal installments of \$15,000 on April 1 and July 1, 1997, respectively. In addition, you will qualify for the executive bonus program which I will be recommending to the Board's Executive Compensation Committee shortly. I expect this program will enable you to earn as much as 30% of your salary in an annual cash performance bonus. The performance criteria shall be tied to three principal factors: 1) the financial performance of the Company as a whole; 2) the financial performance of the business you will be managing; and 3) the attainment of certain prescribed personal goals. In addition, I will recommend to the Executive Compensation Committee that you be granted options to acquire 23,000 shares of Company stock in accordance with the Long Term Compensation Plan. The exercise price for these options will be the market value at the time of employment. The options shall vest over a three-year period at the rates of 40%, 30% and 30% at the end of years one, two and three. Due to the potential for the market price to fluctuate above or below its current price of \$9.50, the Company shall have the right to adjust the number of shares based on significant changes in the market.

As you know, this offer is for "at will" employment rather than a specified period of time. Therefore, in response to your desire for some reasonable severance arrangements should the circumstance arise that the Company no longer desires your services, this offer includes a six month severance provision. Should the Company terminate you without cause, you will be entitled to payment of your salary for a period of six additional months. In this context "cause" shall be defined to include only the following: 1) intentional misconduct; 2) gross negligence; 3) commission and subsequent conviction of a criminal offense; and 4) some other type of intentional behavior that significantly damages the Company. This provision for severance shall not apply if you voluntarily leave the Company.

The relocation package will consist of the reimbursement of both the moving expenses and the closing costs for both the sale of your current home as well as the purchase of your new home. We will "gross up" the calculation of those reimbursement payments which will be taxable to you so as to take your payment of income taxes into account. We will also pay for temporary living expenses for a period of up to six months and or mortgage assistance to a combined maximum amount of \$14,400. Additionally, in the event that the sale of your Atlanta home is less than what you paid for it approximately three and one-half years ago (not including closing costs), the Company shall pay to you 75% of such loss up to a total payment by the Company of \$25,000. An interest free bridge loan in

the amount of \$85,000 will be provided by GSE in the event that you purchase a new home prior to the sale of your existing home. This loan will be due and payable on the earlier of the sale of your existing residence or six months from the commencement of your employment. This agreement will be covered by a promissory note that will be provided as agreed to by both parties. You will be responsible for the tax consequences on the inputted interest of the bridge loan.

As an executive in the Company, you will also receive the following benefits:

- o Reimbursement of country club dues up to \$4,000 per year
- o Car allowance of \$600 per month;
- o Executive term life insurance coverage (3x salary)
- o Company paid medical and dental plan with all pre-existing conditions waived
- o Reimbursement for the use of business communications and productivity tools such as a mobile phone and a home fax;
- o Executive vacation policy.
- o Company provided gas credit card

In addition, you will receive other Company benefit which are as follows:

- o Participation in the Company's 401(k) Plan
- o Coverage by the Company's sick leave and short-term disability policies
- o Company paid holidays
- o Travel insurance
- o Long term disability program
- o Supplemental Life Insurance
- o Personal Accident Insurance

We all look forward to the commencement of your employment on Thursday, January 9, 1997. If you have any questions feel free to contact me or Debbie Caddy at (410) 312-3644.

Sincerely,

*/S/ William E. Kuhlmann*  
-----  
*Offer accepted by:*  
*/S/ Christopher M. Carnavos*  
-----

*Start Date*  
*January 9, 1997*  
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**EXHIBIT 10.20  
GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**AGREEMENT**

This Agreement (this "Agreement") effective as of April 3, 1997, is made by and between William E. Kuhlmann (the "Employee"), and GSE Systems, Inc., a Delaware corporation (the "Company").

**WITNESSETH:**

WHEREAS, Employee has served as Chairman of the Board of Directors and Chief Executive Officer of the Company pursuant to the terms and conditions of an Employment Agreement between Employee and the Company dated July 26, 1995 (the "Employment Agreement");

WHEREAS, the parties have agreed that Employee shall resign as Chairman of the Board and Chief Executive Officer and shall assume the responsibilities outlined hereunder; and

NOW, THEREFORE, in consideration of the foregoing premises and the covenants herein contained, the parties agree as follows:

1. Statement of Intentions and Resignation. The parties understand and agree that this Agreement is intended to apply in lieu of the application of Section 8(b) (Termination Without Cause) and Section 9 (Severance Payments) of the Employment Agreement. Accordingly, in lieu of the invoking a Termination without Cause (as such term is defined in the Employment Agreement), the parties agree that the Employee hereby resigns as Chairman of the Board of Directors and Chief Executive Officer of the Company, and hereby resigns as an officer and/or director of any and all of the Company's subsidiaries. The parties agree that the Employee shall no longer be a director of the Company and shall not be entitled to participate in Board of Directors meetings.

2. Employment as Chairman Emeritus. Notwithstanding the aforementioned resignations of the Employee's directorships and officer positions with the Company, Employee shall remain employed by the Company and shall be promoted to the position of "Chairman Emeritus." In this role, Employee shall perform such duties as are incident and commensurate with such position and as may be mutually agreed by him and the Board of Directors of the Company and/or the Chairman of the Board.

3. Compensation.

A. Initial Payment. In consideration of entering into this Agreement, Employee shall receive from the Company, upon the execution hereof, an initial lump sum payment equal to two (2) months' base salary and the present value of any benefits Employee would normally receive under the Employment Agreement for such period including, but not limited to, country club dues, car allowance, gas credit card, car phone and mobile phone, insurance benefits, and 401(k) plan matching.

B. Salary and Benefits. Through April 2, 1998, Employee shall receive a base salary of \$235,000 per annum, payable bi-weekly. In addition, Employee shall participate in or received all benefits which he is currently receiving under the Employment Agreement through April 2, 1998 including, but not limited to, the payment of country club dues (payable in December 1997 with respect to 1998), car allowance, gas credit card, car phone and mobile phone, insurance benefits, and 401(k) plan matching. In the event of a Change of Control (for purposes of defining this term, Paragraph 1.c. of the Employee's Nonstatutory Stock Option Agreement dated July 27, 1995 shall be incorporated herein by reference), the Employee shall, within five (5) days, receive a lump sum equivalent to all remaining salary and related benefits that would have otherwise been paid through April 2, 1998.

4. Stock Options; Bonuses. Employee has 30,000 unvested stock options outstanding as of April 3, 1997. 15,000 of these shares shall be fully vested and exercisable as of August 1997. The other 15,000 shares shall not vest. In all other respects, such options shall be governed by the terms of the Company's 1995 Long Term Incentive Plan and the Employee's Option Agreement. Employee shall not be entitled to participate in any other incentive bonus plans, programs, arrangements and practices sponsored by the Company.

5. Mutual Releases.

A. By the Company. In consideration for the promises, undertakings and covenants of the Employee, as set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Company hereby releases, discharges, and acquits Employee of and from any liability, contracts, suits, demands, claims, debts, actions, losses, damages or causes of action of whatsoever kind and nature, known or unknown, accrued or unaccrued, which the Company has or may have against the Employee and all other related persons and entities, from the beginning of the world up to and including the date first written above, from every matter, cause or thing whatsoever.

B. By the Employee. In consideration for the promises, undertakings and covenants of the Company, as set forth herein, Employee, intending to be legally bound hereby, for himself and his heirs, successors, administrators, executors and assigns, does hereby fully release, remise and forever discharge the Company, all corporations controlled by, intertwining with or under common control of the Company, its shareholders, officers, board members, directors, attorneys, representatives, assigns, successors, partners, employees and other agents, as agents and as individuals, of and from any liability, contracts, suits, demands, claims, debts, actions, losses, damages or causes of action of whatsoever kind and nature, known or unknown, accrued or unaccrued, which Employee has or may have against the Company, and all other related persons and entities, from the beginning of the world up to and including the date first written above, from every matter, cause or thing whatsoever, including, but not limited to, all matters arising out of or relating to Employee's employment with the Company or his termination from said employment, including but not limited to all claims which Employee may have under any and all federal, state and local laws, regulations, ordinances or common law, specifically including, without limitation, the Maryland Human Relations Act, Title VII of the Civil Rights Act of 1964, and the Age Discrimination in Employment Act ("ADEA"), all claims for wrongful discharge or claims that the Company dealt unfairly with Employee, in bad faith, or in violation of any agreement expressed or implied, that may have existed between Employee and the Company, and all claims for personal injury, emotional distress, pain and suffering.

6. Employment Agreement. In all other respects, the terms of the Employment Agreement, including but not limited to the covenant of non-competition, shall apply as if there was a Termination without Cause on April 3, 1997.

7. Entire Agreement. This Agreement represents the entire agreement between the parties hereto and supersedes all prior agreements, understandings and arrangements, oral or written, between the parties hereto with respect to the subject matter hereof. This Agreement cannot be modified, waived or amended except as may be mutually agreed to by the parties in writing.

IN WITNESS WHEREOF, this Agreement has been duly executed under seal as of the date first above written.

**GSE Systems, Inc.**

*/S/ MICHAEL J. CROMWELL, III* (SEAL)

-----  
*By: Michael J. Cromwell, III Director*

*/S/ WILLIAM E. KUHLMANN* (SEAL)

-----  
*William E. Kuhlmann*

**EXHIBIT 10.21  
GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**AMENDMENT NUMBER TWO TO AMENDED AND  
RESTATED LETTER OF CREDIT, LOAN AND SECURITY AGREEMENT  
AND PROMISSORY NOTE**

This AMENDMENT NUMBER TWO ("Amendment Two") to Amended and Restated Letter of Credit, Loan and Security Agreement and Promissory Note is made and effective as of this 11th day of November, 1997 by and between GSE Process Solutions, Inc., a Delaware Corporation (the "Borrower") and CoreStates Bank, N.A. (the "Bank").

**BACKGROUND**

WHEREAS, the Borrower and the Bank entered into an Amended and Restated Letter of Credit, Loan and Security Agreement dated as of October 13, 1995 pursuant to which the Bank agreed to lend up to \$7,000,000 to the Borrower for the purposes set forth in Section 11.2 thereof (the Amended and Restated Letter of Credit, Loan and Security Agreement is herein referred to as the "Loan Agreement") and as amended by Amendment Number One to the Loan Agreement dated February 23, 1996 ("Amendment One"); as used hereinafter the term "Loan Agreement" shall mean the Loan Agreement as amended by Amendment One. In connection with Amendment One, the Borrower and the Bank amended the \$7,000,000 Promissory Note dated as of October 13, 1995, (the "Note").

WHEREAS, the Borrower has requested that the Bank further amend the Loan Agreement to permit the Borrower to advance funds to another subsidiary of its parent company, GSE, for the purpose of furnishing working capital to such subsidiary, GSE Erudite Software, Inc. ("Erudite").

WHEREAS, the Bank is agreeable to such an amendment on the conditions that the advances do not exceed the amount of the Commitment, are evidenced by a Master Note in the amount of Commitment, which Master Note is duly pledged to the Bank, and Erudite becomes fully liable to the Bank for all amounts due under the Loan Agreement and the Note and such liability is secured by a first lien on the assets of Erudite. The Bank will, if such conditions are met, add the collateral so provided by Erudite to the Collateral Value for purposes of determining Available Commitment; and

WHEREAS, the Borrower has requested and the Bank is agreeable, to add a LIBO Rate interest rate option for advances under the Loan.

WHEREAS the Borrower and the Bank have agreed to amend the Loan Agreement on the terms, and subject to the conditions set forth herein.

NOW THEREFORE, the Borrower and the Bank, in consideration of the mutual agreements herein and other good and valuable consideration, intending to be legally bound, hereby agree as follows:

## I. DEFINED TERMS

1. All capitalized words used herein shall have the meaning ascribed to them in the Loan Agreement, unless such terms are defined herein, in which case they shall have the meaning ascribed to them herein.

## II. DEFINITIONS

2. The following Defined Terms in Section 1.1 of the Loan Agreement are hereby added to the Loan Agreement or, if presently in the Loan Agreement are hereby deleted and replaced with the following:

"Application and Agreement for Standby Letter of Credit" shall mean an Application and Agreement for a Standby Letter of Credit in substantially the form attached hereto as Exhibit A and made a part hereof, or in such other form which is provided by the Bank to the Borrower or Erudite as the form of Application and Agreement which is then in use by the Bank in connection with the issuance of its Standby Letters of Credit, which is executed by the Borrower or Erudite and delivered to the Bank in connection with a request for the issuance of a Standby Letter of Credit.

"Base Receivables" shall mean the aggregate face amount of Receivables, excluding General Intangibles, as to which the Borrower or Erudite has acquired title, the Bank has acquired a first priority, perfected security interest, and the Borrower or Erudite has invoiced the Account Debtor in accordance with the terms of the relevant contract which provides for billing on the basis of Milestone Payments and furnished the Bank with information deemed by the Bank in the Bank's sole discretion adequate for the purpose of evaluating whether or not such Base Receivables are Eligible Receivables hereunder.

"Borrowing Certificate" shall mean a Certificate containing all of the information contemplated by the form attached hereto as Exhibit AA and made a part hereof.

"Borrower's Obligations" shall mean, collectively, the Loan Obligations and the Letter of Credit Obligations, together with all other sums due from the Borrower to the Bank under the terms of the Financing Documents and the Erudite Obligations.

"Eligible Receivable" and "Eligible Receivables" shall mean, at any time of determination thereof, the collective reference to each Base Receivable which conforms and continues to conform to the following criteria to the satisfaction of the Bank: (a) the account arose in the ordinary course of the Borrower's or Erudite's respective businesses from a bona fide outright sale or lease of goods by the Borrower, or from services performed by the Borrower or Erudite, respectively; (b) the account is based upon an enforceable written order or contract for goods delivered or for services performed; (c) the respective title of the Borrower or Erudite to the account is absolute and is not subject to any prior assignment, claim, lien, or security interest, except Permitted Liens or liens permitted under the Erudite Security Agreement, and the Borrower or Erudite otherwise has the full and unqualified respective right and power to assign and grant a security interest in it to the Bank as security and collateral for the payment of the Borrower's Obligations; (d) the amount shown on the respective books of the Borrower or Erudite and on any invoice, certificate, schedule or statement delivered to the Bank is owing to the Borrower or Erudite and no partial payment has been received unless reflected with the delivery of such invoice, certificate, schedule or statement; (e) the amount of the account has been reduced by the amount of any claim of reduction, counterclaim, setoff, recoupment, or other defense in law or equity, or any claim for credits, allowances, or adjustments by the Account Debtor because of returned, refused, inferior, or damaged goods or unsatisfactory services, or for any other reason; (f) the account is not outstanding more than 90 calendar days from the original date of the



original invoice therefor or more than 60 calendar days from the original due date therefor; (g) the account does not arise out of a contract with, or order from, an Account Debtor that, by its terms, forbids or makes void or unenforceable the assignment by the Borrower or Erudite to the Bank of the account arising with respect thereto; (h) the Account Debtor is not a Subsidiary or other Affiliate of the Borrower or Erudite, without the prior written consent of the Bank; (i) neither the Borrower nor Erudite is indebted in any manner to the Account Debtor, with the exception of customary credits, adjustments and/or discounts given to an Account Debtor by the Borrower or Erudite respectively in the ordinary course of its business; (j) no part of the account represents a retainage; (k) the Account is owed in U.S. Dollars or in major foreign currency where an appropriate hedging transaction is in place; (l) the account is not owing by any Account Debtor for which fifty percent (50%) or more of such Account Debtor's total accounts due to the Borrower or to Erudite respectively, are non-Eligible Receivables; (m) the account is not an International Receivable, unless the entire amount of the payment obligation represented by the account is secured by (1) an irrevocable commercial letter of credit denominated in Dollars (or such foreign currency as the Bank and the Borrower may agree) in form and substance satisfactory to the Bank issued or confirmed by a financial institution acceptable to the Bank, the proceeds of which letter of credit have been assigned to the Bank or which letter of credit shall specifically provide that payment thereunder shall be negotiated only at the Bank's counters or, alternatively, made solely and directly to a Restricted Account or (2) foreign credit insurance in form and substance satisfactory to the Bank, issued by the Export-Import Bank of the United States, the proceeds of which insurance have been assigned to the Bank; (n) no notice of the bankruptcy, receivership, reorganization or insolvency of the Account Debtor owing such account has been received by the Bank or the Borrower or Erudite; (o) the Account Debtor is not the federal government or any federal governmental agency except to the extent that such agency and the subject account are subject to the Federal Assignment of Claims Act or the Federal Assignment of Contracts Act and the provisions of such Acts have been fully complied with; (p) the Account Debtor is not a state or a local government or a state or local governmental agency unless any provision of state or local law equivalent to the Federal Assignment of Claims Act or the Federal Assignment of Contracts Act has been fully complied with; and (q) the Bank in the exercise of its reasonable discretion has not deemed the account ineligible because of uncertainty as to the creditworthiness of the Account Debtor or because the Bank otherwise considers the collateral value thereof to the Bank to be impaired or its ability to realize such value to be insecure. In the event of any dispute under the foregoing criteria, as to whether an account is, or has ceased to be, an Eligible Receivable, the decision of the Bank in the exercise of its sole and absolute discretion shall control.

"Erudite's Account" shall mean an account entitled "GSE Erudite Software, Inc. Cash Collateral Account" #14190-06553 with Bank.

"Erudite's Guaranty" shall mean a Guaranty Agreement, in form and substance satisfactory to the Bank, dated the same date as the Amendment Two, executed and delivered by Erudite in favor of the Bank assuring and guarantying the repayment of the Borrower's Obligations (and thereby becoming part of Borrower's Obligations) as the same may be amended, supplemented or otherwise modified, in accordance with the terms thereof and the Loan Agreement.

"Erudite Master Note" shall mean the Master Note described in the Background section hereof and in form and substance as attached hereto as Exhibit BB and pledged to Bank.

"Erudite Master Letter of Credit" means a Master Letter Credit Agreement executed by Erudite prior to the issuance of any Standby Letter Credit for the account of Erudite, which shall be in form substantially similar to the Master Letter of Credit Agreement.

"Erudite's Obligations" shall mean Erudite's obligations to pay the Borrower's Obligations by virtue of Erudite's Guaranty from the proceeds of the collateral pledged to the Bank by Erudite for the Borrower's Obligations or otherwise arising by contract or operation of law.

"Erudite Security Agreement" shall mean that certain Security Agreement of Erudite of even date with and in form and substance as attached as Exhibit CC to Amendment Two.

"Eurocurrency Reserve Requirement" means for any day as applied to a Eurodollar Loan, the aggregate of the rates (such aggregate being expressed as a decimal) of reserve requirements in effect on such day (including, without limitation, basic, supplemental, marginal and emergency reserves under any regulations of the Board of Governors of the Federal Reserve System or other Governmental Authority having jurisdiction with respect thereto, as now and from time to time hereafter in effect) for eurocurrency funding (currently referred to as "eurocurrency liabilities" in Regulation D of such Board) maintained by a member bank of the Federal Reserve System, without benefit of credit for proration, exceptions or offsets otherwise available from time to time under such regulations.

"Eurodollar Loan" means any advance under the Loan or portion thereof when and to the extent the interest rate thereof is determined by reference to the LIBO rate.

"Financing Documents" shall mean, collectively, this Agreement, the Master Letter of Credit Agreement, all Applications and Agreements for Standby Letters of Credit and Standby Letters of Credit issued pursuant thereto, the Promissory Note, the GSE Guaranty, the Erudite Guaranty, the Erudite Security Agreement and any other documents, instruments, certificates and agreements which have been, are or are hereafter executed and delivered by the Borrower or any other Person in connection with any of the Borrower's Obligations.

"General Intangibles" shall mean all general intangibles of every nature, whether presently existing or hereafter acquired or created, including without limitation all books and records, claims (including without limitation all claims for income tax and other refunds), choses in action, contract rights, judgments, patents, patent licenses, trademarks, trademark licenses, licensing agreements, rights in intellectual property, goodwill (including goodwill of the Borrower's or Erudite's respective business symbolized by and associated with any and all trademarks, trademark licenses, copyrights and/or service marks), royalty payments, licenses, contractual rights, rights as lessee under any lease of real or personal property, literary rights, copyrights, service names, service marks, logos, trade secrets, amounts received as an award in or settlement of a suit in damages, deposit accounts, interests in joint ventures or general or limited partnerships, rights in applications for any of the foregoing, books and records in whatever media (paper, electronic or otherwise) recorded or stored, with respect to any or all of the foregoing and all equipment and general intangibles necessary or beneficial or desirable to retain, access and/or process the information contained in those books and records, and all proceeds (cash and non-cash) of the foregoing.

"Governmental Authority or Authorities" shall mean any nation or government, any state or other political subdivision thereof, any governmental or quasi-governmental entity, court or tribunal including, without limitation, any department, commission, board, bureau, agency, administration, service or other instrumentality of any foreign or domestic governmental entity, exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government.

"Instrument" shall mean a negotiable instrument (as defined under Article 3 of the Uniform Commercial Code), a "certificated security" (as defined under Article 8 of the Uniform Commercial Code)

other than any certificated security evidencing ownership in the Borrower or Erudite or any Subsidiary of either, or any other writing which evidences a right to payment of money and is not itself a security agreement or lease and is of a type which is in the ordinary course of business transferred by delivery with any necessary indorsement.

"Interest Payment Date" means (A) as to any Prime Rate Loan, the first day of each calendar month commencing on the first of such days to occur after such Prime Rate Loan is made and (B) as to any Eurodollar Loan, the last day of the Interest Period pertaining to such Eurodollar Loan.

"Interest Period" means with respect to any Eurodollar Loan: (1) initially, the period commencing on the borrowing or conversion date, as the case may be, with respect to such Eurodollar Loan and ending one, two or three months thereafter as selected by the Borrower in their notice of borrowing, and (2) thereafter, each period commencing on the last day of the immediately preceding Interest Period applicable to such Eurodollar Loan and ending one, two or three months thereafter as selected by the Borrower, provided that the Borrower has given its notice of continuation; provided that, all of the foregoing provisions relating to Interest Period are subject to the following: (a) if any Interest Period pertaining to a Eurodollar Loan would otherwise end on a day which is not a Working Day, such Interest Period shall be extended to the next succeeding Working Day unless the result of such extension would be to carry such Interest Period into another calendar month in which event such Interest Period shall end on the immediately preceding Working Day; and (b) if any Interest Period pertaining to a Eurodollar Loan begins on the last Working Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period), such Interest Period shall end on the last Working Day of a calendar month.

"International Receivable" means an account which arises out of a transaction between the Borrower or Erudite and an Account Debtor who meets at least one of the following criteria: (A) the Account Debtor is a non-United States (i) government, (ii) government-controlled business or (iii) governmental agency, (B) the Account Debtor is not subject to the jurisdictions of the court systems of the United States and any state of the United States and/or (C) the Account Debtor does not maintain in the United States an office to which such account is invoiced and tangible assets with a book value equal to at least five (5) times the aggregate accounts owed by such Account Debtor.

"Inventory" shall mean all of the respective inventory of the Borrower or Erudite and all respective right, title and interest of the Borrower or Erudite in and to all of its now owned and hereafter acquired goods, merchandise and other personal property furnished under any contract of service or intended for sale or lease, including, without limitation, all raw materials, inventory related work-in-progress, finished goods and materials and supplies of any kind, nature or description which are used or consumed in its business or are or might be used in connection with the manufacture, packing, shipping, advertising, selling or finishing of such goods, merchandise and other licenses, warranties, franchises, general intangibles, personal property and all documents of title or documents relating to the same and all proceeds (cash and non-cash) of the foregoing.

"Laws" means all ordinances, statutes, rules, regulations, orders, injunctions, writs or decreed of any federal, state or local government or political subdivision or agency thereof, or any court or similar entity established by any of the foregoing.

"Letter of Credit Obligations" shall mean, in respect of each Standby Letter of Credit, the obligation of the Borrower or Erudite to pay to the Bank all sums required to be paid by the terms of the Master

Letter of Credit Agreement and the Erudite Master Letter of Credit Agreement and the related Application and Agreement for Standby Letter of Credit and any Borrower's Obligations related to the Letters of Credit which are described by the terms of this Agreement.

"LIBO Rate" means, with respect to each Interest Period pertaining to a Eurodollar Loan, the rate per annum equal to the quotient of (1) the rate (expressed as a decimal) at which the Bank is offered Dollar deposits two Working Days prior to the beginning of such Interest Period in the London Interbank Market at 11:00 a.m., London time, for delivery on the first day of such Interest Period for the number of days comprised therein and in an amount equal to the amount of such Eurodollar Loan divided by (2) a number equal to 1.00 minus the Eurocurrency Reserve Requirement on the day which is two Working Days prior to the beginning of such Interest Period (such LIBO Rate to be rounded upward to the nearest 1/16 of 1%).

"Milestone Payment" shall mean a payment made pursuant to and in accordance with the terms of a written contract between the Borrower or Erudite, respectively, and an Account Debtor which provides for payments to the Borrower or Erudite, respectively, in respect of materials supplied or to be supplied and/or services rendered or to be rendered under such contract in amounts and at times which are readily calculated and/or determinable by reference to facts, dates or events such that a reasonably informed third party could identify appropriate invoice dates and calculate the amounts of such invoices under the contract. Without limiting the generality of the foregoing, a Milestone Payment shall not include any payment made on a percentage of completion basis, unless the Account Debtor has acknowledged in writing that an invoice issued for a particular percentage of completion is presently due and owing in accordance with the terms of the invoice.

"Prime Rate Loan" means any advance under the Loan or portion thereof when and to the interest rate thereof is determined by reference to the Prime Rate.

"Qualified Inventory" shall mean the aggregate value (lower of cost, as determined by the average cost method, or market), determined in accordance with United States generally accepted accounting principles, of the Inventory consisting of parts and service parts used by the Borrower to conduct its business as described in Section 7.20, or used by Erudite to conduct its business as described in the Security Agreement in all cases as to which the Borrower or Erudite has acquired respective title and the Bank has acquired a first priority, perfected security interest.

"Restricted Account" shall mean Erudite's Account over which Restricted Account the Bank shall have sole power of withdrawal until all of the Erudite's Obligations and the Borrower's Obligations have been repaid and satisfied in full.

"Utilized Portion of the Commitment" shall mean the sum of (a) all outstanding advances of the Loan with respect to which the Borrower has not satisfied in full its Loan Obligations, and (b) all amounts which have been drawn and not reimbursed or are then available to be drawn by the beneficiaries of all Standby Letters of Credit with respect to which the Borrower or Erudite has not satisfied in full its Letter of Credit Obligations.

"Working Day" means any Business Day on which dealings in foreign currencies and exchange between banks may be carried on in London, England and in Philadelphia, Pennsylvania.

3. The following term defined in Section 1.2 of the Loan Agreement is hereby deleted and replaced with the following:

"Receivables" shall mean, collectively, the Borrower's or Erudite's now owned or hereafter acquired or created respective Accounts, Chattel Paper, Contract Rights, General Intangibles and Instruments related thereto, and all cash and non-cash proceeds thereof.

### III. LETTER OF CREDIT

4. Provided that all of the conditions of Erudite Security Agreement, this Amendment Two, each other Financing Document and any other conditions imposed by any document required or contemplated by such are met, Letters of Credit may be issued under Article III of the Loan Agreement for which Erudite is the account party. All reimbursement obligations as to such letters of credit shall remain Borrower's Obligations and Letter of Credit Obligations.

### IV. NEGATIVE COVENANTS

5. Section 11.2 of the Loan Agreement (Use of Loan Proceeds and Letters of Credit) is hereby amended to read as follows:

"Use of Loan Proceeds and Letters of Credit". The Borrower will not use the Loan proceeds or the Letters of Credit for any purposes other than (1) to repay to Texas Instruments Incorporated the principal outstanding under the \$2,000,000 note dated December 30, 1994, which repayment was made on January 31, 1995; (2) to repay to GSE Systems, Inc. \$1,250,000 under its \$2,000,000 note dated December 30, 1994 (the "GSE Note"), which repayment was made on January 31, 1995; and (3) to meet working capital needs, including, without limitation, to make advances under the Loan to fund Letter of Credit reimbursement obligations and to make or repay its intercompany borrowings permitted under Section 11.18 and the investment in existing Subsidiaries permitted under Section 11.8 so long as there exists no Default or Event of Default at the time of such repayment and such repayment would not create a Default or an Event of Default.

6. Section 11.18 of the Loan Agreement is hereby amended to delete the word "and" prior to clause (e) thereof and insert the following phrase at the end of such Section:

"and (f) loans and advances to Erudite, from time to time, not to exceed at any one time outstanding the amount of the Commitment."

### V. CONDITIONS PRECEDENT

7. As conditions to the Bank's execution of this Amendment Two, the Bank shall have received all of the following, in form and substance satisfactory to the Bank in all respects:

(a) Copies of resolutions of the Board of Directors of each of the Borrower and Erudite authorizing the execution, delivery and performance of this Amendment Two, the Erudite Security Agreement, the Erudite Guaranty and any other agreements, documents and instruments delivered in connection therewith to which either is a party (the "Loan Documents") certified by the Secretary or Assistant Secretary of the Borrower or Erudite, as appropriate.

(b) A certificate of the Secretary or Assistant Secretary of each of the Borrower and Erudite as to the incumbency and specimen signatures of the officers of the Borrower and Erudite signing the Loan Documents.

(c) This Amendment Two.

- (d) The Erudite Guaranty.
- (e) A favorable opinion of counsel for each of the Borrower and Erudite in form and substance satisfactory to the Bank.
- (f) The Erudite Security Agreement and each document required thereby.
- (g) The Erudite Master Note.
- (h) UCC financing statements.
- (i) Such other agreements, documents, instruments and the like as the Bank may request.

## VI. REPRESENTATIONS AND WARRANTIES

8. The Borrower hereby represents and warrants that, as of the date hereof and after giving effect to this Amendment Two:

- (a) The Borrower is in compliance with all terms and provisions of the Loan Agreement and the other Financing Documents.
- (b) The representations and warranties set forth in the Loan Agreement and in the other Financing Documents are true and correct in all material respects (references to financial statements of the Borrower and GSE shall be deemed to be references to the latest financial statements of the Borrower and GSE) with the same effect as though made on and as of the date thereof, except to the extent that such representations and warranties expressly relate to an earlier date.
- (c) No Default or Event of Default under the Loan Agreement, as amended, has occurred as of this date other than in connection with loans or advances to Erudite.
- (d) This Amendment Two has been duly authorized by all requisite action on behalf of the Borrower and constitutes the legal, valid and binding obligation of the Borrower enforceable in accordance with its terms, except as the same may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general principles of equity.
- (e) The execution, delivery and performance of this Amendment Two will not violate any applicable provision of law or judgment, order or regulation of any court or of any public or governmental agency or authority nor conflict with or constitute a breach of or a default under any instrument to which the Borrower is a party or by which the Borrower or any of the Borrower's properties is bound.
- (f) No approval, consent or authorization of, or registration, declaration or filing with, any governmental or public body or authority, or any trustee or holder of any indebtedness, is required in connection with the valid execution, delivery and performance by the Borrower of this Amendment Two, except such as have been obtained.
- (g) There has been no material adverse change in the financial condition, business or prospects of the Borrower since the date of the Loan Agreement.

(h) The GSE Guaranty and the Subsidiary Guaranty remain in full force and effect and are binding, valid and enforceable in accordance with their terms.

All of the above representations and warranties shall survive the making of this Amendment Two.

## VII. WAIVER

9. The Bank hereby waives any Default or Event of Default under the Loan Agreement arising solely from the Borrower making loans or advances to Erudite. Nothing contained herein shall constitute a waiver of any other Default or Event of Default whether now existing or hereafter arising and the Bank expressly reserves all of its rights and remedies with respect to any such Default or Event of Default.

## VIII. LIBOR PROVISIONS

10. Article II of the Loan Agreement (THE LOAN) is hereby deleted and replaced with the following:

"2.1 Advances of the Loan. Subject to the provisions of this Agreement, including the satisfaction of the conditions precedent described in Article VIII hereof, the Bank agrees to make advances of the Loan in Dollars to the Borrower's Account as requested by the Borrower from time to time during the Commitment Period, provided that after giving effect to the Borrower's request the outstanding principal balances of the Loan Obligations and the Letter of Credit Obligations would not exceed the lesser of the Commitment and the Collateral Value as reflected on the applicable Borrowing Certificate.

2.2 Procedure for Making Advances Under the Loan; Bank Protection Advances. The Borrower may request a Prime Rate Loan to be made on any Business Day and may request a Eurodollar Loan to be made on any Working Day. Each such request shall be in writing and delivered to the Bank not later than 1:00 P.M., Philadelphia time (a) at least two Working Days prior to the date on which a Eurodollar Loan is to be made and (b) on the Business Day on which a Prime Rate Loan is to be made, specifying (i) the amount to be borrowed, (ii) the requested borrowing date, (iii) whether the advance is to be a Prime Rate Loan or a Eurodollar Loan and (iv) the length of the Interest Period for any Eurodollar Loan (such request may be made by telephone if immediately followed by telecopy confirmation thereof). The request for such advance shall be irrevocable. Advances under the Loan shall be deposited to the Borrower's Account. In addition, the Borrowers hereby irrevocably authorize the Bank, which shall have the right, but not the obligation, at any time and from time to time, without further request from or notice to the Borrower, to make advances under the Loan which the Bank, in its reasonable discretion, deems necessary or appropriate to protect the Bank's interest under this Agreement, including, without limitation, advances under the Loan made to cover any Borrower's Obligations, including, without limitation, Expense Payments, prior to, on, or after the termination of other advances under this Agreement, regardless of whether at such time there shall exist Available Commitment or whether the conditions precedent described in Article VIII hereof shall be satisfied; all such advances shall constitute Prime Rate Loans.

### 2.3 Interest.

(a) Subject to the terms of subsection 2.3(d) below, each Prime Rate Loan shall bear interest for the period from and including the date such advance is made until repayment in full of the principal amount thereof or conversion of such advance to a Eurodollar Loan pursuant to Section 2.4 on the unpaid principal balance thereof at the Prime Rate, such rate to change at the opening of business on the day of each change in the Prime Rate.

(b) Each Eurodollar Loan shall bear interest during each Interest Period applicable thereto on the unpaid principal balance thereof at a rate per annum equal to the LIBO Rate determined for such Interest Period plus 1.00%.

(c) Interest on each Prime Rate Loan and Eurodollar Loan shall be payable on the Interest Payment Dates applicable thereto.

(d) Any principal amount or other amounts (other than interest) payable hereunder not paid when due (upon demand by the Bank, if applicable, on default, or otherwise, whether or not the Bank shall have accelerated the Borrower's Obligations) shall bear interest thereafter until paid in full, payable on demand, at an annual rate equal to:

(i) For each Prime Rate Loan at a rate three percentage points in excess of the Prime Rate; and

(ii) For each Eurodollar Loan, at a rate equal to the then applicable rate as determined under Section 2.3(b) above plus three percent from the time of default in payment of principal until the end of the then current Interest Period therefor, and thereafter at a rate three percentage points in excess of the Prime Rate.

2.4 Interest Rate Conversion/Continuation. (a) The Borrower may elect from time to time to convert all or a part of a Prime Rate Loan or Eurodollar Loan into the other type of loan or to continue all or part of a Prime Rate Loan or a Eurodollar Loan for a new Interest Period by giving the Bank written or telegraphic Notice (effective upon receipt) not later than 1:00 P.M., Philadelphia time, on a Business Day for conversion into a Prime Rate Loan on such day, or at least two Working Days before a conversion into or continuation of a Eurodollar Loan, specifying: (1) the conversion or continuation date; (2) the amount to be converted or continued; (3) in the case of conversions, the type of loan to be converted into; and (4) in the case of continuations of or a conversion into Eurodollar Loans, the duration of the Interest Period applicable thereto provided that (a) Eurodollar Loans can only be converted on the last day of the Interest Period for such loan; (b) no loan may be converted or continued as a Eurodollar Loan when any Default or Event of Default has occurred and is continuing. All notices given under this Section 2.4 shall be irrevocable and shall be given not later than 1:00 P.M. Philadelphia time on the day which is not less than the number of Business or Working Days specified above for such notice. If the Borrower shall fail to give the Bank the notice as specified above for the continuation or conversion of a Eurodollar Loan prior to the end of the Interest Period applicable thereto, such Eurodollar Loan shall automatically be converted into a Prime Rate Loan on the last day of the Interest Period for such loan.



2.5 Inability to Determine Interest Rate. In the event that the Bank shall have determined (which determination shall be conclusive and binding upon the Borrower) that, by reason of circumstances affecting the London Interbank Market, adequate and reasonable means do not exist for ascertaining the LIBO Rate for any proposed Interest Period pertaining to any requested funding or continuation of or conversion to a Eurodollar Loan, or if the Bank shall have determined (which determination shall be conclusive and binding upon the Borrower) prior to such funding, continuation, or conversion that the LIBO Rate determined by the Bank for such Interest Period shall not adequately and fairly reflect the cost of maintaining or funding such Eurodollar Loan for such Interest Period, the Bank shall forthwith give notice of such determination to the Borrower. If such notice is given, such loan shall be funded or continued as or converted to a Prime Rate Loan. Until such notice has been withdrawn, no further Eurodollar Loans shall be made nor shall the Borrower have the right to convert a Prime Rate Loan to a Eurodollar Loan.

2.6 Illegality. If, after the date of this Agreement, the adoption of any applicable law, rule or regulation, or any change therein or in any currently applicable law, rule or regulation, or any change in the interpretation or administration thereof by any Governmental Authority, central bank or comparable agency charged with the interpretation or administration thereof, or compliance by the Bank with any request or directive (whether or not having the force of law) of any such Governmental Authority, central bank or comparable agency shall make it unlawful or impossible for the Bank to make, maintain or fund any loan at the LIBO Rate, the Bank shall so notify the Borrower. Upon receipt of notice pursuant to this Section 2.6 from the Bank, every Eurodollar Loan then outstanding shall automatically and without any requirement of additional notice to the Borrower be converted to a Prime Rate Loan, on either (a) the last day of the then current Interest Period with respect to such loan, if the Bank may lawfully continue to maintain and fund the loan at the rate then in effect to such day or (b) immediately, if the Bank may not lawfully continue to fund and maintain the loan at the rate then in effect to such day. Until the notice given pursuant to this Section 2.6 is withdrawn by the Bank, no further Eurodollar Loans shall be made nor shall the Borrower have the right to convert a loan to a Eurodollar Loan.

2.7 Additional Costs. The Borrower will pay to the Bank such amounts relating to increased costs as provided in Section 5.3(a).

2.8 Funding Loss Indemnification. The Borrower shall pay to the Bank, upon the request of the Bank, such amount or amounts as shall be sufficient (in the reasonable opinion of the Bank) to compensate it for any loss, cost, or expense incurred as a result of:

(a) Any payment of a Eurodollar Loan on a date other than the last day of the Interest Period pertaining to such loan including, but not limited to, any such payment made as a result of any voluntary prepayment or of acceleration by the Bank after default; or

(b) Any failure by the Borrower to borrow or convert, as the case may be, a Eurodollar Loan on the date for borrowing or conversion, as the case may be, specified in the relevant notice.

2.9 Calculations. Interest on the advances under the Loan shall be calculated on the basis of a year of 360 days for the actual number of days elapsed.

2.10 Other Provisions Regarding Eurodollar Loans.

(a) At no time shall there be more than six different Interest Periods pertaining to Eurodollar Loans.

(b) Each Eurodollar Loan shall be in an original principal amount of \$500,000, or an integral multiple of \$100,000 in excess thereof.

2.11 Payment Due on Non-Business Days. Whenever any payment to be made hereunder or under any other Financing Document (other than interest on a Eurodollar Loan) shall be stated to be due on a day which is not a Business Day, such payment may be made on the next succeeding Business Day, and such extension of time shall in such case be included in the calculation of interest payable hereunder or under any other Financing Document, as the case may be.

2.12 Repayment of Advances of the Loan. Each advance of the Loan, together with interest thereon, shall be repaid, and may be prepaid, in accordance with the provisions hereof and of the Promissory Note; provided, however, that the Borrower's Loan Obligations must be repaid to the extent that the Borrower or the Bank receive any Proceeds of the Collateral.

For purposes of this Section, Proceeds of the Collateral shall not be deemed to include the Proceeds of any intercompany Receivables which are collected by the Borrower in the ordinary course of business until the occurrence of an Event of Default. Intercompany Receivables constitute Collateral for the Borrower's Obligations to the Bank; however, intercompany Receivables do not qualify as Eligible Receivables for purposes of determining the amount of Available Commitment from time to time. Accordingly, until the occurrence of an Event of Default, the Borrower shall be entitled to collect and utilize Proceeds of any intercompany Receivables for any purposes within the ordinary course of business.

Amounts which are advanced under the Loan and repaid by the Borrower shall thereafter be available to be readvanced to the Borrower under the Loan, in accordance with the terms of this Agreement, at any time prior to the Termination Date, on which date the entire balance of principal, all accrued and unpaid interest and all other amounts owing hereunder or under any other Financing Document shall be due and payable."

11. Section 3.2 (Reimbursement of Drawings under the Letters of Credit) and Section 5.1(b) (Payments) are each hereby amended to add at the end thereof the following phrase:

"; all such advances shall constitute Prime Rate Loans."

12. Section 5.3(a)(iii) (Increased Costs and Reduced Return) is hereby deleted and replaced with the following:

(iii) does or shall impose on the Bank or any Parent any other condition (including without limitation a condition affecting a loan or a note or the cost of Dollar deposits obtained by the Bank in the London Interbank Market or other applicable markets);

#### **IX(A) ERISA PROVISIONS**

12A. Section 7.15 of the Loan Agreement is hereby deleted and replaced with the following:

7.15 ERISA and Code. Neither the Borrower nor any Commonly Controlled Entity maintains and/or contributes to, or has ever maintained or contributed to, any Defined Benefit Plan other than the Simulation, Systems & Services Technologies Company Union Pension Plan (the "Union Plan"), which was terminated effective August 4, 1996. All assets of the Union Plan were distributed on or before September 3,

1994. Except as specifically disclosed to the Bank in writing prior to the date of this Agreement:

(a) no Reportable Event has occurred with respect to the Union Plan;

(b) [intentionally omitted]

(c) no liability (whether or not such liability is being litigated) has been asserted against the Borrower or any Commonly Controlled Entity in connection with the Union Plan by the PBGC or by a trustee appointed pursuant to Section 4042(b) or (c) of ERISA, and no lien has been attached and no person has threatened to attach a lien to any property of the Borrower or any Commonly Controlled Entity as a result of any failure of the Union Plan to comply with the Code or ERISA;

(d) neither the Borrower nor any Commonly Controlled Entity maintains any employee welfare benefit plan providing for retiree health and/or life benefits other than (i) such continuation of benefit coverage as is required by law, (ii) coverage for a closed group of four retired former employees (and their families, if any) under the health benefit program for active employees, which coverage will continue only until each retiree attains age 65 (at which time, such persons shall become eligible for benefits under the Medicare supplemental program referred to in subparagraph (iii) below), (iii) a Medicare supplemental program for a present group of seven retirees (and a maximum group of 11 retirees) with a lifetime claim maximum of \$15,000 per retiree; and (iv) a death benefit for each retiree described in subparagraphs (ii) and (iii) above not to exceed \$10,000 per retiree, except for one retiree having a death benefit not to exceed \$30,000; and

(e) neither the Borrower nor any Commonly Controlled Entity maintains or makes contributions to, or has ever been required to make contributions to, any Multiemployer Plan.

12B. Section 9.13 of the Loan Agreement is hereby deleted and replaced with the following:

9.17 Pension Matters. The Borrower and each Commonly Controlled Entity will comply in all material respects with the provisions of ERISA and the Code with respect to any "employee benefit plan," as defined in Section 3(3) of ERISA. Neither the Borrower nor any Commonly Controlled Entity will adopt any employee pension benefit plan subject to the minimum funding standards of ERISA and the Code or become obligated to contribute to any Multiemployer Plan. Neither the Borrower nor any Commonly Controlled Entity will adopt any employee welfare benefit plan that provides for post-employment life and/or health benefits (other than such continuation of benefit coverage as is required by law and the plan described in Section 7.15). The Borrower will not acquire or permit the acquisition by any Commonly Controlled Entity of any trade or business which maintains or contributes to any plan described above.

12C. Section 11.1 of the Loan Agreement is hereby replaced with the following:

11.1 ERISA Compliance. Neither the Borrower nor any Commonly Controlled Entity shall fail to maintain at all times such bonding as is required by ERISA.

## IX. AMENDMENT TO NOTE

13. Paragraph (a) of the Promissory Note is hereby deleted and replaced with the following:

"(a) interest on the unpaid principal balance at the rates provided in the Loan Agreement (the interest rate options are set forth in Article II of the Loan Agreement), shall be due and payable at the time provided in the Loan Agreement, until the principal sum is paid in full; and"

## X. MISCELLANEOUS

14. Upon the effectiveness of this Amendment Two, on and after the date hereof, each reference in the Loan Agreement to "this Agreement", "hereunder", "hereof", "herein" or words of like import, and each reference in the Financing Documents shall mean and be a reference to the Loan Agreement as amended hereby.

15. The execution, delivery and effectiveness of this Amendment Two shall not, except as expressly provided herein, operate as a waiver of any right, power or remedy of the Bank under any of the Financing Documents, nor constitute a waiver of any provision of any of the Financing Documents.

16. The Borrower agrees to pay on demand all costs and expenses of the Bank in connection with the preparation, reproduction, execution and delivery of this Amendment Two and the other instruments and documents to be delivered hereunder, including the fees and out-of-pocket expenses of counsel for the Bank with respect thereto.

17. Recognizing and in consideration of the Bank's agreement to consent to the amendments set forth herein, the Borrower hereby waives and releases the Bank and its officers, attorneys, agents, and employees from any liability, suit, damage, claim, loss or expense of any kind or nature whatsoever and howsoever arising that it ever had or now has against the Bank arising out of or relating to the Bank's acts or omissions with respect to this Amendment Two, the Loan Agreement, the Loan, the Letters of Credit, the Note, the Erudite Security Agreement, the Erudite Guaranty, the Erudite Master Note and any other Financing Document or any other matters described or referred to herein.

18. All of the terms, conditions, provisions (including, without limitation, provisions relating to Events of Default) and covenants in the Loan Agreement, the Note, and all other Financing Documents and obligations secured thereby shall remain unaltered and in full force and effect without defense, counterclaim or offset by the Borrower, except as specifically modified by this Amendment Two.

19. The headings of any paragraph of this Amendment Two are for convenience only and shall not be used to interpret any provision hereof.

20. This Amendment Two, the Loan Agreement, the Note and each document incident thereto shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized officers to execute this Amendment Two as of the day and year first above written.

Attest:

GSE PROCESS SOLUTIONS, INC.

By: /s/ Thomas K. Milhollan  
-----  
Title: Assistant Secretary

By /s/ Robert W. Stroup  
-----  
Title: Executive Vice President

CORESTATES BANK, N.A.

By /s/ Derrick Davis  
-----  
Title: Vice President

**GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**SECURITY AGREEMENT**

THIS (this "Agreement") is made as of this 11th day of November, 1997, between GSE Erudite Software, Inc., a Delaware corporation (the "Debtor") and CORESTATES BANK, N.A., a national banking association (the "Bank").

**BACKGROUND**

WHEREAS, the GSE Process Solutions, Inc. ("Borrower") and the Bank entered into an Amended and Restated Letter of Credit, Loan and Security Agreement dated as of October 13, 1995 pursuant to which the Bank agreed to lend up to \$7,000,000 to the Borrower for the purposes set forth in Section 11.2 thereof (the "Loan Agreement") and amended the Loan Agreement by Amendment Number One to the Loan Agreement dated February 23, 1996 ("Amendment One"); as used hereinafter the term "Loan Agreement" shall mean the Loan Agreement as amended by Amendment One. In connection with Amendment One, the Borrower and the Bank amended the \$7,000,000 Promissory Note dated as of October 13, 1995, (the "Promissory Note").

WHEREAS, the Borrower has requested that the Bank further amend the Loan Agreement to permit the Borrower to advance funds to the Debtor for the purpose of furnishing working capital to the Debtor.

WHEREAS, the Bank is agreeable to such an amendment on the conditions that the advances do not exceed the amount of the Commitment, are evidenced by a Master Note in the amount of Commitment, which Master Note is duly pledged to the Bank, and the Debtor becomes fully liable to the Bank for all amounts due under the Loan Agreement and the Promissory Note and such advances secured by a first lien on the assets of the Debtor. The Bank will, if such conditions are met, add the collateral so provided by the Debtor to the Collateral Value for purposes of determining Available Commitment; and

WHEREAS the Debtor and the Bank have agreed to the grant of the first lien on the Debtor's assets pursuant to this Security Agreement set forth herein.

**AGREEMENTS**

NOW, THEREFORE, in consideration of the mutual agreements herein and other good and valuable consideration, the Debtor and the Bank hereby agree as follows:

**ARTICLE I  
DEFINITIONS**

1.1 Defined Terms. As used in this Agreement, the following terms shall have the following meanings:

"Account" individually and "Accounts" collectively shall mean all presently existing or hereafter acquired or created accounts, accounts receivable, contract rights, notes, drafts, instruments, acceptances, chattel paper, leases and writings evidencing a monetary obligation or a security interest in or a lease of goods, all rights to receive the payment of money or other consideration under present or future contracts (including, without limitation, all rights to receive payments under presently existing or hereafter acquired or created letters of credit), or by virtue of merchandise sold or leased, services rendered, loans and advances made or other considerations given, by or set forth in or arising out of any present or future chattel paper, note, draft, lease, acceptance, writing, bond, insurance proceeds from claims, instrument or document, and all extensions and renewals of any thereof, all rights under or arising out of present or future contracts,

agreements or general interest in merchandise which gave rise to any or all of the foregoing, including all goods, all claims or causes of action now existing or hereafter arising in connection with or under any agreement or document or by operation of law or otherwise, all collateral security of any kind (including real property mortgages) given by any person with respect to any of the foregoing, all books and records in whatever media (paper, electronic or otherwise) recorded or stored, with respect to any or all of the foregoing and all equipment necessary or beneficial or desirable to retain, access and/or process the information contained in those books and records, and all proceeds (cash and non-cash) of the foregoing.

"Account Debtor" shall mean any Person who is obligated on a Receivable and "Account Debtors" shall mean all Persons who are obligated on the Receivables.

"Affiliate" shall mean, with respect to the Debtor, any Person, directly or indirectly controlling, directly or indirectly controlled by, or under direct or indirect common control with the Debtor or any Subsidiary. Without in any way limiting the generality of the foregoing, "Affiliate" includes the Borrower, GSE Systems, Inc. and each of the following shareholders of GSE Systems, Inc.: ManTech International Corporation, SGLG, Inc. (formerly GPS Technologies, Inc.), General Physics Corporation and Vattenfall AB.

"Application and Agreement for Standby Letter of Credit" shall mean an Application and Agreement for Standby Letter of Credit in substantially the form attached hereto as Exhibit A and made a part hereof, or in such other form which is provided by the Bank to the Debtor as the form of Application and Agreement which is then in use by the Bank in connection with the issuance of its Standby Letters of Credit, which is executed by the Debtor and delivered to the Bank in connection with a request for the issuance of a Standby Letter of Credit.

"Borrower's Obligations" shall mean, collectively, the Loan Obligations and the Letter of Credit Obligations, together with all other sums due from the Borrower to the Bank under the terms of the Financing Documents.

"Business Day" shall mean a day on which commercial banking institutions are open for business in Philadelphia, Pennsylvania.

"Chattel Paper" shall mean a writing or writings which evidence both a monetary obligation and a security interest in or lease of specific goods; any returned, rejected or repossessed goods covered by any such writing or writings and all proceeds (in any form including, without limitation, accounts, contract rights, documents, chattel paper, instruments and general intangibles) of such returned, rejected or repossessed goods; and all proceeds (cash and non-cash) of the foregoing.

"Collateral" shall mean the collateral for the Debtor's Obligations and the Borrower's Obligations which is described in Section 3.1 of this Agreement or otherwise.

"Debtor's Account" shall mean GSE Erudite Software, Inc.'s Cash Collateral Account #14190-06553 with the Bank.

"Debtor's Guaranty" shall mean a Guaranty Agreement, in form and substance satisfactory to the Bank, dated the same date as the Amendment Two, executed and delivered by Debtor in favor of the Bank assuring and

guarantying the repayment of the Borrower's Obligations (and thereby becoming part of Debtor's Obligations) as the same may be amended, supplemented or otherwise modified, in accordance with the terms thereof and the Loan Agreement.

"Debtor's Master Note" shall mean the Master Note described in the Background section hereof and in form and substance as attached hereto as Exhibit B and pledged to Bank.

"Debtor's Master Letter of Credit" means a Master Letter of Credit Agreement executed by Debtor prior to the issuance of any Standby Letter of Credit for the account of Debtor, which shall be in form substantially similar to the Master of Letter of Credit Agreement.

"Debtor's Obligations" shall mean Debtor's obligations to pay the Borrower's Obligations by virtue of Debtor's Guaranty from the proceeds of the collateral pledged to the Bank by Debtor for the Borrower's Obligations or otherwise arising by contract or operation of law.

"Default" shall mean any of the events specified in Section 8.1 hereof, whether or not any requirement for the giving of notice, the lapse of time, or both, or any other condition, has been satisfied.

"Dollars" and the sign "\$" shall mean dollars in lawful money of the United States of America.

"Environmental Laws" shall mean any federal, state or local statute, law, rule, ordinance, regulation, standard, permit or requirement concerning or relating to the protection of health and the environment.

"Event of Default" shall mean any of the events specified in Section 8.1 hereof, provided that any requirement for the giving of notice, the lapse of time, or both, or any other condition, has been satisfied.

"Expense Payments" shall have the meaning given to such term in Section 8.2(f) of this Agreement.

"Financing Documents" shall mean, collectively, this Agreement, the Master Letter of Credit Agreement, all Applications and Agreements for Standby Letters of Credit and Standby Letters of Credit issued pursuant thereto, the Promissory Note, the GSE Guaranty, the Debtor's Guaranty, this Security Agreement, Debtor's Master Note and any other documents, instruments, certificates and agreements which have been, are or are hereafter executed and delivered by the Borrower or the Debtor or any other Person in connection with any of the Borrower's or Debtor's Obligations.

"GSE" means GSE Systems, Inc.

"Letter of Credit" shall mean a Standby Letter of Credit.

"Letter of Credit Obligations" shall mean, in respect of each Standby Letter of Credit, the obligation of the Debtor to pay to the Bank all sums required to be paid by the terms of the Master Letter of Credit Agreement and the related Application and Agreement for Standby Letter of Credit and any Borrower's or Debtor's Obligations related to the Letters of Credit which are described by the terms of the Loan Agreement.

"Loan" shall mean the direct loan advances to be made available by the Bank to the Borrower in accordance with the provisions of Article II of the Loan Agreement.



"Loan Obligations" shall mean the obligation of the Borrower to repay to the Bank the principal amount of the Loan, together with interest thereon, in accordance with the terms of the Promissory Note, and any Borrower's Obligations related to the Loan which are described by the terms of the Loan Agreement and the Promissory Note.

"Master Letter of Credit Agreement" shall mean the Master Letter of Credit Agreement in substantially the form attached hereto as Exhibit C and made a part hereof.

"Permitted Liens" means (a) liens in connection with workers' compensation, unemployment insurance or other social security or similar obligations arising in the ordinary course of business; (b) deposits or pledges securing the performance of bids, tenders, contracts (other than contracts for the payment of money), leases, statutory obligations, surety and appeal bonds and other obligations of like nature made in the ordinary course of business and not affecting the Collateral; (c) mechanics', carriers', landlords', warehousemen's, workers', materialmen's or other like liens arising in the ordinary course of business with respect to obligations which shall not at the time be due or payable and the validity of which is being contested in good faith, by appropriate proceedings, and without a materially adverse effect on the Debtor or on the Collateral; (d) liens for taxes imposed upon the Debtor or any of its properties, operations, income, products or profits, which shall not at the time be due or payable and the validity of which is being contested in good faith, by appropriate proceedings, and without a materially adverse effect on the Debtor or on the Collateral; (e) reservations, exceptions, encroachments, easements, rights of way, covenants, conditions, restrictions, and other similar title exceptions or encumbrances affecting real property which do not have a materially adverse effect on the Debtor or on the Collateral; (f) attachment, judgment and other similar liens not affecting the Collateral which arise in connection with court proceedings, as to which the execution or other enforcement thereof is effectively stayed, or which are fully covered by applicable insurance (which shall not include any bonding or other arrangement in connection with which the Debtor may be liable to any extent); (g) liens in favor of the Bank; (h) purchase money security interests as provided for in Section 7.4(b) of this Agreement; and (i) liens, if any, consented to by the Bank in writing.

"Person" shall mean an individual, a partnership, a corporation, a trust, any other organization or entity or any government or governmental body or authority.

"Proceeds" or "proceeds" means, when used with respect to any of the Collateral, all cash and non-cash proceeds within the meaning of the Uniform Commercial Code and shall include the proceeds of any and all insurance policies.

"Promissory Note" shall mean the Promissory Note of October 13, 1995 executed by the Borrower in favor of the Bank and containing the terms and conditions under which the principal amount of the Loan, together with interest thereon, will be repaid, as the same may from time to time be amended, supplemented or otherwise modified in accordance with the terms thereof and of the Loan Agreement.

"Registered Properties" shall have the meaning given to such term in Section 3.1 of this Agreement.

"Restricted Account" shall mean the Debtor's Account #14190-06553 over which Restricted Account the Bank shall have sole power of withdrawal until all of the Debtor's Obligations and the Borrower's Obligations have been repaid and satisfied in full.

"Security Agreement" shall mean this Security Agreement, as it may from time to time be amended, supplemented or otherwise modified in accordance with the terms hereof.

"Standby Letter of Credit" shall mean a Standby Letter of Credit issued by the Bank (in accordance with the provisions of Uniform Customs and Practice for Documentary Credits, 1993 Revision, ICC Publication No. 500, or such subsequent revisions as may be adopted by the International Chamber of Commerce Executive Board from time to time) to a designated beneficiary for the account of the Debtor, upon receipt of an executed Application and Agreement for Standby Letter of Credit, which Standby Letter of Credit will be in form and content satisfactory to the Bank in all respects.

"Subsidiary" shall mean any present or future corporation at least a majority of whose outstanding Voting Stock shall at the time be owned by the applicable Person; or by one or more Subsidiaries of the applicable Person; or by the applicable Person and one or more of its respective Subsidiaries.

## 1.2 Uniform Commercial Code Terms.

"Accounts," "Chattel Paper," "Contract Rights," "Documents," "Equipment," "General Intangibles," "Instruments" and "Inventory" shall, in addition to any meaning given to such term in this Security Agreement, have the respective meanings as are given to those terms in the Uniform Commercial Code as presently adopted and in effect in the Commonwealth of Pennsylvania and in any other states in which any portion of the Collateral may be located, and shall also cover, without limitation, (a) any property specifically included in those respective terms in this Security Agreement or in the other Financing Documents executed in connection with this Security Agreement, (b) all property included in these respective terms, whether now owned or existing or hereafter acquired or created and wherever located, and (c) all proceeds (cash and non-cash) and products of the foregoing.

"Receivables" shall mean, collectively, the Debtor's now owned or hereafter acquired or created Accounts, Chattel Paper, Contract Rights, General Intangibles and Instruments related thereto, and all cash and non-cash proceeds thereof.

1.3 Certain Terms Defined in Loan Agreement. All capitalized words used herein shall have the meaning ascribed to them in the Loan Agreement, unless there are defined herein, in which case they shall have the meaning ascribed to them herein.

1.4 ERISA Terms. Certain terms used in this Agreement are defined in the Employee Retirement Income Security Act of 1974, as amended ("ERISA") or are otherwise defined in the Internal Revenue Code of 1986, as amended (the "Code"). When and if used in this Agreement, such terms shall have the meanings given them in ERISA or the Code. Specifically, the following terms shall have the following meanings:

"Commonly Controlled Entity" means any Subsidiary or any other trade or business (whether or not incorporated) which is part of a group of trades or businesses under "common control" (as defined in Code 414(c)) and of which GSE, the Borrower, the Debtor or any of their Subsidiaries is a part.

"Defined Benefit Plan" means an employee pension benefit plan (as defined in Section 3(2) of ERISA) covered by Title IV of ERISA (other than a Multiemployer Plan), as provided in Section 4021 of ERISA, and maintained by the Debtor, the Borrower, GSE and/or by any Commonly Controlled Entity.

"Multiemployer Plan" means a multiemployer plan (as defined in Section 4001(a)(3) of ERISA), to which GSE, the Borrower or the Debtor or any Commonly Controlled Entity, as appropriate, has or had an obligation to contribute.

"PBGC" means the Pension Benefit Guaranty Corporation.

"Reportable Event" means a "reportable event" as defined in Section 4043(c) of ERISA.

"Responsible Officer" means the chief executive officer of the Debtor, the president of the Debtor, the executive vice president of the Debtor, or, with respect to financial matters, the vice president of finance of the Debtor.

#### 1.5 Other Definitional Provisions.

(a) All terms defined in this Security Agreement shall have their defined meanings when used in any certificate or other document made or delivered pursuant hereto.

(b) The words "hereof," "herein" and "hereunder" and words of similar import, when used in this Security Agreement shall refer to this Security Agreement as a whole and not to any particular provision of this Security Agreement, and section, subsection, schedule and exhibit references are to this Security Agreement unless otherwise specified.

(c) In the event of any conflict between the meanings given to "Accounts," "Chattel Paper," "Contract Rights," "Documents," "Equipment," "General Intangibles," "Instruments," and "Inventory" in the Uniform Commercial Code and as otherwise set forth in this Security Agreement, the respective meanings given to such terms in the Uniform Commercial Code shall prevail with respect to all matters relating to the grant, existence and perfection of security interests in the Collateral; for all other purposes, the respective meanings shall be as otherwise set forth in this Security Agreement.

**ARTICLE II  
LOCKBOX, ETC.**

2.1 Lockbox. While any of the Borrower's Obligations or the Debtor's Obligations remain outstanding, or the Bank has any obligation under the Loan Agreement, the Debtor shall maintain a post office box which will be under the exclusive control of the Bank (the "Lockbox") into which the Debtor shall cause all payments of any of the Debtor's Receivables (other than intercompany Receivables prior to the occurrence of an Event of Default) and Documents to be made, and the Debtor shall indicate on all invoices and other correspondence with Account Debtors (other than intercompany Account Debtors) to make all payments to the Debtor in care of the Lockbox and hereby appoints the Bank, as the Debtor's true and lawful attorney-in-fact to receive all incoming mail, open all such mail, remove all collections and remittances therefrom in payment of or on account of any of the Debtor's Receivables and Documents and use the Bank's reasonable efforts to forward all other mail so received to the Debtor's place of business. Any Proceeds of Collateral received by the Debtor, including, without limitation, payments on Receivables (other than intercompany Receivables so long as there exists no Event of Default, it being understood and agreed that any such payments on intercompany Receivables will be treated as any other Receivable after the occurrence of an Event of Default) and Documents and other payments from sales or leases of Inventory, shall be held by the Debtor in trust for the Bank in the same medium in which received, shall not be commingled with any assets of the Debtor, and shall be delivered immediately to the Bank. The Debtor agrees to pay to the Bank promptly when billed the Bank's standard fees for operating the Lockbox. The Debtor hereby grants, bargains, conveys and sets over to the Bank a security interest in and lien upon the Lockbox, the Restricted Account, the Debtor's Account and any other account established by the Debtor with the Bank or any affiliate thereof, and all cash and any other assets at any time hereafter contained therein. Amounts received in the Lockbox shall be deposited upon collection into the Restricted Account, and the Bank will apply all amounts so received against the Borrower's Obligations or the Debtor's Obligations on a daily basis, as collected.

### ARTICLE III SECURITY

3.1 Collateral. As security and collateral for the repayment of the Debtor's Obligations and the Borrower's Obligations and the payment of all other liabilities of the Debtor or the Borrower to the Bank, whether absolute or contingent, matured or unmatured, direct or indirect, similar or dissimilar, due or to become due or heretofore or hereafter contracted or acquired, however and wherever arising and whether or not arising hereunder, under any of the other Financing Documents, or in connection with any of the transactions described herein or therein or under any other documents, instruments or agreements, the Debtor hereby assigns, pledges and grants to the Bank, and agrees that the Bank shall have a perfected (except as the Bank's remedies may be limited at any time by the absence of full compliance with the Federal Assignment of Claims Act, the Federal Assignment of Contracts Act, any state or local law equivalent of either of the foregoing, and as a result of matters relating to copyrights, trademarks and patents set forth in the next paragraph) and a continuing security interest in, and lien on, all of the following (collectively, the "Collateral"): (a) all of the Debtor's Accounts, Inventory, Chattel Paper, Documents, Instruments, General Intangibles, and Equipment (whether or not fixtures), whether now owned or existing or hereafter acquired or arising, other than vehicle leases and equipment leases, (b) all returned, rejected or repossessed goods, the sale or lease of which shall have given or shall give rise to an Account or Chattel Paper, (c) all insurance policies relating to the foregoing, (d) all books and records in whatever media (paper, electronic or otherwise) recorded or stored, with respect to the foregoing and all equipment and general intangibles necessary or beneficial to retain, access and/or process the information contained in those books and records, (e) the Lockbox, the Debtor's Account, the Restricted Account and any other account maintained by the Debtor with the Bank and all cash held therein; and (f) all cash and non-cash proceeds and products of the foregoing.

Except as set forth in Schedule 3.1, the Debtor has no ownership interest in any of the following (hereinafter collectively referred to as "Registered Properties"): (i) any patent issued by, or any invention for which a patent application is pending in, the U.S. Patent and Trademark Office; (ii) any trademark registered by, or for which an application for registration is pending in, the U.S. Patent and Trademark Office; or (iii) any copyright registered by, or for which an application for registration is pending in, the U.S. Copyright Office. If any inventions, trademarks or copyrights of the Debtor hereafter become Registered Properties or if the Debtor hereafter obtains an ownership interest in any Registered Properties, the Debtor will immediately notify the Bank in writing. If the Bank requests, the Debtor will cause the Bank's first priority security interest in any or all such Registered Properties to be appropriately recorded in the appropriate office pursuant to documentation in form and substance satisfactory to the Bank in its sole and absolute discretion.

The Debtor further agrees that the Bank shall have in respect of the Collateral all of the rights and remedies of a secured party under the Uniform Commercial Code of Pennsylvania and of all other states in which any portion of the Collateral may be located, as well as those provided in this Security Agreement, under each of the other Financing Documents and under applicable laws.

3.2 Location of Collateral; Principal Place of Debtor's Business. The Debtor agrees to keep the Bank informed as to the location of the Collateral and the address of its principal place of business (which are, and will be, as set forth on Schedule 4.12, subject to the provisions of this section all allowing for changes in certain circumstances), give the Bank prior notice of any contemplated change of location or the address of its principal place of business, and not change the location of any of the Collateral or the address of its principal place of business, without, in the case of a change to another location in the continental United States, 30 days' prior written notice to the Bank and, in the case of a change to another location outside the continental United States, 30 days' prior written notice to and the prior written consent of the Bank. Without limiting the generality of the foregoing, (a) the Debtor's

principal place of business and chief executive office shall at all times be within the State of Utah and (b) the Debtor shall notify the Bank in writing immediately (i) if and when the aggregate value (as determined in accordance with United States generally accepted accounting principles) of Collateral (in the case of Inventory, the lower of cost, as determined by the average cost method, or market) in any state of the United States equals or exceeds \$500,000 (other than Tempe, Arizona, where the Debtor now maintains assets); and (ii) if and when the aggregate value (as determined in accordance with United States generally accepted accounting principles) of assets (in the case of inventory, the lower of cost, as determined by the average cost method, or market) of its Subsidiaries exceeds \$1,500,000.

3.3 Loss of Collateral. The Bank shall not be liable for any loss of any Collateral in its possession, nor shall such loss diminish the debt due, except to the extent such loss is caused by the Bank's willful misconduct or gross negligence.

3.4 Filing of Financing Statements; Perfection of Security Interest in Collateral. The security interest created by this Security Agreement shall be perfected by the filing of financing statements which fully comply with Article 9 of the Uniform Commercial Code, as adopted by each of the states in which the Collateral may be located, in such form and in such offices as may be required by the Bank. The parties agree that:

(a) with respect to any such financing statement, a carbon, photographic or other reproduction of a security agreement or a financing statement is sufficient as a financing statement for purposes of Section 9-402 of the Uniform Commercial Code;

(b) if at any time any of the information contained in any financing statement filed in connection with the security interests created by this Security Agreement, including without limitation, the location or description of the Collateral or the Debtor's name or address of its principal place of business, or chief executive office shall change in such manner as to cause such financing statement to become misleading in any material respect or as may impair the perfection of the security interests intended to be created by this Security Agreement, then the Debtor will cooperate with the Bank in promptly preparing and executing an amendment to such financing statement, or a new financing statement, as may be necessary to continue the perfection of the security interest intended to be created by this Security Agreement which amendment or new financing statement will be filed in any office where such amendment or financing statement is required to be filed to continue the perfection of the security interests created by this Security Agreement;

(c) upon the request of the Bank, the Debtor shall prepare, have executed and file any amendments to the financing statements filed with respect to the security interests created by this Security Agreement in such form as the Bank may require;

(d) the Bank may, and the Debtor hereby irrevocably appoints the Bank as the Debtor's attorney-in-fact to, take any action the Bank deems necessary to perfect or maintain perfection of any security interest granted to the Bank herein or in connection herewith (but only to the extent that the perfection is contemplated hereunder), including the execution of any document on the Debtor's behalf, granting unto the Debtor's said attorney full power to do any and all things necessary to be done with respect to the above transactions as fully and effectually as the Debtor might or could do, and hereby ratifying all that said attorney shall lawfully do or cause to be done by virtue hereof; this power of attorney is coupled with an interest and irrevocable until all of the Debtor's Obligations and Borrower's Obligations are paid in full and the Bank has no further obligation under the Loan Agreement;

(e) the Debtor shall bear all costs, fees and expenses of or relating to any and all of the filings described in this Section 3.4, including any recordation taxes payable as a result of such filings; and

(f) upon request by the Bank, the Debtor shall provide, at its expense, an opinion of counsel as to the effectiveness and perfection of the Bank's lien on the Collateral or any portion thereof.

3.5 Waivers. If any of the Collateral or any of the books and records relating thereto are at any time to be located on premises leased by the Debtor or on premises owned by the Debtor subject to a mortgage or other lien in favor of a Person other than the Bank, the Debtor shall use its best efforts in good faith to obtain and deliver to the Bank, prior to the delivery of any Collateral or books and records to said premises, or as soon thereafter as possible, an agreement in form satisfactory to the Bank, waiving the landlord's or mortgagee's or lienholder's rights to enforce any claim against the Debtor for moneys due under the lease, mortgage or other lien by levy of distraint or other similar proceeding against the Collateral or the books and records relating thereto and assuring the Bank's ability to have access to the Collateral and the books and records relating thereto to exercise its rights hereunder to take possession thereof.

3.6 Bank's Rights with Respect to Accounts, Chattel Paper, General Intangibles and Instruments. (a) With respect to any Accounts, Chattel Paper, General Intangibles and Instruments, the Bank shall have the right at any time and from time to time, whether or not there then exists a Default or Event of Default: (i) to endorse in the name of the Debtor all proceeds of the Accounts, Chattel Paper, Instruments and General Intangibles payable to the Debtor that may come to the Bank and (ii) to take control of any cash or noncash proceeds of any Account, Chattel Paper, Instrument, and/or General Intangibles for the purpose of application to pay down the Debtor's Obligations or the Borrower's Obligations.

(a) With respect to any Accounts, Chattel Paper, General Intangibles and Instruments, the Bank shall have the right at any time and from time to time, after an Event of Default: (i) to compromise, extend or renew any Account, Chattel Paper, Instrument, or General Intangible or deal with the Debtor's Accounts, Chattel Paper, Instruments and General Intangibles as the Bank may deem advisable; (ii) to make exchanges, substitutions, or surrenders of collateral; (iii) to communicate with Account Debtors and the Debtor's accountant to verify account balances and any information provided by the Debtor; and (iv) to notify an Account Debtor that the Account or General Intangible payable by such Account Debtor has been assigned to the Bank and is to be paid directly and solely to the Bank.

3.7 Accounts. (a) With respect to each Account, the Debtor represents that: (i) such Account is not evidenced by a judgment, an Instrument or Chattel Paper or secured by a letter of credit (except (A) such judgment as has been assigned to the Bank, or (A) such Instrument or Chattel Paper as has been endorsed and delivered to the Bank or (C) such letter of credit as provides for payment to be negotiated only at the Bank's counters, or, alternatively, provides that payment be made solely to the Restricted Account) and represents a bona fide transaction; (ii) the amount thereof shown on the Debtor's books and records and on any list, invoice or statement furnished to the Bank is owing to the Debtor; (iii) the title of the Debtor to the Account and, except as against the Account Debtor, to any goods represented thereby is absolute; (iv) the Account has not been transferred to any other Person, and no Person except the Debtor has any claim thereto or, with the sole exception of the Account Debtor therefor, to the goods represented thereby; (v) except as previously disclosed to the Bank and/or stated on the Debtor's financial statements previously delivered to the Bank, no partial payment against any Account has been made by anyone; (vi) except as previously disclosed to the Bank and/or stated on the Debtor's financial statements previously delivered to the Bank, no set-off or counter-claim in a material amount to such Account exists, and no agreement has

been made with any Person under which any deduction or discount in a material amount may be claimed; and (vii) the Debtor has notified and shall notify all Account Debtors and has indicated and shall indicate on all billings and statements to Account Debtors that payments thereon are to be made solely to the Lockbox. All invoices shall direct payment to the address set forth in the Lockbox Agreement.

(a) The Debtor will (i) furnish to the Bank, upon the Bank's request, copies, with such duplicate copies as the Bank may request, of any invoice applicable to each of its Accounts; (ii) make no material change in the payment terms of any Account, Chattel Paper or Instrument in an amount or evidencing an obligation equal to \$250,000 or more without notifying the Bank of the change in writing; (iii) furnish the Bank upon the Bank's request with all information received by the Borrower affecting the financial standing of any Account Debtor; (iv) if requested by the Bank, mark the Debtor's records concerning each of its Accounts, Chattel Paper, Instruments, or General Intangibles in a manner satisfactory to the Bank so as to show that each Account, Chattel Paper, Instrument or General Intangible has been assigned to the Bank; (v) if requested by the Bank, furnish the Bank with evidence satisfactory to the Bank of the shipment and receipt of any goods and the performance of any services represented by any Accounts; and (vi) inform the Bank immediately of any default by any Account Debtor in connection with any Account, Chattel Paper, Instrument, or General Intangible.

3.8 Chattel Paper; Letters of Credit and Instruments. The Debtor represents and warrants to the Bank that it has delivered to the Bank and covenants that it will deliver to the Bank promptly on receipt all originals of

(a) letters of credit securing Accounts, (b) Chattel Paper and (c) Instruments now in its possession or hereafter acquired, each properly assigned and/or endorsed over to the Bank, which letters of credit, Chattel Paper and Instruments shall be held by the Bank as security hereunder, or, at the Bank's option, endorsed for payment. The Debtor shall remain solely responsible for the observance and performance of all of the Debtor's covenants and obligations under all Chattel Paper and Instruments, and the Bank shall not be required to observe or perform any such covenants or obligations.

3.9 Equipment and Inventory. The Debtor represents, warrants and agrees that (a) the Debtor is the absolute owner of its Inventory, Equipment and Documents, subject only to the security interests created hereby and Permitted Liens; (b) the Debtor will sell its Inventory only in the ordinary course of business and as otherwise permitted hereunder; (c) after the occurrence of an Event of Default, the Bank shall have the right to take possession of Inventory and the Debtor hereby assigns to the Bank its right of stoppage in transit with respect to such Inventory; the Debtor will repay the Bank promptly for all reasonable costs of transportation, packing, storage and insurance of any such possession, together with interest at the highest rate payable hereunder, at the time the Bank pays such costs; and the Debtor's liability to the Bank for such repayment with interest shall be included in the Debtor's Obligations and the Borrower's Obligations; (d) if any such Inventory is or becomes represented by a Document, the Bank may require that such Document be in such form as to permit the Bank or anyone to whom the Bank may negotiate the same to obtain delivery to it of the Inventory represented thereby; and (e) all of the Debtor's Equipment as of the date hereof is set forth on Schedule 3.9 attached hereto and is of a type in which a security interest is to be perfected solely by filing a financing statement under the Uniform Commercial Code, as adopted in the various states, except for motor vehicles owned by the Debtor, and if in the future the Debtor acquires any equipment of a type in which a security interest is to be perfected in a manner other than by or in addition to filing a financing statement under the Uniform Commercial Code, as adopted in the various states, the Debtor shall promptly notify the Bank thereof and take such steps as are necessary to perfect the Bank's security interest therein.

3.10 Condition of Inventory and Equipment. The Debtor will promptly notify the Bank of any casualty or similar event which results in a material decline in the value of any substantial portion of its Inventory or Equipment and the amount of such decline in value.



3.11 Notices. If notice of sale, disposition or other intended action by the Bank with respect to the Collateral is required by the Uniform Commercial Code or other applicable law, any notice thereof sent to the Debtor at the address listed in Section 9.1 or such other address of the Debtor as may from time to time be shown on the records of the Bank, at least five Business Days prior to such action, shall constitute reasonable notice to the Debtor.

3.12 Discharge of Taxes, Etc. The Bank shall have the right, at any time and from time to time, without notice to the Debtor to (a) discharge taxes, liens, security interests or other encumbrances at any time levied or placed on any of the Collateral, and (b) pay for the maintenance and preservation of any of the Collateral. The Debtor will reimburse the Bank, on demand, with interest thereon at the highest rate payable under the Loan Agreement, for any payment the Bank makes, or any expense the Bank incurs, under this authorization.

3.13 Waiver and Release by the Debtor. The Debtor (a) waives protest of all commercial paper at any time held by the Bank on which the Debtor is in any way liable, notice of nonpayment at maturity of any and all Accounts, Instruments, Chattel Paper or General Intangibles of the Debtor and, except where required hereby or by law, notice of action taken by the Bank, and (b) releases the Bank from all claims for loss or damage caused by any failure to collect any Account, Instrument, Chattel Paper or General Intangible or by any act or omission on the part of the Bank or its officers, agents and employees, except for gross negligence and willful misconduct.

3.14 Custody of Inventory and Equipment. Upon demand by the Bank after the occurrence of an Event of Default, the Debtor shall assemble its Inventory and Equipment and make it available to the Bank at the Debtor's place of business. At the request of the Bank, after the occurrence of an Event of Default, the Debtor shall provide warehousing space in its own premises to the Bank for the purpose of taking Inventory and Equipment into the custody of the Bank without removal thereof from such premises and will post such signs as the Bank may reasonably require to place such Inventory and Equipment under the exclusive control of the Bank.

3.15 Records and Reports. The Debtor shall keep accurate and complete records of its Accounts (and the collection thereof), Chattel Paper, Instruments, Documents, Equipment, Inventory, and General Intangibles (including, without limitation, making all necessary entries therein to reflect the quantities, costs, values and location of its Inventory, and the transactions and facts giving rise to its Accounts, General Intangibles, Chattel Paper, Instruments and Documents and payments, credits and adjustments applicable thereto), and furnish the Bank such information about the Debtor's Accounts, Chattel Paper, Instruments, Documents, Equipment, Inventory and General Intangibles, as the Bank may reasonably request.

3.16 Application of Proceeds of Collateral. After an Event of Default, all proceeds of Collateral shall be applied (a) to the costs of preservation and liquidation of such Collateral and the Bank's exercise of its rights hereunder, then (b) to principal, interest and other amounts owing hereunder or in connection herewith in such order as the Bank, in its sole discretion, shall determine, then (c) into the Debtor's Account.

3.17 Continuing Collateral. The Bank shall be under no obligation to proceed first against any part of the Collateral before proceeding against any other part of the Collateral. It is expressly agreed that all of the Collateral stands as equal security for all Debtor's Obligations and Borrower's Obligations and the Bank shall have the right to proceed against or sell any and/or all of the Collateral in any order, or simultaneously, as it, in its sole discretion, shall determine.

**ARTICLE IV  
REPRESENTATIONS AND WARRANTIES**

To induce the Bank to enter into the amendment to the Loan Agreement described in the Background section hereof and to allow advances by the Borrower to the Debtor, the Debtor represents and warrants to the Bank as follows:

4.1 Ownership; Subsidiaries; etc. (a) Schedule 4.1 attached hereto states as of the date hereof the authorized capitalization of the Debtor and each of its Subsidiaries (including capital stock of the Debtor and each Subsidiary held in Treasury), the number of shares of each class of capital stock issued and outstanding of the Debtor and each Subsidiary and the number and percentage of outstanding shares of each such class of capital stock and the names of the record and beneficial owners of such shares. The outstanding shares have been duly authorized and validly issued and are fully paid and nonassessable. Schedule 4.1 to this Security Agreement describes as of the date hereof all outstanding options, rights and warrants issued by the Debtor and each Subsidiary for the acquisition of shares of the capital stock of the Debtor or such Subsidiary, as the case may be, all outstanding securities or obligations convertible into such shares and all agreements by the Debtor or such Subsidiary, as the case may be, to issue or sell such shares. Schedule 4.1 to this Security Agreement describes as of the date hereof all options, sale agreements, pledges, proxies, voting trusts, powers of attorney and other agreements or instruments binding upon the Debtor's and/or each Subsidiary's shareholders with respect to beneficial or record ownership of or voting rights with respect to shares of the capital stock of the Debtor and each Subsidiary.

(a) The Debtor has no Subsidiaries other than as set forth on Schedule 4.1.

4.2 Good Standing. The Debtor (a) is a corporation duly organized and existing, in good standing, under the laws of the jurisdiction of its incorporation, (b) has the corporate power to own its property and to carry on its business as now being conducted, and (c) is duly qualified to do business and is in good standing in each jurisdiction in which the character of the properties owned by it therein or in which the transaction of its business makes such qualification necessary.

4.3 Corporate Authority. The Debtor has full corporate power and authority to enter into and execute and deliver this Security Agreement and each of the other Financing Documents executed and delivered by the Debtor, and to incur and perform the Debtor's Obligations and the Borrower's Obligations provided for herein and therein, all of which have been duly authorized by all proper and necessary corporate action and all material governmental licenses, authorizations, consents and approvals required. No consent or approval of stockholders or of any other person or public authority or regulatory body is required as a condition to the validity or enforceability of this Security Agreement or any of the other Financing Documents, or if required the same has been duly obtained.

4.4 Binding Obligations. This Security Agreement and each of the other Financing Documents executed and delivered by the Debtor have been properly executed by the Debtor, constitute valid and legally binding obligations of the Debtor, and are fully enforceable against the Debtor in accordance with their respective terms, subject only to the effect upon enforceability of applicable bankruptcy, insolvency, and other similar laws affecting the rights of creditors generally and the exercise of judicial discretion in accordance with general principles of equity.

4.5 Litigation. There is no litigation or proceeding pending or, so far as the Debtor knows, threatened before any court or administrative agency which, in the opinion of the officers of the Debtor, will materially adversely affect the financial condition or operations of the Debtor, or the ability of the

Debtor to pay and perform in full the Debtor's Obligations or the Borrower's Obligations or the authority of the Debtor to enter into, or the validity or enforceability of, this Security Agreement or any of the other Financing Documents executed and delivered by the Debtor.

4.6 No Conflicting Agreements. There is (a) no charter, bylaw or preference stock provision of the Debtor and no provision of any existing contract or agreement binding on the Debtor or affecting its properties, and (b) to the knowledge of the Debtor, no law binding upon the Debtor or affecting any of its property, which would conflict with or in any way prevent the execution, delivery or performance of the terms of this Agreement or of any of the other Financing Documents executed and delivered by the Debtor, or which would be in default or violated as a result of such execution, delivery or performance.

4.7 Financial Condition. (a) The audited consolidated and consolidating financial statements of GSE and its Subsidiaries as of December 31, 1996, and the interim, management-prepared consolidated and consolidating financial statements of GSE and its Subsidiaries as of March 31, 1997, and (b) the financial statements of the Debtor, as of March 31, 1997, together with statements of profit and loss and of surplus for the periods then ended, all of which have been delivered to the Bank, are complete and correct and fairly present the financial position of the Debtor and GSE and the results of their operations and transactions in their equity account(s) as of the dates and for the periods referred to and have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the period involved except as previously disclosed to the Bank. There are no liabilities (of the type required to be reflected on balance sheets prepared in accordance with generally accepted accounting principles), direct or indirect, fixed or contingent, of the Debtor or GSE as of the dates of such balance sheets which are not reflected therein or in the notes thereto, except as previously disclosed to the Bank in writing. There has been no material adverse change in the financial condition or operations of the Debtor or GSE since the date of the financial statements referenced above (and to the Debtor's knowledge no such material adverse change is pending or threatened) except as previously disclosed to the Bank in writing, and neither the Debtor nor GSE has guaranteed the obligations of, or made any investment in or loans to, any Person except as disclosed in such balance sheets. Each of the Debtor and GSE have good and marketable title to all of their properties and assets, and all of such properties and assets are free and clear of encumbrances, except as reflected on such balance sheets or in the notes thereto.

4.8 Tax Returns. The Debtor has filed or caused to be filed all required federal, state and local tax returns and has paid all taxes as shown on such returns to the extent that such taxes have become due or has obtained valid extensions of time in which to file such federal, state or local tax returns. No claims have been assessed and are unpaid with respect to such taxes except as shown in the financial statements referred to in Section 4.7 above.

4.9 Compliance with Laws Generally. The Debtor is not in violation of any law, ordinance, governmental rule or regulation to which the Debtor is subject (including, without limitation, any laws relating to employment practices or to environmental, occupational and health standards and controls) and the violation of which would have a material adverse effect on the conduct of the Debtor's business, and the Debtor has obtained any and all licenses, permits, franchises and other governmental authorizations necessary for the ownership and operation of its properties and business.

4.10 Licenses. The Debtor has obtained all necessary licenses, permits and authorizations required for the conduct of its business.

4.11 Liens on Collateral. Other than the Permitted Liens, the Collateral and the other assets of the Debtor are free and clear of mortgages, pledges, liens, charges and other encumbrances.

4.12 Names under which Debtor Does Business; Principal Place of Business. The Debtor has never done business under any other name. The principal place of business of the Debtor, within the meaning of the Uniform Commercial Code, which is its chief executive office and the office in which it keeps all of its records concerning Receivables and Inventory, is located at Salt Lake City, Utah. The Debtor maintains no other place of business except as set forth on Schedule 4.12.

4.13 Real Property. The Debtor owns no real estate.

4.14 Margin Stock. None of the proceeds of the Loan or the Letters of Credit will be used, directly or indirectly, by the Debtor for the purpose of purchasing or carrying, or for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry, any "margin security" within the meaning of Regulation G (12 CFR Part 207), or "margin stock" within the meaning of Regulation U (12 CFR Part 221), of the board of Governors of the Federal Reserve System (herein called "margin security" and "margin stock") or for any other purpose which might make the transactions contemplated herein a "purpose credit" within the meaning of said Regulation G or Regulation U, or cause this Agreement to violate any other regulation of the Board of Governors of the Federal Reserve System or the Securities Exchange Act of 1934 or the Small Business Investment Act of 1958, as amended, or any rules or regulations promulgated under any of such statutes.

4.15 ERISA and Code. Neither the Debtor nor any Commonly Controlled Entity maintains and/or contributes to, or has ever maintained or contributed to, any Defined Benefit Plan other than the Simulation, Systems & Services Technologies Company Union Pension Plan (the "Union Plan"), which was terminated effective August 4, 1996. All assets of the Union Plan were distributed on or before September 3, 1994. Except as specifically disclosed to the Bank in writing prior to the date of this Agreement:

(a) no Reportable Event has occurred with respect to the Union Plan;

(b) [intentionally omitted]

(c) no liability (whether or not such liability is being litigated) has been asserted against the Debtor or any Commonly Controlled Entity in connection with the Union Plan by the PBGC or by a trustee appointed pursuant to Section 4042(b) or (c) of ERISA, and no lien has been attached and no person has threatened to attach a lien to any property of the Debtor or any Commonly Controlled Entity as a result of any failure of the Union Plan to comply with the Code or ERISA;

(d) neither the Debtor nor any Commonly Controlled Entity maintains any employee welfare benefit plan providing for retiree health and/or life benefits other than (i) such continuation of benefit coverage as is required by law, (ii) coverage for a closed group of four retired former employees (and their families, if any) under the health benefit program for active employees, which coverage will continue only until each retiree attains age 65 (at which time, such persons shall become eligible for benefits under the Medicare supplemental program referred to in subparagraph (iii) below), (iii) a Medicare supplemental program for a present group of seven retirees (and a maximum group of 11 retirees) with a lifetime claim maximum of \$15,000 per retiree; and (iv) a death benefit for each retiree described in subparagraphs (ii) and (iii) above not to exceed \$10,000 per retiree, except for one retiree having a death benefit not to exceed \$30,000; and

(e) neither the Debtor nor any Commonly Controlled Entity maintains or makes contributions to, or has ever been required to make contributions to, any Multiemployer Plan.

4.16 Governmental Consents. Neither the nature of the Debtor's business or properties, nor any relationship between the Debtor and any other entity or person, nor any circumstance in connection with the extension of the Loan, advances to the Debtor by the Borrower or the issuance of the Letters of Credit is such as to require a consent, approval or authorization of, or filing, registration or qualification with, any Governmental Authority, on the part of the Debtor, as a condition to the execution and delivery of this Security Agreement or any of the other Financing Documents.

4.17 No Default or Event of Default. No event has occurred which would constitute a Default or an Event of Default under this Security Agreement or any of the other Financing Documents. The Debtor is not in default under the terms of any other agreement or instrument to which the Debtor may be a party or by which any of the Collateral may be bound or subject and which would have a material adverse effect on the Debtor's ability to pay or perform its obligations under this Security Agreement or any of the other Financing Documents.

4.18 Full Disclosure. To the best of the Debtor's knowledge, no representation or warranty by the Debtor in this Security Agreement and no information in any other Financing Document or any statement, certificate, schedule or other document furnished or to be furnished to the Bank pursuant hereto, or in connection with the transactions contemplated hereby, contains or will contain any untrue statement of a material fact or fails or will fail to state a material fact necessary to make the statements contained herein or therein not misleading. Except as disclosed in this Security Agreement, there is no fact known to the Debtor which the Debtor has not disclosed to the Bank in writing which materially adversely affects, or, so far as the Debtor can now foresee, may materially adversely affect, the business, financial condition or results of operations of the Debtor.

4.19 Officers and Directors of the Debtor. Schedule 4.19 attached hereto states as of the date hereof the officers and directors of the Debtor.

4.20 Business. The business of the Debtor as presently conducted and presently planned to be conducted is (i) technical training for professional and continuing education students which includes Novell, Microsoft and other similar types of database and computer tool training; (ii) computer hardware sales, including mid-range computer, workstations and network computing; (iii) computer software sales ranging from the complete line of Microsoft products to Sybase, Oracle and other computer database and tool producers; (iv) client/server, Internet, and database software consulting and development, including the creation of custom applications, custom upgrades and professional testing services; and (v) staff augmentation, where consultants are sent to a client site under the client's supervision.

4.21 Employee Controversies. There are no material controversies pending or, to the knowledge of the Debtor, threatened or anticipated between the Debtor and any of its employees, and there are no labor disputes, grievances, arbitration proceedings or any strike, work stoppages or slow downs pending or, to the Debtor's knowledge, threatened between the Debtor and its employees and representatives which could impair the ability of the Debtor to perform its obligations hereunder or under any other Financing Document, or which has had, or is likely to have, a material adverse effect on the financial condition of the Debtor.

4.22 Environmental Matters.

(a) The Debtor and all of its operations are in material compliance with all of the Environmental Laws. To the extent necessary for the conduct of its business, the Debtor is in possession of, and in material compliance with, all permits, licenses, registrations, and authorizations required under the

Environmental Laws. All such permits, licenses, registrations, and authorizations are currently in effect; no proceeding is pending or, to the best of the Debtor's knowledge, threatened to modify, suspend, revoke, withdraw, or otherwise limit such permits, licenses, registrations, and authorizations; and no administrative or governmental action has been taken or, to the best of the Debtor's knowledge, threatened in connection with the expiration or renewal of such permits, licenses, registrations or authorizations. The Debtor has not received any notice of violation, citation, complaint, request for information, order, directive, compliance schedule, notice of claim, proceeding, or litigation, from any party, relating to its compliance with the Environmental Laws.

(b) The Debtor does not generate, store, recycle, process, transport, dispose of or release any "Hazardous Substances," as defined herein, except in compliance with the Environmental Laws. To the best of the Debtor's knowledge, there are no conditions on, about or arising from any properties where the Debtor conducts business which may give rise to liability, the imposition of a statutory lien, or require "Response," "Removal" or "Remedial Action," as defined herein, under any of the Environmental Laws which would have a material adverse effect on the Debtor, its business or its properties.

(c) The Debtor has not received any request for information, claim, demand, or other notification that it is or may be potentially responsible or liable for any Response, Removal or Remedial Action at any site, including properties not owned, operated or leased by or to the Debtor. Hazardous Substances generated by the Debtor have never, directly or indirectly, to the best of the Debtor's knowledge, been sent, transferred, or transported to, or treated, stored or disposed of at any site listed or formally proposed for listing on the National Priorities List promulgated pursuant to CERCLA.

(d) There are no pending, or, to the best of the Debtor's knowledge, past or threatened investigations, actions, claims and proceedings of any nature whatsoever against the Debtor, including third party claims based upon negligence, trespass, strict liability, nuisance or toxic tort, arising out of or in any way related to any Hazardous Substance or any alleged violation of the Environmental Laws.

## **ARTICLE V CONDITIONS PRECEDENT**

5.1 General Conditions Precedent. It is a condition to the effectiveness of this Security Agreement that the Borrower and the Bank shall have entered into the amendment to the Loan Agreement described in the Background section hereof that the Bank shall have received all of the following, in form and substance satisfactory to the Bank:

(a) A copy, certified in writing by the Secretary or an Assistant Secretary of the Debtor, of (1) resolutions of the Board of Directors of the Debtor evidencing approval of the Financing Documents by the Debtor and the matters contemplated thereby, and (2) each document evidencing other necessary corporate action and governmental approvals, if any, with respect to the Financing Documents;

(b) A favorable opinion of counsel for the Debtor and its Subsidiaries covering such matters as the Bank shall reasonably require;

(c) A written certificate by the Secretary or an Assistant Secretary of the Debtor as to the names and signatures of the officers of the Debtor authorized to sign the Financing Documents to which the Debtor is a party and the other documents or certificates of the Debtor to be executed and delivered pursuant thereto;

- (d) Recent certificates, issued by the Secretary of State of each jurisdiction where the Debtor is incorporated or is, or is required to be, authorized to do business, stating that the Debtor is a corporation duly incorporated or authorized to do business (as the case may be) and in good standing under the laws of such jurisdictions;
- (e) This Security Agreement executed by the Debtor;
- (f) The Debtor's Master Note executed by the Debtor;
- (g) Confirming letter re: Master Letter of Credit Agreement executed by the Debtor;
- (h) Confirming letter re: Lockbox Agreement in the form attached hereto as Exhibit 5.1(H);
- (i) The Debtor's Guaranty;
- (j) Payment by the Debtor of the fees referred to in Section 9.3 hereof;
- (k) Certificates of insurance issued in the name of the Bank, showing the Bank as a lender loss payee and/or additional insured, as the case may be, evidencing all insurance coverage as required hereunder together with copies of the underlying policies (each policy of insurance must be issued by an insurance company satisfactory to the Bank, must have premiums therefor prepaid through the first quarter ending after the date of this Security Agreement, and must provide that it will not be terminated or otherwise modified adversely to the Bank without at least 30 days' prior written notice to the Bank) and an assignment of the proceeds of the business interruption insurance;
- (l) A certificate of the Debtor (with supporting evidence if reasonably required by the Bank) representing to the Bank that (1) the Debtor has fully complied with all applicable federal, state and local laws and regulations, including without limitation all Environmental Laws where failure to so comply could have a material and adverse effect on the Debtor, its business or its properties; (2) there is no pending or threatened litigation which, if adversely decided against the Debtor, could result in a material adverse change in the financial condition or operations of the Debtor; (3) the representations and warranties contained herein are true and correct as of the date of this Security Agreement; (4) no material adverse change has occurred since the date of the most recent financial statements reviewed by the Bank; (5) no Default or Event of Default has occurred; (6) no casualty or condemnation has occurred which affects the Debtor's property; (7) the Debtor has no Subsidiaries other than as set forth in Section 4.1; and
- (8) the Bank has received true and correct copies of all documents evidencing, executed in connection with, or, in any way, related to the Debtor's Obligations or Borrower's Obligations;
- (m) Each other document required by Article III hereof as to the Collateral and any other documents or condition which the Bank may reasonably request, including without limitation, a comprehensive list of all of the Debtor's Inventory and Equipment, its fair market value and location, and any other document for filing or otherwise in order to perfect the Bank's security interest in the Collateral as determined by the Bank in its sole and absolute discretion;
- (n) If Collateral is located at a facility that is not owned by the Debtor, or owned by the Debtor subject to a mortgage or other lien in favor of a Person other than the Bank, (1) copies of all leases,

mortgages or other similar agreements relating to such facility; and (2) a lien waiver executed by the landlord, mortgagee or other lienholder of each such facility (provided that such lien waivers will be delivered on a best efforts in good faith basis);

(o) Satisfactory results of Uniform Commercial Code, judgment and lien searches, trade checkings and bank audits; and

(p) Such other documents and information as the Bank may reasonably request.

5.2 Continuing Conditions Precedent. The obligation of the Bank to make any advance under the Loan Agreement or issue any Letter of Credit, is subject to the further conditions precedent that:

(a) the representations and warranties contained in this Security Agreement and in the other Financing Documents shall be correct and accurate on and as of that date unless the Bank shall otherwise agree;

(b) no Default or Event of Default shall have occurred; and

(c) no event shall have occurred which, in the Bank's reasonable opinion, impairs the financial responsibility of the Debtor such that a material adverse change in the financial condition or operations of the Debtor could result and there shall not have occurred any material adverse change in the financial condition or operations of the Debtor.

## **ARTICLE VI AFFIRMATIVE COVENANTS**

Until payment and performance in full of the Debtor's Obligations and the Borrower's Obligations, and until the Bank has no further obligation under the Loan Agreement, the Debtor will perform each of the covenants contained in this Article VI:

6.1 Financial Statements. The Debtor shall cause to be provided to the Bank the following financial information, all of which must contain detail reasonably satisfactory to the Bank:

(a) as soon as available but in no event more than 120 days after the end of each fiscal year, consolidated balance sheets and income and expense statements of GSE together with its Subsidiaries (including, without limitation, the Borrower, the Debtor and their Subsidiaries), examined and unqualifiedly certified by such independent accountant as may be satisfactory to the Bank, and consolidating management-prepared balance sheets and income and expense statements of GSE and its Subsidiaries (including the Borrower, the Debtor and their Subsidiaries), prepared in accordance with United States generally accepted accounting principles consistently applied and certified by the principal financial officer of GSE and accompanied by a certificate of that officer stating whether any Default or Event of Default has occurred under this Security Agreement or any of the other Financing Documents, and, if so, stating the facts with respect thereto; and

(b) as soon as available but in no event more than 45 days after the end of each fiscal quarter, consolidated balance sheets of GSE together with its Subsidiaries (including, without limitation, the Borrower, the Debtor and their Subsidiaries) and consolidating balance sheets of all of its Subsidiaries (including, without limitation, the Borrower, the Debtor and their Subsidiaries), as of the close of such period and income and expense statements for such period, prepared in



accordance with United States generally accepted accounting principles consistently applied and certified by the principal financial officer of GSE, and accompanied by a certificate of that officer stating whether any Default or Event of Default has occurred under this Security Agreement or any of the other Financing Documents, and, if so, stating the facts with respect thereto; and

(c) such additional information, reports or statements as the Bank may from time to time reasonably request.

6.2 Taxes and Claims. The Debtor shall pay and discharge all taxes and assessments, whether general or special, ordinary or extraordinary, due and owing by the Debtor to all Governmental Authorities in respect to the Debtor, any of its properties or assets, franchises, businesses, income or profit, prior to the date on which penalties attach thereto, and all lawful claims which, if unpaid, might become a lien or encumbrance upon any of its properties, other than those taxes and assessments which are being contested in good faith and for which adequate reserves in accordance with generally accepted accounting principles have been set aside.

6.3 Insurance. The Debtor shall provide or cause to be provided to the Bank, and shall maintain, or cause to be maintained, in full force and effect at all times prior to the payment and performance in full of the Debtor's Obligations and the Borrower's Obligations and until the Bank has no further obligations under the Loan Agreement, such policies of insurance as are normally maintained by similar businesses operating in the same vicinity as the Debtor, which are underwritten by a company or companies and are in form and amounts satisfactory to the Bank, including, by way of example and not by way of limitation, at least the following:

(a) permanent fire and hazard insurance or property damage insurance covering any real property improvements owned by the Debtor and all Equipment and Inventory and other personal property of the Debtor wherever located, affording protection against at least loss or damage by fire or other hazards covered by the standard all-risk "extended coverage" endorsement (non-reporting form), including vandalism and malicious mischief and such other risks as shall be customarily covered with respect to similar property or as the Bank may from time to time otherwise require, in amounts not less than the lesser of (i) the aggregate principal amount of the Commitment (whether or not the entire amount of the Commitment is fully utilized by the Borrower from time to time) and (ii) the maximum amount of such insurance which is available to the Debtor, containing a standard noncontributing, non-reporting mortgagee or loss payee clause naming the Bank as mortgagee and loss payee, as its interest may appear and specifying that "such policy will not be cancelled without 30 days' prior written notice to the Bank";

(b) public liability and property damage insurance for the Debtor to afford protection in amounts of not less than (i) \$500,000 per occurrence and \$1,000,000 for all annual occurrences in respect of bodily injury, and (ii) \$250,000 per occurrence and \$500,000 for all annual occurrences in respect of property damage, together with an endorsement naming the Bank as an additional insured;

(c) business interruption insurance for the Debtor to afford protection against such events as are customarily covered by such insurance issued with respect to businesses similar to those conducted by the Debtor; and

(d) workers' compensation insurance of the Debtor with coverage limits in accordance with the requirements of applicable laws or regulations.

All of such insurance shall be evidenced by binders or properly endorsed policies and not merely by certificates.

6.4 Corporate Existence. The Debtor shall maintain in good standing its existence as a corporation under the laws of the jurisdiction of its incorporation and its qualification to do business in each jurisdiction in which such qualification is necessary for the conduct of its business in such jurisdiction, including, without limitation, the State of Utah.

6.5 Maintenance of Properties. The Debtor shall maintain all of its properties (including Inventory and Equipment) in good working order and condition and cause replacements and repairs to be made when necessary for the proper and advantageous conduct of its business.

6.6 Compliance With Laws Generally. The Debtor shall comply with all applicable laws, ordinances, governmental rules or regulations to which the Debtor is or becomes subject (including, without limitation, any laws relating to employment practices or to environmental, occupational and health standards and controls).

6.7 Maintenance of Licenses. The Debtor will take all steps necessary to maintain all licenses, permits, franchises and other governmental authorizations required for the operation of its business, including but not limited to validated licenses or permits in connection with its export operations.

6.8 Books and Records; Inspection. (a) The Debtor will keep adequate records and books of account with respect to its business, in accordance with generally accepted accounting principles; and permit the Bank, by any of its respective accountants, attorneys, officers or other agents, to examine such records and books of account and to discuss the affairs, finances and accounts relating thereto with officers of the Debtor at its offices at any time during normal business hours. As part of this requirement, the Debtor will keep such records as may be necessary to track its working capital needs, by any appropriate measure as may be approved by the Bank.

(b) The Debtor will permit representatives of the Bank to inspect, examine and/or audit the Collateral, any of its other property and/or its books and records and to make extracts therefrom at all reasonable times for purposes of examination, verification, inspection and appraisal thereof. The Debtor will permit representatives of the Bank to conduct field examinations of the Collateral at any time and from time to time during normal business hours. The Debtor agrees to reimburse the Bank for the cost of such inspections, examinations and/or audits; provided, however, that prior to an Event of Default such reimbursed inspections, examinations or audits by representatives of the Bank shall not occur more frequently than twice annually.

6.9 Notification of Certain Events; Events of Default and Adverse Developments. The Debtor shall promptly (and in any event within five Business Days of obtaining knowledge thereof) notify the Bank in writing of the occurrence of any of the following (in each case describing in detail satisfactory to the Bank the nature thereof and the action the Debtor proposes to take with respect thereto):

(a) any Default or Event of Default under this Security Agreement or any of the other Financing Documents;

(b) litigation or other actions, suits or proceedings before any court or any governmental or regulatory agency, domestic or foreign, affecting the Debtor which, if adversely decided, would materially adversely affect the conduct of its business, the Collateral, its ability to perform its obligations under any of the Financing Documents,

its financial condition, or in any manner impair or affect the security for the Debtor's Obligations or the Borrower's Obligations or the ability of the Debtor to pay or perform in full the Debtor's Obligations or the Borrower's Obligations;

(c) any notice, claim or demand from any Governmental Authority which alleges that the Debtor is in violation of any of the terms of, or has failed to comply with, any applicable order issued pursuant to any federal or state statute regulating its operation of business, including, but not limited to, the Occupational Safety and Health Act and the Environmental Protection Act;

(d) the occurrence of any event which the Debtor reasonably believes may adversely affect the collectibility of any Receivable in the amount of or evidencing an obligation equal to \$250,000 or more, including (without limitation) the occurrence of an event under any accounts receivable insurance maintained by the Debtor with respect to any of the Receivables or the deterioration of the financial condition of any bank issuing a letter of credit to secure any of the Receivables; and

(e) any other development in the business or affairs of the Debtor which could have a material adverse effect on the Debtor or could adversely affect the security for the Debtor's Obligations or the Borrower's Obligations or the ability of the Borrower to pay or perform in full the Debtor's Obligations or the Borrower's Obligations.

6.10 Performance of All Contracts. The Debtor shall perform all of its obligations under all purchase orders and contracts substantially in accordance with their terms, as they may be modified from time to time.

6.11 Conditions Precedent to Right to Receive Payment under Purchase Orders and Contracts. The Debtor shall, as soon as possible, take all actions necessary to entitle the Debtor to receive any payments due in respect of all purchase orders and contracts, including (without limitation) the timely drawing of drafts under any letters of credit issued for the benefit of the Debtor in connection therewith.

6.12 Further Assurances and Corrective Instruments. The Debtor shall execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, from time to time, such supplements hereto and such further instruments as may reasonably be required by the Bank for carrying out the intention of the parties to, or facilitating the performance of, this Security Agreement or any of the other Financing Documents.

6.13 Lockbox Notices. The Debtor shall from time to time at the request of the Bank deliver to the Bank evidence satisfactory to the Bank in its sole and absolute discretion that the Debtor has notified all Account Debtors (other than intercompany Account Debtors) that all payments are to be made to the Lockbox and evidence that the Debtor has indicated on all billings and statements (other than those provided to intercompany Account Debtors) that payments are to be made solely to the Lockbox.

6.14 Equal Employment. The Debtor shall prohibit discrimination on the basis of (i) political or religious opinion or affiliation, marital status, race, color, creed, or national origin, or (ii) sex or age, except where sex or age constitutes a bona fide occupational qualification, or (iii) the physical or mental disability of a qualified individual with a disability.

6.15 Management. The Debtor shall notify the Bank promptly and in any event within two Business Days if there shall occur any change in the identity of the persons occupying the offices of chief executive officer, president or executive vice president (or their equivalents).

## 6.16 Environmental Matters.

- (a) The Debtor shall comply with all Environmental Laws and, to the extent necessary for the conduct of its business, shall obtain, maintain, and comply with all permits, licenses, registrations and authorizations required under the Environmental Laws. The Debtor shall comply with all governmental orders, directives, judgments, decrees, awards, administrative consent orders, settlement agreements, or other settlement documents entered into with any administrative or governmental agency or entity concerning compliance with the Environmental Laws.
- (b) The Debtor shall not generate, store, recycle, process, transport, dispose of or release any Hazardous Substances, except in compliance with the Environmental Laws. The Debtor shall not operate its business in a manner which may give rise to liability, the imposition of a statutory lien, or require any Response, Removal or Remedial Action under any of the Environmental Laws. In the event that conditions are discovered in connection with the operation of the Debtor's business which may give rise to liability, the imposition of a statutory lien, or require Response, Removal or Remedial Action under any of the Environmental Laws, the Debtor shall promptly take all actions, required under the Environmental Laws. The requirements of this Section and Section 6.16(a) do not affect the Debtor's rights to defend or take any other action relative to any claims of any kind instituted against it.
- (c) The Debtor shall immediately notify the Bank, in writing, of its receipt, knowledge or discovery of: (i) any notice of violation, citation, complaint, request for information, order, directive, compliance schedule, notice of claim, proceeding, or litigation, from any party, relating to its compliance with the Environmental Laws; (ii) any request for information, claim, demand, or notification that it is or may be potentially responsible or liable for any Response, Removal or Remedial Action at any site, including properties not owned, operated or leased by or to the Debtor; (iii) any notice of claim, action, or proceeding of any nature whatsoever against the Debtor, including third-party claims based upon negligence, trespass, strict liability, nuisance or toxic tort, arising out of or in any way related to any Hazardous Substance or any alleged violation of the Environmental Laws and; (iv) any other information which may give rise to liability of the Debtor, the imposition of a statutory lien against the Debtor, or require Response, Removal or Remedial Action by the Debtor under any of the Environmental Laws.
- (d) The Debtor indemnifies, defends and holds harmless the Bank, its parents, subsidiaries, successors, assigns, officers, directors, shareholders, employees, and agents (the "Bank Parties"), from and against any and all claims, liabilities, penalties, fines, damages, judgments, losses, suits, actions, legal or administrative proceedings, interest, costs (including without limitation, all costs of any required Response, Removal or Remedial Action) and expenses (including attorneys' fees, consultants fees and expert fees) arising out of or in any way relating to: (i) the presence of Hazardous Substances on, about, beneath or arising from any properties where the Debtor conducts its business; (ii) the failure of the Debtor or any of its Subsidiaries to comply with the Environmental Laws; and (iii) the Debtor's breach of any of the representations, warranties and covenants contained herein. The Debtor's Obligations under this Section shall not include claims arising solely out of the actions of the Bank Parties. The indemnities contained in this Section shall survive the discharge of the Borrower's Obligations, foreclosure, or deed in lieu of foreclosure.

6.17 Pension Matters. The Debtor and each Commonly Controlled Entity will comply in all material respects with the provisions of ERISA and the Code with respect to any "employee benefit plan," as defined in Section 3(3) of ERISA. Neither the Debtor nor any Commonly Controlled Entity will adopt any employee pension benefit plan subject to the minimum funding standards of ERISA and the Code or become obligated to contribute to any Multiemployer Plan. Neither the Debtor nor any Commonly Controlled Entity will adopt any employee welfare benefit plan that provides for post-employment life and/or health

benefits (other than such continuation of benefit coverage as is required by law and the plan described in Section 4.15). The Debtor will not acquire or permit the acquisition by any Commonly Controlled Entity of any trade or business which maintains or contributes to any plan described above.

## **ARTICLE VII NEGATIVE COVENANTS**

Until payment and performance in full of all of the Debtor's Obligations and the Borrower's Obligations, and until the Bank has no further obligation under the Loan Agreement, the Debtor agrees that it will not fail to comply with any of the following covenants:

7.1 ERISA Compliance. Neither the Debtor nor any Commonly Controlled Entity shall fail to maintain at all times such bonding as is required by ERISA.

7.2 Use of Certain Funds and Letters of Credit. The Debtor will not use the proceeds of any advances from the Borrower or the Letters of Credit on which the Debtor is the account party for any purposes other than to meet working capital needs, including, without limitation, funding to meet reimbursement obligations under such Letters of Credit.

7.3 Borrowings. The Debtor will not create, incur, assume or suffer to exist any liability for borrowed money, except:

(a) indebtedness to GSE, Borrower or to any of the stockholders of GSE, which is created in the normal course of business, subject to the provisions of Section 7.10; and

(b) indebtedness of the Debtor secured by any purchase money, lien or permitted by subsection (h) of the definition of "Permitted Lien".

7.4 Collateral. The Debtor will not sell, transfer or otherwise dispose of any portion of the Collateral, other than inventory in the ordinary course of business and as otherwise permitted hereunder, or create, incur, assume or suffer to exist any mortgage, pledge, lien or encumbrance of any kind upon the Collateral or any of its other property or assets, whether now owned or hereafter acquired, except:

(a) Permitted Liens; and

(b) any lien on any property, or interest therein, hereafter acquired by the Debtor, which is created contemporaneously with such acquisition to secure or provide for the payment or financing of any part of the purchase price thereof, and which liens do not, in the aggregate together with similar liens on such property or interest of the Borrower, secure indebtedness exceeding \$500,000.

7.5 Merger, Acquisition, Dissolution or Sale of Assets. The Debtor will not, and will not permit any Subsidiary to (a) enter into any merger or consolidation or dissolution, or (b) acquire, directly or indirectly, any of the assets (other than inventory, equipment and real estate in the ordinary course as permitted by the Financing Documents to conduct its business as conducted on the date of this Security Agreement) of any Person (including without limitation any division or other operating unit of any Person), (c) sell, lease, or otherwise dispose of any of its assets, as identified in accordance with United States generally accepted accounting principles (except inventory and equipment disposed of in the ordinary course of business, except for obsolete inventory as

determined by the board of directors of the Debtor and except for inventory with a fair market value of no more than \$250,000 in the aggregate), (d) make any material change in its corporate structure or identity, or (e) enter into any agreement to do any of the foregoing without the prior written consent of the Bank.

7.6 Change in Nature of Business. The Debtor will not make any material changes in the basic nature of its business.

7.7 Additional Stock. The Debtor will not issue any additional stock of any class (except to its existing stockholder as a stock dividend).

7.8 Subsidiaries. The Debtor will not create any Subsidiaries other than those set forth on Schedule 4.1. The Bank may, in its sole and absolute discretion, require at any time, or from time to time, that the assets of one or more of the Subsidiaries become part of the Collateral for the Borrower's Obligations or the Debtor's Obligations pursuant to documentation that shall be in form and substance satisfactory to the Bank in its sole and absolute discretion. The Debtor's aggregate investment in its Subsidiaries shall not exceed \$50,000, provided that for purposes of this Section 7.8 only "investment" shall not include intercompany Accounts arising from transactions for the delivery of goods and services with any of its Subsidiaries in the ordinary course on terms no less favorable to the Debtor or such Subsidiary than would be obtainable from a Person not an Affiliate (and in any event payment for goods or services arising from the lending of personnel, selling of merchandise, or otherwise performing services shall be made on a timely basis (120 days maximum)), as permitted by Section 7.16(b).

7.9 Contingent Liabilities. Except as specifically permitted by the terms of this Security Agreement, the Debtor will not assume, guarantee, endorse, contingently agree to purchase or otherwise become liable upon the obligation of any Person, except by the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business.

7.10 Subordination of Amounts Owning to GSE, Subsidiaries or Affiliates.

(a) In the event that the Debtor incurs any obligations to GSE, a Subsidiary or an Affiliate other than the Borrower (and the Debtor shall incur no such obligations other than those permitted in Section 7.16), no payments shall be made in respect to such obligations during any period of time in which any Debtor's Obligations or Borrower's Obligations remain outstanding, except as provided in this Section 7.10; and

(b) In the event that the Debtor incurs any obligations to GSE, a Subsidiary or an Affiliate other than the Borrower as permitted by Section 7.16 (and the Debtor shall incur no such obligations other than those permitted in Section 7.16), payments may be made in respect of any such obligations, provided that no Default or Event of Default shall have occurred and the making of any such payment does not create a Default or Event of Default; no payments shall be made in respect of any such obligations after the occurrence of a Default or an Event of Default; and

(c) The Debtor may declare and pay dividends permitted under Section 7.13, provided that no Default or Event of Default shall have occurred and the declaring or paying of any such dividend does not create a Default or Event of Default; no dividends shall be declared or paid after the occurrence of a Default or an Event of Default; and

(d) In the event the Debtor has incurred, or in the future incurs, any obligation to GSE, GSE shall subordinate such obligation as provided as to the Borrower in Section 1.8 of the GSE Guaranty, in form and substance satisfactory to the Bank, subject to the provisions hereof.

7.11 Loans. The Debtor will not make loans or advances to any Person, except for reasonable travel advances to officers and employees made in the ordinary course of business.

7.12 Investments. The Debtor will not purchase or acquire the obligations or stock of, or any other or additional interest in, any Person, except (a) general obligations of, or obligations unconditionally guaranteed as to principal and interest by, the United States of America, (b) bonds, debentures, participation certificates or notes issued by any agency or corporation which is or may hereafter be created by Act of the Congress of the United States as an agency or instrumentality thereof, (c) public housing bonds, temporary notes or preliminary loan notes, fully secured by contracts with the United States, (d) certificates of deposit issued by the Bank, (e) its Subsidiaries in existence on the date of this Security Agreement, as such levels may change as a result of stock dividends permitted under the Financing Documents and (f) any other investments as permitted by the Bank.

7.13 Dividends and Purchase of Stock. The Debtor may declare dividends on any shares of any class of its stock, or set apart any sum for the payment of dividends on any shares of any class of capital stock, provided that any amounts payable as a result thereof shall be subject to Section 7.10 and shall be treated as subordinated indebtedness under Section 1.8 of the GSE Guaranty as if the dividends were declared by the Borrower. The Debtor shall obtain GSE's acknowledgement of such subordination in such event in form and substance satisfactory to the Bank. The Debtor shall not apply any of its property or assets to the purchase, redemption, or other retirement of, or set apart any sum for the purchase, redemption or other retirement of, or make any other distribution by reduction of capital or otherwise in respect of any shares of its capital stock.

7.14 Sale and Leaseback. The Debtor will not directly or indirectly enter into any arrangement whereby the Debtor shall sell or transfer all or any substantial part of its fixed assets then owned by it and shall thereupon or within one year thereafter rent or lease the assets so sold or transferred.

7.15 Sale of Accounts Receivable. The Debtor will not sell, discount, transfer, assign, or otherwise dispose of any of its Receivables or any other rights to receive income, revenues or moneys, however evidenced, except in connection with currently existing extensions of credit by the Bank.

7.16 Transactions with Affiliates and Subsidiaries. The Debtor will not use any of the proceeds of any advances from the Borrower or the Letters of Credit on which it is the account party for the benefit of any Subsidiary or Affiliate except as permitted by the use of proceeds set forth in Section 7.2. The Debtor will not, and will not permit any of its Subsidiaries to, engage in any transaction with any Affiliate or Subsidiary of the Debtor unless such transaction is made on substantially same terms and conditions as the Debtor would have required in a substantially similar arms length transaction.

**ARTICLE VIII**  
**EVENTS OF DEFAULT; REMEDIES**

8.1 Events of Default. Any one or more of the following events shall constitute an Event of Default under this Agreement:

(a) Failure to Pay Borrower's Obligations or Debtor's Obligations. (i) The Debtor shall fail to pay the amount of any of the Borrower's Obligations as and when the same are due and payable in accordance with the terms of the Loan Agreement or (ii) fail to pay the Borrower's Obligations or the Debtor's Obligations as and when the same are due and payable under the other Financing Documents.

(b) Breach of Representations and Warranties. Any representation or warranty made herein or in any of the Financing Documents, or in any report, certificate, opinion (including any opinion of counsel for the Debtor), financial statement or other instrument delivered in connection with this Security Agreement or any of the other Financing Documents shall prove to be false or misleading in any material respect when made (or deemed made) with respect to the Debtor.

(c) Failure to Comply with Covenants. Default shall be made in the due observance or performance of any covenant, conditions or agreement contained in Section 6.2, Section 6.3, Section 6.13 (unless such Default is capable of being cured by a capital contribution or by a borrowing permitted under Section 7.3 and such Default is so cured within thirty (30) days after the earlier to occur of (i) a Responsible Officer shall have become aware of such default or (ii) written notice of such default shall have been given to the Debtor by the Bank), or Article VI hereof or there shall exist an Event of Default under and as defined in the GSE Guaranty or Subsidiary Guaranty.

(d) Other Defaults. Either (i) default shall be made in the due observance or performance of any other term, covenant or agreement contained in this Security Agreement and such default shall have continued unremedied for a period of thirty (30) days after the earlier to occur of (A) a Responsible Officer shall have become aware of such default or (B) written notice of such default shall have been given to the Debtor by the Bank, or (ii) an event of default shall occur under any of the other Financing Documents.

(e) Default Under Other Indebtedness. Default shall be made with respect to any other evidence of indebtedness or liability for borrowed money of the Debtor (i) to the Bank, or any financial institution into which the Bank is merged or to which it is related or affiliated by direct or indirect common ownership, or (ii) to any other Person if the effect of such default is to accelerate the maturity of such evidence of indebtedness or liability or to permit the holder or obligee thereof to cause any indebtedness to become due prior to its stated maturity, or any such indebtedness shall not be paid as and when due and payable.

(f) Receiver; Bankruptcy. The Debtor or the Borrower, GSE or any Subsidiary of any of such Persons or any Subsidiary shall (i) apply for or consent to the appointment of a receiver, trustee or liquidator of itself or any of its property, (ii) admit in writing its inability to pay its debts as they mature, (iii) make a general assignment for the benefit of creditors, (iv) be adjudicated as bankrupt or insolvent, or (v) file a voluntary petition in bankruptcy, or a petition or an answer seeking reorganization or an arrangement with creditors or to take advantage of any bankruptcy, reorganization, insolvency, readjustment of debt, dissolution or liquidation law or statute, or an answer admitting the material allegations of a petition filed against it in any proceeding under any such law, or if corporate action shall be taken by any of them for the purposes of effecting any of the foregoing, or (vi) by any act indicate its consent to, approval or acquiescence in any such proceeding or the appointment of any receiver of or trustee for it or any substantial part of its property, or suffers any such receivership, trusteeship or proceeding to continue undischarged for a period of 30 days.



(g) Involuntary Receiver; Bankruptcy. An order, judgment or decree shall be entered, without the application, approval or consent of the Debtor or the Borrower, GSE or any Subsidiary of any of such Persons, as the case may be, by any court of competent jurisdiction, approving a petition seeking reorganization of such entity, or of all or a substantial part of its assets or appointing a receiver, trustee or liquidator of such entity, and such order, judgment or decree shall continue unstayed and in effect for a period of 30 days.

(h) Judgments. Judgments in excess of \$250,000 in the aggregate, or any attachment or other levy against the property of the Debtor with respect to a claim, remains unpaid, unstayed on appeal, undischarged, unbonded, or undismissed for a period of 30 days.

(i) Execution; Attachment. Any execution on a judgment or attachment in respect of a judgment shall be levied against any of the Collateral, and such judgment, either alone or when aggregated with any other such judgments, shall exceed \$100,000 in amount and such executions or attachments shall not be set aside, discharged or stayed within thirty (30) days after the same shall have been levied.

(j) Transfers of Stock. Any shares, or interests in the shares, of the capital stock of the Debtor are sold, encumbered, purchased, redeemed or otherwise transferred.

(k) Liquidation; Dissolution. The Debtor shall begin any procedure for its liquidation or dissolution or any such procedure is commenced against it.

(l) Change of Control. There shall occur a Change of Control.

8.2 Remedies. Notwithstanding any provision to the contrary contained in this Agreement, upon the occurrence of a Default or any Event of Default or upon receipt by the Bank of any notice which the Debtor is required to give under Section 6.9 of this Agreement, the Bank may discontinue making advances of the Loan (except to fund reimbursement obligations under issued and outstanding Letters of Credit as they arise) and issuing Letters of Credit under the Loan Agreement in its sole and absolute discretion and will automatically discontinue making advances of the Loan (except to fund reimbursement obligations under issued and outstanding Letters of Credit as they arise) and issuing Letters of Credit under the Loan Agreement if the Default or Event of Default is under Sections 8.1(f) or (g) of this Agreement.

In addition, upon the occurrence of any Event of Default, and in every such Event of Default and at any time thereafter, unless such Event of Default shall be cured to the satisfaction of the Bank, the Bank may exercise any one or more of the following remedies and will be deemed to exercise the remedies under Sections 8.2(a) and (b) of this Agreement automatically upon an Event of Default under Sections 8.1(f) or (g) of this Agreement.

(a) Accelerate Termination Date. Accelerate the Termination Date, whereupon the Commitment shall terminate as of the accelerated Termination Date, and all Letters of Credit shall be prefunded as required by Section 3.4(c) of the Loan Agreement.

(b) Accelerate the Debtor's Obligations. Demand immediate payment in full of all of the Debtor's Obligations under this Security Agreement and the other Financing Documents and the Borrower's Obligations under the Loan Agreement and the other Financing Documents, including (without limitation) all accrued and unpaid interest thereon, whether or not (i) the Loan has become due and payable, or (ii) the Standby Letters of Credit may remain outstanding following repayment of the Borrower's Obligations or the Debtor's Obligations relating thereto, whereupon all outstanding Debtor's Obligations and Borrower's Obligations shall become immediately due and payable without presentment, demand, protest, or any other notice of any kind, all of which are hereby expressly waived, anything contained in this Security Agreement or in the other Financing Documents to the contrary notwithstanding. In addition, all Letters of Credit shall be prefunded as required by Section 3.4(c) of the Loan Agreement.

The occurrence or non-occurrence of an Event of Default under this Security Agreement shall in no way affect or condition the right of the Bank to demand payment at any time of any of the Debtor's Obligations or the Borrower's Obligations which are payable on demand regardless of whether or not an Event of Default has occurred.

(c) Liquidation of Security Interest in Collateral. Upon the occurrence of any Event of Default, and at any time during the continuance thereof, the Bank shall have, in addition to all other rights and remedies, the remedies of a secured party under the Uniform Commercial Code, or under any other governing laws, including, without limitation, the right to take possession of the Collateral (to which the Debtor hereby specifically consents), and for that purpose the Bank may, so far as the Debtor can give authority therefor, enter upon any premises on which the Collateral may be situated and remove the same therefrom. Upon request of the Bank, the Debtor shall assemble and make the Collateral available to the Bank at a place to be designated by the Bank. Unless the Collateral is perishable or threatens to rapidly decline in value, or is of a type customarily sold on a recognized market, the Bank shall give the Debtor at least five (5) days' prior notice of the time and place of any public sale or the time after which any private sale or any other intended disposition is to be made. The Bank may at any time in its discretion transfer any securities (i.e., stock or bonds) or other property constituting the Collateral into its own name or that of its nominee and receive the income thereon and hold the same as collateral for Debtor's Obligations and the Borrower's Obligations or apply it to principal, or interest or other costs, fees or charges due on, or with respect to, Debtor's Obligations and the Borrower's Obligations. The Debtor hereby irrevocably constitutes and appoints the Bank as the Debtor's true and lawful attorney in fact, with full power of substitution, at the sole cost and expense of the Debtor, but for the sole benefit of the Bank, to convert the Collateral to cash, including without limitation, completing the manufacturing process of work in process, and the sale (either public or private) of all or any portion of the Collateral, to enforce collection of the Collateral, either in its own name or in the name of the Debtor, compromising or settling with any account debtors and prosecuting, defending, compromising or releasing any action relating to the Collateral; to receive, open and dispose of all mail addressed to the Debtor and to take therefrom any remittances on or proceeds of the Collateral in which Bank has a security interest; to notify United States Post Office authorities to change the address for delivery of mail addressed to the Debtor to such address as the Bank may designate; to indorse the name of the Debtor in favor of the Bank upon any and all checks, drafts, money orders, notes, acceptances or other instruments of the same or different nature; to sign and indorse the name of the Debtor on and to receive as secured party any of the Collateral, any invoices, schedules of collateral, freight or express receipts and/or other documents of title of the same or different nature relating to the Collateral; to sign the name of the Debtor on any notice to the account debtors or on verification of the Collateral; and to sign and file or record on behalf of the Debtor any financing or continuation statements or other statements in order to perfect, keep perfected or protect the Bank's security interest in the Collateral. The Bank shall not be obliged to do any of the acts or exercise any of the powers hereinabove authorized, but if the Bank elects to do any such act or exercise any such power, it shall not be responsible to the Debtor except for the Bank's own willful misconduct or gross negligence. All powers conferred upon the Bank by this Security Agreement, being coupled with an interest, shall be irrevocable as long as any of the Debtor's Obligations or the Borrower's Obligations to the Bank shall remain unpaid or the Bank shall have any obligations under the Loan Agreement.

(d) Setoff. Without limiting any other right of the Bank, whenever the Bank has the right to declare any of the Debtor's Obligations to be immediately due and payable (whether or not it has so declared), the Bank at its sole election may setoff against the Debtor's Obligations any and all monies then or thereafter owed to the Debtor by the Bank in any capacity, whether or not the Debtor's Obligations have been declared due, or the obligation to pay such monies owed by the Bank is then due, and the Bank shall be deemed to have exercised such right of setoff immediately at the time of such election even though any charge therefor is made or entered on the Bank's records subsequent thereto.

(e) Other Rights and Remedies. In addition to any other rights or remedies specifically set forth herein, the Bank shall have available to it all rights and remedies under any other of the Financing Documents and any other rights and remedies afforded to it at law or in equity.

(f) Performance by Bank. If the Debtor shall fail to pay any of the Debtor's Obligations or the Borrower's Obligations or the Debtor shall otherwise fail to perform, observe or comply with any of the conditions, covenants, terms, stipulations or agreements contained in this Security Agreement or any of the other Financing Documents, the Bank, without notice to or demand upon the Debtor, and without waiving or releasing any of the Debtor's Obligations or the Borrower's Obligations or any Event of Default, and in addition to any rights or remedies available to it under any of the other Financing Documents, may (but shall be under no obligation to) at any time thereafter make such payment or perform such act for the account and at the expense of the Debtor, and may, to the extent permitted by law, enter upon the premises of the Debtor for that purpose and take all such action thereon as the Bank may consider necessary or appropriate for such purpose. All sums so paid or advanced by the Bank and all costs and expenses (including, without limitation, reasonable attorneys' fees and expenses) incurred in connection therewith (the "Expense Payments") together with interest thereon from the date of payment of the advance or the date on which the expense was incurred until paid in full at the rate of three percent (3%) per annum in excess of the rate of interest otherwise payable on the Borrower's Obligations shall be paid by the Debtor to the Bank on demand and shall constitute and become a part of the Debtor's Obligations and the Borrower's Obligations.

(g) No Conditions Precedent to Exercise of Remedies. The Debtor shall not be relieved of any obligation by reason of the failure of the Bank to comply with any request of the Debtor or of any other Person, to sell any portion of the Collateral, or otherwise to enforce any provision of the Financing Documents, or by reason of the release, regardless of consideration, of all or any part of the Collateral, or other security for the Debtor's Obligations or the Borrower's Obligations, or by reason of any agreement or stipulation between any subsequent owner of the Collateral or other security for the Debtor's Obligations or the Borrower's Obligations, or the Bank extending the time of payment or modifying the terms of the Financing Documents without first having obtained the consent of the Debtor; and in the latter event, the Debtor shall continue to be liable to make payments according to the terms of any such extension or modification agreement, unless expressly released and discharged in writing by the Bank.

(h) Remedies Cumulative and Concurrent. No remedy herein conferred upon or reserved to the Bank is intended to be exclusive of any other remedies provided for in the Financing Documents, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given hereunder, or under the Financing Documents, or now or hereafter existing at law or in equity or by statute. Every right, power and remedy given by the Financing Documents to the Bank shall be concurrent and may be pursued separately, successively or together against the Debtor or the Collateral or other security for the Debtor's Obligations or the Borrower's Obligations or any part thereof, and every right, power and remedy given by the Financing Documents may be exercised from time to time as often as may be deemed expedient by the Bank.

(i) No Waiver. No delay or omission of the Bank to exercise any right, power or remedy accruing upon the happening of an Event of Default shall impair any such right, power or remedy or shall be construed to be a waiver of any such Event of Default or any acquiescence therein. No delay or omission on the part of the Bank to exercise any remedy hereunder, or acceptance by the Bank of any partial payment on account of the Debtor's Obligations or Borrower's Obligations shall constitute a waiver of any such Event of Default and each of the remedies herein provided shall remain continuously available to the Bank.

**ARTICLE IX  
MISCELLANEOUS**

9.1 Notices. All communications between the parties or notices in connection with this Agreement and any of the other Financing Documents shall be in writing (unless otherwise specified herein), hand delivered or sent by registered airmail, postage prepaid, or by telex, telecopy or other electronic transmission, or by reliable overnight service, addressed to the intended recipient at the address therefor set forth below. All such communications and notices shall be effective upon delivery. Any party may change its address or other information for notices by giving notice to the other parties in accordance with the provisions of this Section.

(a) if to the Debtor:

GSE Erudite Software, Inc. 8930 Columbia Boulevard Columbia, MD 21045 Attn: Robert W. Stroup

Telephone: 410-312-3500 Telecopy: 410-312-3611

with copies to:

Thomas K. Milhollan, Esquire Corporate Counsel GSE Systems, Inc. 8930 Stanford Boulevard Columbia, Maryland 21045 Telephone: 410-312-3500 Telecopy: 410-312-3611

(b) if to the Bank:

CoreStates Bank, N.A.

1345 Chestnut Street  
3rd Floor  
Philadelphia, PA 19107  
Attn: Derrick Davis  
Telephone: 215-973-6765  
Telecopy: 215-973-5387

with a copy to:

Drinker Biddle & Reath 1345 Chestnut Street Suite 1100 Philadelphia, PA 19107-3496 Attn: Bruce D. Shuter, Esq.

Telephone: 215-988-2947

Telecopy: 215-988-1809

#### 9.2 Survival of Agreement; Successors and Assigns.

(a) All covenants, agreements, representations and warranties made herein and in the certificates delivered pursuant hereto shall survive the making of the Loan and the issuance of any Letters of Credit, and the execution and delivery to the Bank of this Security Agreement and all of the other Financing Documents and shall continue in full force and effect until all of the Debtor's Obligations have been paid and performed in full and the Bank shall have no further obligation under the Loan Agreement.

(b) Whenever in this Agreement any of the parties hereto is referred to, such reference shall be deemed to include the successors and assigns of such party; and all covenants, promises and agreements by or on behalf of the Debtor which are contained in this Agreement or in the other Financing Documents shall inure to the benefit of the successors and assigns of the Bank.

9.3 Payment of Fees and Expenses. The Debtor will pay on demand all costs and expenses (including the reasonable fees and out-of-pocket expenses of the Bank's counsel and the Bank's auditors and consultants) incurred by the Bank in connection with (i) audits and Collateral review, (ii) the preparation and negotiation of this Security Agreement and any other Financing Documents or any other documents contemplated, required or necessary in connection therewith, and any amendments or modifications thereof, (iii) the taking, perfection, preservation and protection of the Collateral and any other security for the repayment of the Debtor's Obligations or the Borrower's Obligations, and (iv) the enforcement and protection of the rights of the Bank in connection with this Security Agreement or any of the other Financing Documents.

9.4 Applicable Law; Jurisdiction, Consent to Service of Process. This Agreement and all of the other Financing Documents (except where expressly indicated therein to the contrary) shall be construed in accordance with and governed by the laws of the the State of Maryland. The Bank and the Debtor hereby submit to the nonexclusive jurisdiction of any Pennsylvania court or federal court sitting in Philadelphia over any suit, action or proceeding arising out of or relating to this Agreement. The Debtor hereby submits to the nonexclusive jurisdiction of any Utah court or federal court sitting in Utah over any suit, action or proceeding arising out of or relating to this Security Agreement. The Debtor hereby agrees that it may be served with process at the address for notices provided in Section 9.1 of this Security Agreement.

9.5 Waiver of Trial by Jury. The Debtor and the Bank hereby waive trial by jury in any action or proceeding to which the Debtor and the Bank may be parties, arising out of or in any way pertaining to this Security Agreement or any of the other Financing Documents. It is agreed and understood that this waiver constitutes a waiver of trial by jury of all claims against all parties to such actions or proceedings, including claims against parties who are not parties to this Security Agreement.

This waiver is knowingly, willingly and voluntarily made by the Debtor and the Bank, and the Debtor hereby represents that no representations of fact or opinion have been made by any individual to induce this waiver of trial by jury or to in any way modify or nullify its effect. The Debtor further

represents that it has had the opportunity to be represented in the signing of this Security Agreement and in the making of this waiver by independent legal counsel, selected of its own free will, and that it has had the opportunity to discuss the waiver with counsel.

9.6 Modifications. No modification or waiver of any provision of this Agreement or of any of the other Financing Documents, nor consent to any departure by the Debtor therefrom, shall be effective unless the same shall be in writing, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which it is given. No notice to or demand on the Debtor in any case shall entitle the Debtor to any other or further notice or demand in the same, similar or other circumstances.

9.7 No Waiver of Rights by Bank. Neither any failure nor any delay on the part of the Bank in exercising any right, power or privilege hereunder or under this Security Agreement or any of the other Financing Documents shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise or the exercise of any other right, power or privilege.

9.8 No Liability of Bank. The Bank shall not be liable for any act or omission by it pursuant to the provisions of this Agreement, in the absence of fraud or gross negligence. The Debtor hereby agrees that the Bank shall not be chargeable for any negligence, mistake, act or omission of any accountant, examiner, agency or attorney employed by them in making examinations, investigations or collections, or otherwise perfecting, maintaining, protecting or realizing upon any lien or security interest in the Collateral or any other interest in security for the Debtor's Obligations or the Borrower's Obligations. The Bank shall not incur any liability to the Debtor or to any other Person in connection with the acts or omissions of the Bank in reliance upon any certificate or other paper believed by the Bank to be genuine or with respect to any other thing which the Bank may do or refrain from doing, unless such act or omission amounts to fraud or gross negligence.

By accepting or approving anything required to be observed performed or fulfilled by the Debtor or to be given to the Bank pursuant to this Agreement, including, without limitation, any certificate, balance sheet, statement of profit and loss or other financial statement, survey, receipt, appraisal or insurance policy, the Bank shall not be deemed to have warranted or represented the sufficiency, legality, effectiveness or legal effect of the same, or of any term, provision or condition thereof and any such acceptance or approval thereof shall not be or constitute any warranty or representation with respect thereto.

9.9 Indemnification. All acts, including any failure to act, relating to the Collateral and any other security for the Debtor's Obligations or the Borrower's Obligations by any agent, representative or designee of the Bank are performed solely for the benefit of the Bank to assure repayment of the Debtor's Obligations or the Borrower's Obligations and are not for the benefit of the Debtor, or for the benefit of any other Person, including without limitation, purchasers, tenants or other occupants. The Debtor agrees to indemnify the Bank and to hold the Bank harmless against any loss or expense (including reasonable attorneys' fees) resulting from any and all claims, actions, settlements, or liability for acts or failure to act in connection with the Collateral and any other security for the Debtor's Obligations or the Borrower's Obligations. In addition to all amounts payable hereunder, the Debtor hereby protects, indemnifies and holds harmless the Bank from and against, and hereby agrees to defend the Bank against, any and all claims, damages, losses, liabilities, costs or expenses whatsoever which the Bank may, at any time, sustain or incur by reason of or in consequence of or arising out of the making of the Loan or the issuance of the Letters of Credit, it being the intention of the parties that this Security Agreement shall be construed and applied to protect and indemnify the Bank against any and all risks involved in the transactions contemplated by this Security Agreement and the other Financing Documents, all of which risks are hereby assumed by the Debtor. The provisions of this Section shall survive the expiration of this Security Agreement and the other Financing Documents. Notwithstanding the foregoing, the Debtor shall have no obligation to indemnify the Bank for the Bank's own gross negligence or willful misconduct.

9.10 No Partnership. Nothing contained in this Security Agreement shall be construed in a manner to create any relationship among the Debtor and the Bank other than the relationship of obligor and lender, and the Debtor and the Bank shall not be considered partners or co-venturers for any purpose on account of this Security Agreement or the Financing Documents.

9.11 Time of Essence. Time shall be of the essence for each and every provision of this Agreement of which time is an element.

9.12 Illegality. If fulfillment of any provision hereof or any transaction related hereto or to any of the other Financing Documents, at the time performance of such provision shall be due, shall involve transcending the limit of validity prescribed by law, then ipso facto, the obligation to be fulfilled shall be reduced to the limit of such validity; and if any clause or provisions herein contained other than the provisions hereof pertaining to repayment of the Debtor's Obligations operates or would prospectively operate to invalidate this Security Agreement in whole or in part, then such clause or provision only shall be void, as though not herein contained, and the remainder of this Security Agreement shall remain operative and in full force and effect; and if such provision pertains to repayment of the Debtor's Obligations, then, at the option of the Bank, all of the Debtor's Obligations to the Bank shall become immediately due and payable.

9.13 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be considered an original for all purposes; provided, however, that all such counterparts shall together constitute one and the same instrument.

9.14 Captions and Headings. The captions and headings contained in this Agreement are included herein for convenience of reference only and shall not be considered a part hereof and are not in any way intended to limit or enlarge the terms hereof.

9.15 Debtor's Obligations Absolute and Unconditional. All of the Debtor's Obligations shall be absolute and unconditional, irrespective of any set-off or counterclaim or the genuineness, validity, priority or enforceability of this Security Agreement or any of the other Financing Documents or any other circumstance which might otherwise constitute a legal or equitable discharge.

IN WITNESS WHEREOF, the Debtor and the Bank have caused this Security Agreement to be duly executed, sealed and delivered by their duly authorized officers, all as of the day and year first above written.

ATTEST/WITNESS:

/S/ Thomas K. Milhollan  
-----

GSE ERUDITE SOFTWARE, INC.

By: /S/ Eugene D. Loveridge  
-----

CORESTATES BANK, N.A.

By: /S/ Derrick Davis  
-----  
Title: Vice President



**EXHIBIT 10.22**

**GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**LEASE TERMINATION AGREEMENT**

THIS LEASE TERMINATION AGREEMENT (the "Termination Agreement") is made and entered into as of the 30th day of January 1998, and is by and between GSE POWER SYSTEMS, INC., a Delaware corporation (formerly known as Simulation, Systems and Services Technologies Company (the "Tenant" or "GSE") and 8930 STANFORD BOULEVARD, LLC, a Delaware limited liability company (the "Landlord"). The Tenant and the Landlord are sometimes hereafter collectively referred to as the "parties."

**RECITALS:**

R-1 Pursuant to an Amended and Restated Lease Agreement dated January 27, 1993 (the "Lease") by and between Tenant and CCP Development Limited Partnership No. 7, a Maryland limited partnership (the "Original Landlord"), Tenant did lease from the Original Landlord those certain premises consisting of an office building containing approximately one hundred fifty-four thousand three hundred ninety-four (154,394) square feet of space, including a parking lot and other appurtenant facilities, located at 8930 Stanford Boulevard, Columbia, Maryland, within the Columbia Corporate Park, as said premises are more particularly described in the Lease (collectively, the "Premises").

R-2 The term of the Lease (the "Term") expires on January 9, 2002, subject to Tenant's renewal option as set forth in Section 39 of the Lease.

R-3 Landlord has entered into an agreement to acquire the Premises and the real estate on which is it located from the Original Landlord in a transaction scheduled to close on February 5, 1998. Upon consummation of such transaction, Landlord shall succeed to all of the Original Landlord's rights under the Lease.

R-4 Tenant has requested that the Lease be terminated, effective April 30, 1998, at which time all of Tenant's rights and obligations under the Lease shall cease and terminate (except for those obligations which, pursuant to the terms and provisions of the Lease, survive expiration of the Term and termination of the Lease).

R-5 Landlord has secured Genus Corporation, a Maryland corporation "Genus"), as a replacement tenant for the Premises, and has entered into a separate lease agreement with Genus for the Premises (the "Replacement Lease"). The effectiveness of the Replacement Lease is conditioned upon, among other things, Tenant's execution and delivery of this Termination Agreement and Landlord's acquisition of the Premises and the real estate on which it is located.

NOW, THEREFORE, in consideration of the above premises and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereby agree as follows:

1. The Lease shall terminate at 11:59 p.m. on April 30, 1998 (the "Termination Date") at which time: (a) the Term, and all of Tenant's right to possession of the Premises, shall terminate; (b) Tenant shall surrender possession of the entirety of the Premises to Landlord in the condition required by the Lease; and (c) all of Tenant's rights and obligations under the Lease shall cease and terminate. The fixtures, equipment, alterations and other improvements to the Premises that shall be removed by Tenant at the expiration of the Term of the Lease is set forth in Exhibit A attached hereto. All other fixtures, equipment, alterations and other improvements to the Premises in place as of the date hereof shall remain with the Premises at the expiration of the

Term of the Lease, and shall not be removed by Tenant. Attached hereto as Exhibit B is a true and correct first of all management, supply, maintenance, service and other contracts binding on GSE with respect to the Property. Unless Landlord gives written notice to GSE within sixty (60) days of the date hereof, which notice describes those contracts which Landlord desires to continue beyond the Lease Termination Date, all such contracts shall terminate as of the Termination Date (or, if earlier, the Early Termination Date).

2. In the event that Tenant surrenders possession of the entirety of the Premises in the condition required prior to the Termination Date specified above and provides advance written notice thereof to Landlord (such date of surrender of possession of the Premises being referred to herein as the "Early Termination Date 11"), the Early Termination Date shall be the date upon which the Lease and all of Tenant's obligations thereunder including, without limitation, the obligation to pay rent and other sums due pursuant to the Lease, shall cease and terminate.

3. All payments required to be made by Tenant to the Landlord pursuant to the Lease (including, without limitation, Rent and an additional rent) shall be pro-rated to the Termination Date or the Early Termination Date (as appropriate), and Landlord shall refund any excess payment(s) to Tenant.

4. In the event that Tenant does not surrender possession of the Premises in the condition required on or before the Termination Date, such failure shall be deemed a holdover for purposes of the Lease, and Landlord shall be entitled to all remedies provided for in the Lease or available at law or in equity as a result of such holdover by Tenant. In addition, Tenant shall be liable to Landlord for the damages, if any, which Landlord may suffer or incur in accordance with Article 3 of the Replacement Lease (including, without limitation, damages resulting from termination of the Replacement Lease pursuant to the provisions of Article 3 of the Replacement Lease) or otherwise as a result of Tenant's holdover beyond the Termination Date. Notwithstanding anything to the contrary herein, in the event that Tenant's failure to timely surrender possession of the Premises does not result in a termination of the Replacement Lease pursuant to Article 3 of such lease, then Landlord's damages shall be limited to the damages which Landlord suffers or incurs in accordance with Article 3 of the Replacement Lease, and Landlord's sole remedy for Tenant's failure to timely surrender possession of the Premises which does not result in termination of the Replacement Lease shall be its recovery of such damages.

5. As a material inducement to Landlord's agreement to a termination of the Lease and the execution of the Replacement Lease as contemplated hereby, at Closing of Landlord's acquisition of the Premises and the real estate on which it is located (the "Acquisition Date"), Tenant shall deliver to Landlord an irrevocable sight draft letter of credit to secure Tenant's obligations to surrender possession of the Premises in the condition required by the Termination Date, as well as Genus' obligations pursuant to the Replacement Lease for a period of five (5) years, which letter of credit shall be substantially is in the form of Exhibit "C" attached hereto and issued by a bank reasonably acceptable to Landlord (the "Tenant Letter of Credit"). The Tenant Letter of Credit shall have an initial term of not less than one (1) year and shall be continuously renewed no later than thirty (30) days prior to the stated term thereof as necessary so that it remains in effect for the following periods and, subject to draws thereunder, for the following amounts:

(a) initially, the amount of the Tenant Letter of Credit shall be \$630,000 (the "Original Amount"); (b) at the expiration of the first full lease year of the term of the Replacement Lease the amount of the Tenant Letter of Credit may be reduced to an amount equal to the Original Amount less the greater of (x) \$75,000 or (y) the amount previously drawn under the Tenant Letter of Credit; (c) at the expiration of the second full lease year of the term of the Replacement Lease the amount of the Tenant Letter of Credit may be reduced to an amount equal to the Original Amount less the greater of (x) \$175,000 or

(y) amounts previously drawn under the Tenant Letter of Credit; (d) at the expiration of the third full lease year of the term of the Replacement Lease the amount of the Tenant Letter of Credit may be reduced to an amount equal to the Original Amount less the greater of (x) \$300,000 or (y) amounts previously drawn under the Tenant Letter of Credit; (e) at the expiration of the fourth full lease year of the term of the Replacement Lease the amount of the Tenant Letter of Credit be reduced to an amount equal to the Original Amount less the greater of (x) \$450,000 or (y) amounts previously drawn under the Tenant Letter of Credit) and (of at the expiration of the fifth full lease year of the term of the Replacement Lease the Tenant Letter of Credit shall be terminated to the extent not already drawn upon.

6. (a) In the event that an Event of Default (as hereinafter defined) shall have occurred and be continuing Landlord shall have the right to draw against the Tenant Letter of Credit as hereinafter described.

(b) The following shall be an "Event of Default" hereunder: (i) Tenant shall fail to surrender possession of the Premises by the Termination Date in the condition required by the Lease, or (ii) Genus shall have committed a default under the Replacement Lease (which has continued beyond the expiration of any notice or cure periods provided with reference thereto), or (iii) Tenant shall fail to renew the Tenant Letter of Credit as required hereby at least thirty (30) days prior to the expiration of the stated term thereof.

(c) Upon the occurrence of an Event of Default under clause (b)(ii) above, Landlord shall give notice to Tenant of such Event of Default and the amount of damages to Landlord as a result of such Event of Default. In the event that Tenant shall fail to cause Genus to cure such Event of Default within three

(3) business days after such notice, Landlord shall have the right to draw against the Tenant Letter of Credit, in an amount not to exceed the amount of damages set forth in Landlord's notice, and apply the amount so drawn to Landlord's damages. In the event that Tenant cures such an Event of Default by making a payment of damages to Landlord, such payment will be deemed the equivalent of a draw upon the Tenant Letter of Credit and Landlord will cooperate with Tenant to permit the Tenant Letter of Credit to be reduced by the amount of such payment. Upon the occurrence of an Event of Default under clause

(b)(i) above Landlord shall be permitted to draw upon the Tenant Letter of Credit up to the amount of Landlord's damages as a result thereof. Upon the occurrence of an Event of Default under clause (b)(iii) above, Landlord may draw upon the full amount of the Tenant Letter of Credit and shall hold the proceeds thereof, in lieu of the Tenant Letter of Credit, as security for the obligations secured by the Tenant Letter of Credit.

(d) Any draw on the Tenant Letter of Credit, or payment by Tenant in lieu thereof, shall be without prejudice to any other rights and/or remedies of Landlord with reference to such Event of Default, including, without limitation, Landlord's rights and remedies under the Replacement Lease to the extent that the Event of Default is as a result of a default by Genus under the Replacement Lease, or against Tenant to the extent that the Event of Default is as a result of Tenant's failure to surrender possession of the Premises by the Termination Date in the condition required by the Lease (except as otherwise provided in Section 4 above).

(e) Notwithstanding the preceding, if and to the extent that Genus cures its default under the Replacement Lease which gave rise to an Event of Default and, as a result thereof, Landlord recovers the amount of damages for which Landlord has drawn against the Tenant Letter of Credit, or received a payment from Tenant in lieu thereof, Landlord shall notify Tenant of such recovery and, provided that Tenant causes the Tenant Letter of Credit to be restored to the amount which it would have been absent such draw or payment, Landlord will refund to Tenant the amount of such draw or payment.

7. It is further acknowledged and agreed that in the event that Tenant has failed to surrender possession of the Premises in the condition required by the Termination Date, that Landlord shall have no obligation to satisfy all or any portion of its damages as a result thereof by a draw upon the Tenant Letter of Credit (and may retain the full amount thereof to secure Genus' obligations pursuant to the Replacement Lease). In addition, in the event that Tenant should fail to surrender possession of the Premises in the condition required by the Termination Date, and Landlord elects to draw upon the Tenant Letter of Credit to recoup all or a portion of its damages as a result thereof (in accordance with Section 4 above), then the Tenant shall, within ten (10) days of receipt of notice from Landlord of any such draw upon the Tenant Letter of Credit, replenish the amount available to be drawn thereunder (by providing a supplemental or replacement letter of credit) to the respective amounts set forth in paragraph 5 hereof, and if Tenant shall fail to do so, it shall not be entitled to any further periodic reduction in the amount of the Tenant Letter of Credit provided for in paragraph 5 hereof.

8. Nothing herein contained shall be deemed to release Tenant from any obligations under the Lease as of the Termination Date or, as appropriate, the Early Termination Date, which, by the terms and provisions of the Lease, are intended to survive expiration of the Term thereof.

9. Tenant hereby waives and releases Landlord from any and all claims, demands and causes of action ("Claim") it may have pursuant to the Lease and all matters related thereto, whether against the Original Landlord or the Landlord (as Original Landlord's successor) and whether now known or within the contemplation of Tenant or otherwise. In addition, Tenant acknowledges that, as of the date hereof, it is aware of no basis for any Claims against Original Landlord pursuant to the Lease or any basis for claiming a defense or right of offset against rent or any other sum due and payable by it pursuant to the Lease. Tenant agrees hereby that, from and after the date that Landlord acquires the Premises and the real estate on which it is located from Original Landlord, and thereby succeeds to the Original Landlord's rights under the Lease, all rent and other sums payable by it pursuant to the Lease shall be paid to Landlord without offset or defense.

10. Notwithstanding any provisions being to the contrary, this Termination Agreement, and the parties' rights and obligations hereunder, shall become effective on the date that Landlord acquires the Premises and the real estate on which it is located from Original Landlord (such date being the "Effective Date"). In the event the Effective Date does not occur by February 5, 1998, this Termination Agreement, and each and every provision hereof, shall be deemed void and of no legal force and effect, ab initio as if this Termination Agreement had never been entered into.

11. As of the Effective Date, the following Sections of the Lease are hereby deleted in their entirety: (a) Section 33 (Option to Expand); (b) Section 39 (Renewal Options) and (c) Section 40 (Purchase Option). Without limitation of the foregoing, Tenant hereby consents to Landlord's acquisition of the Premises and the real estate on which it is located from Original Landlord and, to the extent that such acquisition may in any way be inconsistent with, or violate or conflict with, any provision of the Lease (including, without limitation, Section 40 thereof), Tenant hereby waives the applicability of, or its right to enforce, any such provision.

12. This Termination Agreement shall be construed and governed in accordance with the laws of the State of Maryland.

13. Unless otherwise specified herein, initially capitalized terms shall have the meanings given them by the Lease,

14. Except only as expressly modified hereby, the Lease remains in full force and effect, unmodified by this Termination Agreement.

15. This Termination Agreement may be entered into in counterparts.

IN WITNESS WHEREOF, the parties have entered into this Termination Agreement as of the date first above-written.

WITNESS:

TENANT:

GSE Power Systems, Inc.  
a Delaware corporation

/s/ Thomas K. Milhollan  
-----

By: /s/ Robert W. Stroup  
-----  
Title: Executive Vice President

**LANDLORD:**

8930 Stanford Boulevard, LCC, a Delaware  
limited liability company

By: /s/ John M. Schemer  
-----  
Title: Managing Member  
-----

**JOINDER OF PARENT**

By its execution hereof, GSE Systems, Inc., a Delaware corporation, parent of Tenant, hereby guarantees to Landlord Tenant's payment in full of Tenant's obligations to Landlord pursuant to Section 4 of this Lease Termination Agreement (less amounts drawn by Landlord under the Letter of Credit therefor).

**GSE Systems, Inc.**

By: /s/ Robert W. Stroup  
-----  
Title: Executive Vice President  
-----

**EXHIBIT 10.23**

**GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**INDEMNIFICATION AGREEMENT**

THIS INDEMNIFICATION AGREEMENT ("Agreement") is made as of this 2nd day of February, 1998 by and between GENUS CORPORATION, a Maryland corporation ("Genus") and GSE POWER SYSTEMS, INC., a Delaware corporation ("GSE").

**RECITALS:**

- A. Pursuant to that certain Amended and Restated Lease Agreement dated January 27, 1993 (the "Lease") between GSE, as tenant, and CCP Development Limited Partnership No., LLC, a Maryland limited liability company ("CCP"), as landlord, GSE leased certain space in an office building located at 8930 Stanford Boulevard, Columbia, Maryland (the " Building ").
- B. 8930 Stanford Boulevard, LLC, a Delaware limited liability company ("Allied") has entered into an agreement to purchase the Building from CCP. Upon closing of that transaction, Allied will succeed to all of CCP's rights under the Lease.
- C. Pursuant to that certain Lease Termination Agreement between GSE and Allied, executed simultaneously herewith, (the "Termination Agreement") GSE and Allied have agreed that the Lease shall terminate on April 30, 1998, and that GSE shall vacate the Building on or before April 30, 1998.
- D. Simultaneously with the termination of the Lease, Allied shall enter into a new lease with Genus for the Building (the "New Lease").
- E. As a condition to its entering into the New Lease, Allied has required that GSE provide Allied a letter of credit (the "Letter of Credit") in the initial amount of Six Hundred Thirty Thousand Dollars (\$630,000.00) to secure Genus's obligations under the New Lease for five (5) years.
- F. GSE is willing to give Allied the Letter of Credit to secure Genus's obligations under the New Lease in consideration for Genus's agreement to indemnify, hold harmless and defend GSE on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the foregoing premises, Genus, GSE and GSE Systems hereby agree as follows:

- 1. Genus' Indemnification of GSE. Genus shall indemnify, hold harmless and defend GSE from and against, to the extent arising pursuant to Section 6(b)(ii) of the Termination Agreement: (a) any and all amounts drawn by Allied on the Letter of Credit or any replacement thereof; and (b) all reasonable costs and expenses (including reasonable attorney's fees) incurred by GSE in connection with any action, suit, proceeding, demand or judgment incident to any draw or attempt by Allied to draw on the Letter of Credit or any replacement thereof.
- 2. Liquidated Damages and Expenses on Account of Holdover. In the event that (i) GSE does not vacate the Building on or before September 15, 1998, (ii) that Allied fails to deliver the Building to Genus in accordance with Article 3 of the New Lease as a result of GSE's failure to timely vacate as required under the Termination Agreement, and (iii) Genus terminates the New Lease in accordance with Article 3 of the New Lease, GSE shall pay to Genus, an amount

equal to the Annual Base Rental that would have been abated pursuant to Article 3 of the New Lease on account of delay in delivery of the Building by Allied, which amount is stipulated as one million one hundred seventy thousand eight hundred twenty-one and 10/100 dollars (\$1,170,821.10) it being agreed that such payment is liquidated damages and not a penalty and such liquidated damages are a reasonable estimation of Genus' damages on account of such termination); and

(b) all reasonable costs and expenses (including reasonable attorneys' fees) incurred by Genus in connection with any action, suit, proceeding, demand or judgment incident to GSE failure to timely vacate the Building.

3. Payments and Interest. Genus shall pay to GSE any and all amounts due pursuant to Section 1 within ten days of written notice from GSE that Allied has made a draw on the Letter of Credit or that GSE has incurred the costs and expenses identified in Section 1(b). GSE shall pay to Genus any and all amounts pursuant to Section 2 herein thirty days after written notice from Genus that all of the preconditions in Section 2 have been satisfied. Any amount not paid within such ten-day or thirty-day period, as appropriate, shall bear interest from the date due until paid at a rate per annum equal to three (3) percentage points above the prime rate of interest charged by U.S. money center commercial banks as published in The Wall Street Journal, such prime rate to change from time to time as and when the change is reported.

5. Miscellaneous. This Agreement (a) shall be governed by and construed in accordance with the laws of the State of Maryland, (b) may be executed in multiple counterparts, each of which shall constitute an original and all of which shall constitute one and the same agreement, (c) constitutes the final and entire agreement between Genus and GSE with respect to the matters set forth herein, and (d) shall be binding upon and inure to the benefit of the parties hereto, and their respective heirs, successors and assigns. If any provision shall be deemed severable, the remaining provisions hereof shall continue in full force and effect.

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

**GENUS CORPORATION**

By: /S/ *Bernaldo J. Dancel*  
-----  
Title: *President*  
-----

**GSE POWER SYSTEMS, INC.**

By: /S/ *Robert W. Stroup*  
-----  
Title: *Executive Vice President*  
-----

**JOINDER OF PARENT**

By its execution hereof, GSE Systems, Inc., a Delaware corporation, parent of GSE Power Systems, Inc., hereby guarantees to Genus, GSE's payment in full of its obligations to Genus under this Indemnification Agreement and all reasonable out-of-pocket costs and expenses (including reasonable attorneys' fees) incurred by Genus in connection with collecting any amounts not paid by GSE when due to Genus hereunder.

**GSE SYSTEMS, INC.**

By:       /S/ Robert W. Stroup        
-----  
Title: Executive Vice President  
-----



**EXHIBIT 10.24**

**GSE SYSTEMS, INC.**

**FORM 10-K**

**For the Year Ended December 31, 1997**

**RUTHERFORD PLAZA**

Suite 110, 1st Floor  
&  
Suite 200, 2nd Floor

**OFFICE LEASE**

by and between

**STERLING RUTHERFORD PLAZA, L.L.C.**

(Landlord)

and

**GSE SYSTEMS, INC.**  
(Tenant)

TABLE OF CONTENTS

Section 1. Definitions .....  
Section 2. Premises; Measurement .....  
Section 3. Term .....  
Section 4. Rent; Security Deposit .....  
Section 5. Taxes .....  
Section 6. Use of Premises and Common Areas .....  
Section 7. Insurance and Indemnification .....  
Section 8. Services and Utilities .....  
Section 9. Repairs and Maintenance .....  
Section 10. Improvements .....  
Section 11. Landlord's Right of Entry .....  
Section 12. Damage or Destruction .....  
Section 13. Condemnation .....  
Section 14. Assignment and Subletting .....  
Section 15. Rules and Regulations .....  
Section 16. Subordination and Attornment .....  
Section 17. Defaults and Remedies .....  
Section 18. Estoppel Certificate .....  
Section 19. Quiet Enjoyment .....  
Section 20. Notices .....  
Section 21. Option to Terminate .....  
Section 22. Renewal Option .....  
Section 23. Expansion Space .....  
Section 24. General .....

Exhibits

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- A Drawing showing approximate location of Premises
- B Landlord's Work
- C Current Rules and Regulations

**GSE SYSTEMS, INC.****FORM 10-K****For the Year Ended December 31, 1997****OFFICE LEASE**

THIS LEASE ("Lease") is made on this 10th day of February, 1998 (the "Effective Date"), by and between STERLING RUTHERFORD PLAZA, L.L.C., a Delaware limited liability company (the "Landlord"), and GSE SYSTEMS, INC., a publicly traded Maryland corporation (the "Tenant").

IN CONSIDERATION of the agreements and covenants hereinafter set forth, Landlord and Tenant mutually agree as follows:

**1. DEFINITIONS.**

1.1. As used herein, the following terms shall have the following meanings:

"Additional Rent" has the meaning given it in subsection 4.2.

"Alterations" has the meaning given it in subsection 10.2.

"Base Operating Costs" means Operating Costs incurred during the first twelve (12) full calendar months after the Rent Commencement Date.

"Base Rent" has the meaning given it in subsection 4.1.

"Base Taxes" means Taxes incurred for the Tax Year 1998/99.

"Building" means the building known as Rutherford Plaza and located at 7133 Rutherford Road in Baltimore County, Maryland.

"Building Service Equipment" means all apparatus, machinery, devices, fixtures, appurtenances, equipment and personal property now or hereafter located on the Premises and owned by the Landlord.

"Common Areas" has the meaning given it in subsection 6.5.1.

"Condemnation" has the meaning given it in subsection 13.1.

"Event of Default" has the meaning given it in subsection 17.1.

"Insurance Premiums" means the aggregate of any and all premiums paid by the Landlord for hazard, liability, loss-of-rent, workmens' compensation or similar insurance upon any or all of the Property.

"Landlord" means the Person hereinabove named as such and its successors and assigns.

"Interest Rate" has the meaning given it in Section 4.4.3.

"Landlord's Work" has the meaning given to it in subsection 10.1.

"Lease Year" means (a) the period commencing on the Rent Commencement Date and terminating at 11:59 p.m. on the first anniversary of the last day of the fifteenth (15th) full calendar month after the Rent Commencement Date; and (b) each successive period of twelve (12) calendar months thereafter during the Term.

"Liquidated Damages" has the meaning given it in subsection 17.3.

"Mortgage" has the meaning given it in subsection 16.1.

"Mortgagee" has the meaning given it in subsection 16.1.

"Operating Costs" means any and all costs and expenses reasonably incurred (consistent with the customary practice in the Baltimore area) by the Landlord for services performed by the Landlord or by others on behalf of the Landlord with respect to the operation and maintenance of the Property and the Common Areas located therein, adjusted to reflect the greater of actual or a minimum of ninety (90%) occupancy of the Building, including, without limitation, all costs and expenses of:

(a) operating, maintaining, repairing, lighting, signing, decorating, cleaning, removing trash from, painting, striping, controlling of traffic in, controlling of rodents in, policing and securing the Property (including, without limitation, the costs of uniforms, equipment, assembly permits, supplies, materials, alarm and life safety systems, and maintenance and service agreements);

(b) purchasing and maintaining in full force insurance (including, without limitation, liability insurance for personal injury, death and property damage, rent insurance, insurance against fire, theft or other casualties, extended coverage insurance, workers' compensation insurance covering personnel, fidelity bonds for personnel, insurance against liability for defamation and claims of false arrest occurring on or about the Property, and plate glass insurance);

(c) removing snow, ice, water, litter and debris;

(d) operating, maintaining and repairing machinery, furniture, accessories and equipment used in the operation and maintenance of the Property, and the personal property taxes and other charges reasonably incurred in connection with such machinery, furniture, accessories and equipment;

(e) maintaining and repairing roofs, awnings, paving, curbs, walkways, sidewalks, drainage pipes, ducts, conduits, grease traps and lighting fixtures throughout the Property.

(f) planting, replanting and replacing flowers, shrubbery, trees, grass, planters and general landscape maintenance;

(g) providing electricity, heating, ventilation and air conditioning to the Common Areas, but not the Premises, and operating, maintaining and repairing any equipment used in connection therewith, including, without limitation, costs incurred in connection with determining the feasibility of installing, maintaining, repairing or replacing any facilities, equipment, systems or devices which are intended to reduce utility expenses of the Property as a whole;

(h) water and sanitary sewer services and other services, if any, furnished to the Common Areas for the non-exclusive use of tenants;

(i) janitorial services for the Building;

(j) enforcing any operating agreements pertaining to the Common Areas or any portions thereof, and any easement and/or rights agreements entered into by the Landlord for the benefit and use of the Landlord with reference to the Property, the Property or tenants thereof, or any arbitration or judicial actions undertaken with respect to the same;

(k) maintaining and repairing the Property, including, without limitation, exhaust systems, sprinkler systems, pumps, fans, switchgear, loading docks and ramps, freight elevators, escalators, passenger elevators, stairways, service corridors, delivery passages, utility plants, transformers, doors, walls, floors, skylights, ceilings, windows and fences;

(l) accounting, audit and management fees and expenses (provided that such management fees and expenses shall be consistent with fees and expenses customarily charged in the Baltimore, Maryland area, but in no event shall exceed five percent (5%) of the total of all revenue generated from the Property), payroll, payroll taxes, employee benefits and related expenses of all personnel engaged in the operation, maintenance, security and management of the Property, including, without limitation, security and maintenance personnel, secretaries and bookkeepers (including, specifically, uniforms and working clothes and the cleaning thereof, tools, equipment and supplies used by such personnel, and the expenses imposed on or allocated to the Landlord or its agents pursuant to any collective bargaining or other agreement); and

(m) the cost and expense of complying with all federal, state and local laws, orders, regulations and ordinances applicable to the Property which are now in force, or which may hereafter be in force.

Notwithstanding anything to the contrary contained herein, Operating Costs shall not include the following: (1) any ground lease rents; (2) any and all fines and penalties (including but not limited to capital expenditures) incurred or required to be paid due to Landlord's failure to comply with applicable laws or to timely pay taxes or utilities; (3) costs incurred by Landlord for the repair of damage to the Property to the extent that Landlord is reimbursed by insurance (or would have been entitled had Landlord carried the insurance required to be carried hereunder by Landlord); (4) depreciation and amortization of any type, except on materials, tools, supplies and vendor type equipment purchased by Landlord to enable Landlord to supply services Landlord might otherwise contract for with a third party where such depreciation and amortization would otherwise have been included in the charge for such third party's services, all as determined according to generally accepted accounting principles ("GAAP") and when depreciation or amortization is permitted or required, the item shall be amortized over its reasonably anticipated useful life; (5) leasing commissions, marketing expenses, tenant improvement expenses, attorney's fees, and other costs and expenses incurred in connection with negotiations or disputes with present or prospective tenants or other occupants of the Building; (6) costs of a capital nature, including, without limitation, capital improvements, capital repairs, capital equipment and capital tools, all as determined under GAAP except for capital costs for improvements which reduce the Operating Costs of the Property, which capital improvements shall be amortized over their useful life; (7) interest, principal, points and fees on debt or amortization on any mortgage or mortgages or any other debt instrument encumbering the Building; (8) such other expenses as are not customarily considered to be Operating Costs under GAAP for comparable office buildings in the Baltimore metropolitan area.

"Operating Year" means each respective calendar year or part thereof during the Term, or, at the Landlord's option, any other 12-month period or part thereof designated by the Landlord during the Term.

"Parking Areas" has the meaning given it in subsection 6.5.1.

"Person" means a natural person, a trustee, a corporation, a limited liability company, a partnership and/or any other form of legal entity.

"Premises" means that certain space having a rentable area of 3,579 square feet, located on the first floor of the Building and known as Suite 110, and 28,272 square feet located on the second floor of the Building and known as Suite 200, as more particularly depicted on Exhibit A; provided, that if at any time hereafter any portion of the Premises becomes no longer subject to this Lease, "Premises" shall thereafter mean so much thereof as remains subject to this Lease. The exact rentable area of the Premises shall be determined by Heath Design in accordance with BOMA standards as soon as reasonably possible after final completion of the Space Improvements. If such determination discloses that the actual rentable area of the Premises is other than 31,851 square feet, then: (i) the Base Rent to be paid by the Tenant pursuant to Section 4.1 hereof shall be increased or decreased, as applicable, at the rate of \$13.60 per square foot; and (ii) the Tenant's Proportionate Share shall be recomputed to reflect the increase or decrease in rentable area.

"Property" means that certain parcel of land containing approximately 4.6 acres, more or less, together with the Building thereon. The Property is more particularly shown on Exhibit A.

"Rent" means all Base Rent and all Additional Rent.

"Rent Commencement Date" has the meaning given to it in subsection 3.1.

"Rules and Regulations" has the meaning given to it in section 15.

"Tax Year" means the 12-month period beginning July 1 of each year or such other 12-month period (deemed for the purposes of this Lease to have 365 days) established as a real estate tax year by the taxing authority having lawful jurisdiction over the Property.

"Taxes" means the aggregate of any and all real property and other taxes, metropolitan district charges, front-foot benefit assessments, special assessments and other taxes or public or private assessments or charges levied against any or all of the tax parcel containing the Premises, including but not limited to any such charges imposed under any private covenants encumbering the title to any or all of the Property, and regardless of whether any of the same are ordinary or extraordinary, foreseen or unforeseen, recurring or nonrecurring, or special or general.

"Tenant" means the Person hereinabove named as such and its successors and permitted assigns hereunder.

"Tenant's Proportionate Share" (a) means the percentage assigned to the Premises for purposes of allocating Operating Costs and Taxes to the Premises (and the rest of the net rentable spaces within the Property), (b) represents the approximate and (for purposes of this Lease) hereby agreed upon proportion which the rentable floor area of the Premises (31,851 square feet) bears to the aggregate rentable floor area of the Building, which shall be in accordance with BOMA (79,306 square feet), and (c) as of the Effective Date shall be 40.16%.

"Tenant's Share of Increased Operating Costs" has the meaning given it in subsection 4.3.2.

"Tenant's Share of Increased Taxes" has the meaning given it in subsection 5.1.

"Term" has the meaning given it in subsection 3.1.

"Termination Damages" has the meaning given it in subsection 17.3.

"Termination Date" has the meaning given it in subsection 3.1.

"Transfer" has the meaning given it in subsection 14.1.

1.2. Other Terms. Any other term to which meaning is expressly given in this Lease shall have such meaning.

2. PREMISES. The Landlord hereby leases to the Tenant, and the Tenant hereby leases from the Landlord, the Premises in "AS IS, WHERE IS" condition (subject, however, to the Landlord's obligations set forth in subsection 10.1), together with the right to use, in common with others, the Common Areas.

3. TERM.

3.1. Original Term; Rent Commencement Date. This Lease shall be for a term (the "Term") commencing on the Effective Date and ending at 11:59

p.m. on the expiration of the one hundred twenty-third (123rd) full calendar month after the last day of the month in which the Rent Commencement Date shall occur (which date is hereinafter referred to as the "Termination Date"). Monthly rent payments shall commence on the earlier of: (a) fifteen (15) days after the date on which the Landlord notifies the Tenant that the Landlord's Work and Space Improvements have been substantially completed, but in no event earlier than May 15, 1998 (unless the Tenant elects, in its sole discretion, to take occupancy prior to May 15th); or (b) June 1, 1998, provided, that if the Space Improvements are not substantially complete by May 15th due to causes attributable to the Landlord or the General Contractor and not to Tenant, then said June 1st date shall be extended one day for each day of delay attributable to the Landlord or the General Contractor. The earlier of the dates set forth in

(a) and (b) above is hereinafter referred to as the "Rent Commencement Date"). Notwithstanding the foregoing, Base Rent shall abate for the first ninety (90) days after the Rent Commencement Date.

3.2. Confirmation of Commencement and Termination. The Landlord and the Tenant at the Landlord's option and request after (a) the Rent Commencement Date or (b) the expiration of the Term or any earlier termination of this Lease by action of law or in any other manner, shall confirm in writing by instrument in recordable form that, respectively, such rent commencement or such termination has occurred, setting forth therein, respectively, the Rent Commencement Date and the Termination Date.

3.3. Surrender. The Tenant, at its expense at the expiration of the Term or any earlier termination of this Lease, shall (a) promptly surrender to the Landlord possession of the Premises (including any fixtures or other improvements which are owned by the Landlord) in good order and repair (ordinary wear and tear and damage by fire or casualty excepted) and broom clean, (b) remove therefrom all signs, goods, effects, machinery, fixtures and equipment used in conducting the Tenant's trade or business which are neither part of the Building Service Equipment nor owned by the Landlord, and (c) repair any damage caused by such removal.

3.4. Holding Over. If the Tenant continues to occupy the Premises after the expiration of the Term or any earlier termination of this Lease after obtaining the Landlord's express, written consent thereto, then:

(a) such occupancy (unless the parties hereto otherwise agree in writing) shall be deemed to be under a month-to-month tenancy, which shall continue until either party hereto notifies the other in

writing, at least one month before the end of any calendar month, that the notifying party elects to terminate such tenancy at the end of such calendar month, in which event such tenancy shall so terminate;

(b) anything in this section to the contrary notwithstanding, the Rent payable for each such monthly period shall equal the sum of (a) one-twelfth (1/12) of that amount which is equal to 150% of the Base Rent for the Lease Year during which such expiration of the Term or termination of this Lease occurs, plus (b) the Additional Rent payable under subsection 4.2; and

(c) except as provided herein, such month-to-month tenancy shall be on the same terms and subject to the same conditions as those set forth in this Lease; provided, however, that if the Landlord gives the Tenant, at least one month before the end of any calendar month during such month-to-month tenancy, written notice that such terms and conditions (including any thereof relating to the amount and payment of Rent) shall, after such month, be modified in any manner specified in such notice, then such tenancy shall, after such month, be upon the said terms and subject to the said conditions, as so modified.

4. RENT; SECURITY DEPOSIT. As Rent for the Premises, the Tenant shall pay to the Landlord all of the following:

4.1. Base Rent. An annual rent (the "Base Rent") as follows:

Lease Year -----	Base Rent -----	Monthly Installment of Base Rent -----
1	\$541,467.00	\$36,097.80
2	\$433,173.60	\$36,097.80
3	\$448,334.68	\$37,361.22
4	\$464,026.39	\$38,668.87
5	\$480,267.31	\$40,022.28
6	\$497,076.67	\$41,423.06
7	\$514,474.35	\$42,872.86
8	\$532,480.96	\$44,373.41
9	\$551,117.79	\$45,926.48
10	\$570,406.91	\$47,533.91

4.2. Additional Rent. Additional rent ("Additional Rent") shall include any and all charges or other amounts which the Tenant is obligated to pay to the Landlord under this Lease, other than the Base Rent, regardless of whether such charges or amounts are designated as additional rent.

4.3. Operating Costs.

4.3.1. Computation. Within one hundred twenty (120) days after the end of each calendar year during the Term, the Landlord shall compute the total of the Operating Costs incurred for the Property during such calendar year, and the Landlord shall allocate them to each separate rentable space within the Property in proportion to the respective operating costs percentages assigned to such spaces; provided that anything in this subsection 4.3 to the contrary notwithstanding, wherever the Tenant and/or any other tenant of space within the Property has agreed in its lease or otherwise to provide any item of such services partially or entirely at its own expense, or wherever in the Landlord's judgment any such significant item of expense is not incurred



with respect to or for the benefit of all of the net rentable space within the Building in allocating the Operating Costs pursuant to this subsection, the Landlord shall make an appropriate adjustment, using generally accepted accounting principles, as aforesaid, so as to avoid allocating to the Tenant or to such other tenant (as the case may be) those Operating Costs covering such services already being provided by the Tenant or by such other tenant at its own expense, or to avoid allocating to all of the net rentable space within the Building those Operating Costs incurred only with respect to a portion thereof, as aforesaid. Within ten (10) days after the end of each 120 day computation period during the Term, Landlord shall submit to Tenant a statement prepared and certified as accurate by Landlord ("Expense Statement") setting forth in reasonable detail the Operating Costs for such calendar year and the amount (if any) of Tenant's Proportionate Share of such Operating Costs for such calendar year. If the amount of Tenant's Proportionate Share of Operating Costs stated in the Expense Statement is less than the amount Tenant paid by Tenant as Operating Costs for the period covered by the Expense Statement, then Tenant shall deduct the overpayment from its next payments(s) of Operating Costs. If the amount of Tenant's Proportionate Share of Operating Costs stated in such Expense Statement exceeds the amount paid by Tenant as Operating Expenses, Tenant shall pay Landlord the excess with its next payment of Base Rent. The Tenant shall have the right, during normal business hours at the Landlord's offices, to review the books and records of the Landlord with respect to the calculation of: (a) either Base Operating Costs; or (b) Operating Costs for the prior calendar year applicable, at the Tenant's sole expense, provided (i) the Tenant provides at least ten (10) days' advance written notice to the Landlord of its desire to inspect such books and records, and (ii) such request is made within sixty (60) days after either: (a) the end of the twelve (12) months during which Base Operating Costs are determined; or (b) the Expense Statement is delivered by the Landlord to the Tenant. If the Tenant does not notify the Landlord within such 60-day period, then all sums included as Base Operating Costs, or Operating Costs, as applicable, shall be deemed acceptable to the Tenant and thereafter the Tenant shall have no right to dispute in any manner any sums included within Base Operating Costs, or Operating Costs prior calendar year, as applicable. If the Tenant in good faith wishes to dispute the determination of Base Operating Costs or Operating Costs or the calculation of any amount payable by the Tenant, the Tenant will give the Landlord written notice of such dispute within two (2) months after Tenant's review of the Landlord's books and records. As soon as reasonably practicable after receiving such written notice, the Landlord will meet with the Tenant in an attempt to reconcile the dispute. If such efforts do not, in the reasonable determination of the Landlord and Tenant, resolve all outstanding disputes, the Tenant may cause to be made a complete audit of the Landlord's records relating to the matter in dispute by a firm of independent certified public accountants selected by the Tenant with the approval of Landlord, which approval shall not be unreasonably withheld. If such audit reveals that the amount previously determined by the Landlord was incorrect, a correction will be made, and either the Landlord will promptly return to the Tenant any overpayment or the Tenant will promptly pay to the Landlord any underpayment which was based on such incorrect amount. If Tenant's Proportionate Share of Operating Costs was overstated by an amount in excess of five percent (5%), Landlord shall also pay one-half (1/2) of the reasonable costs incurred by Tenant in conducting such audit.

4.3.2. Payment. For each Operating Year (or portion thereof in the event Base Operating Costs are determined on other than a calendar year basis), the Tenant shall pay to the Landlord, in the manner provided herein, "Tenant's Share of Increased Operating Costs" which shall be computed by subtracting the Base Operating Costs from the Operating Costs for the Operating Year in question, and multiplying the difference by Tenant's Proportionate Share. The Landlord shall send to the Tenant an annual statement setting forth the Operating Costs for the applicable calendar year. Notwithstanding anything to the contrary contained in this Lease, the Landlord represents that the cumulative annual increase per Operating Year of the controllable portion of Operating Costs shall not be more than five percent (5%). By way of example but not of limitation, if the controllable portion of such costs increases by 4% in the second Lease Year and 3% in the third Lease Year, then the controllable portion of such costs may increase by no more than 8% in the fourth Lease Year [ $3 \times 5 = 4 + 3 + 8$ ]. In no event, however, shall the

first increase of the controllable portion of such costs exceed 5%. Non-controllable Operating Costs shall be deemed to include insurance costs, utility costs (including HVAC), the costs of snow and ice removal and other similar costs which, under industry custom and practice, are deemed non-controllable.

4.3.3. Proration. If only part of any calendar year falls within the Term, the amount computed as Tenant's Share of Increased Operating Costs for such calendar year (or portion thereof in the event Base Operating Costs are determined on other than a calendar year basis) under this subsection shall be prorated in proportion to the portion of such calendar year falling within the Term (but the expiration of the Term before the end of a calendar year shall not impair the Tenant's obligation hereunder to pay such prorated portion of Tenant's Share of Increased Operating Costs for that portion of such calendar year falling within the Term, which amount shall be paid on demand).

4.3.4. Landlord's Right to Estimate. Anything in this subsection to the contrary notwithstanding, the Landlord, at its reasonable discretion, may (a) make from time to time during the Term a reasonable estimate Tenant's Share of Increased Operating Costs which may become due under this subsection for any calendar year, (b) require the Tenant to pay to the Landlord for each calendar month during such year one twelfth (1/12) of such Tenant's Share of Increased Operating Costs, at the time and in the manner that the Tenant is required hereunder to pay the monthly installment of the Base Rent for such month, and (c) increase or decrease from time to time during such calendar year the amount initially so estimated for such calendar year, all by giving the Tenant written notice thereof, accompanied by a schedule setting forth in reasonable detail the expenses comprising the Operating Costs, as so estimated.

#### 4.4. When Due and Payable.

4.4.1. Base Rent. The Base Rent for any Lease Year shall be due and payable in twelve (12) consecutive, equal monthly installments, in advance, on the first (1st) day of each calendar month during such Lease Year. In addition, the Base Rent for the first full calendar month of the Term shall be due and payable within three (3) days after the Landlord delivers a fully executed copy of this Lease to the Tenant. Rent for any partial calendar month shall be due and payable three (3) days after the Rent Commencement Date.

4.4.2. Additional Rent. Any regularly scheduled Additional Rent accruing to the Landlord under this Lease, except as is otherwise set forth herein, shall be due and payable when the installment of Base Rent next falling due after such Additional Rent accrues and becomes due and payable. Tenant shall pay any other, non-scheduled amounts of Additional Rent, within thirty (30) days after notice (accompanied by reasonable documentation evidencing such Additional Rent) from Landlord that such amount is due.

4.4.3. No Set-Off; Late Payment. Any payment of Base Rent or regularly scheduled Additional Rent shall be made promptly when due, without any deduction or setoff whatsoever, and without demand, failing which the Tenant shall pay to the Landlord as Additional Rent, after the tenth (10th) day after such payment remains due but unpaid, a late charge equal to five percent (5%) of such payment which remains due but unpaid. In addition, any payment that is not paid by the tenth (10th) day after such payment is due shall bear interest at the rate equal to the sum of the "prime rate", as quoted in the Wall Street Journal's money rates section, plus two percent (2%) per annum (the "Interest Rate") on the date of default if applicable to a default, otherwise, on the date of determination. Any payment made by the Tenant to the Landlord on account of Rent may be credited by the Landlord to the payment of any Rent then past due before being credited to Rent currently falling due. Any such payment which is less than the amount of Rent then due shall constitute a payment made

on account thereof, the parties hereto hereby agreeing that the Landlord's acceptance of such payment (whether or not with or accompanied by an endorsement or statement that such lesser amount or the Landlord's acceptance thereof constitutes payment in full of the amount of Rent then due) shall not alter or impair the Landlord's rights hereunder to be paid all of such amount then due, or in any other respect.

4.5. Where Payable. The Tenant shall pay the Rent, in lawful currency of the United States of America, to the Landlord by delivering or mailing it to the Landlord's agent at the following address, or to such other address or in such other manner as the Landlord from time to time specifies by written notice to the Tenant:

MacKenzie  
Suite 200  
2328 West Joppa Road Lutherville, Maryland 21093

4.6. Tax on Lease. If federal, state or local law now or hereafter imposes any tax, assessment, levy or other charge (other than Landlord's income or franchise taxes) directly or indirectly upon (a) the Landlord with respect to this Lease or the value thereof, (b) the Tenant's use or occupancy of the Premises, (c) the Base Rent, Additional Rent or any other sum payable under this Lease, or (d) this transaction, then the Tenant shall pay the amount thereof as Additional Rent to the Landlord upon demand, unless the Tenant is prohibited by law from doing so, in which event the Landlord at its election may terminate this Lease by giving written notice thereof to the Tenant.

4.7. Security Deposit. Simultaneously upon the execution and delivery of this Lease by the parties hereto, the Tenant shall deposit with the Landlord the sum of Thirty-five Thousand, Nine Hundred Sixty-five Dollars and Nine Cents (\$35,965.09), which (a) shall be retained by the Landlord as security for the Tenant's payment of the Rent and performance of all of its other obligations under this Lease, and (b) shall not be deemed to represent payment of any Rent and shall not be construed as liquidated damages. If an Event of Default occurs, the Landlord shall be entitled, at its sole discretion, (a) to apply any or all of such sum in payment of (i) any Rent then due and unpaid, (ii) any expense incurred by the Landlord in curing any such default, and/or (iii) any damages incurred by the Landlord by reason of such default (including but not limited to that of reasonable attorneys' fees), in which event the Tenant, immediately on its receipt of a written demand therefor from the Landlord, shall pay to the Landlord a sum equaling the amount so applied, so as to restore such sum to its original amount; and/or (b) to retain any or all of such sum in liquidation of any or all damages suffered by the Landlord by reason of such default. On the termination of this Lease, any of such sum which is not so applied or retained shall be returned to the Tenant. Such sum shall not bear interest while being held by the Landlord. Landlord shall be entitled to the full use of the Security Deposit and shall not be required to keep the Security Deposit in a separate account. Any Mortgagee or purchaser of the Property shall be relieved and released from any obligation to return the Security Deposit in the event such Mortgagee or purchaser comes into possession of the Property by reason of foreclosure (including deed in lieu thereof) or proceeding in lieu of foreclosure unless the Security Deposit actually has been delivered to such Mortgagee or purchaser.

4.7.1 Performance Bond. A condition precedent to the performance of Landlord's obligations under this Lease is the delivery of a Six Hundred Thousand Dollar (\$600,000.00) performance and payment bond to Landlord within fifteen (15) days after the date of execution hereof. Such bond shall:

(i) be written by a surety acceptable to Landlord in its sole discretion; (ii) extend from the Effective Date until the end of the second Lease Year; and (iii) provide that the Landlord may, from time to time, draw on the bond by the submission of a certified statement from the managing member stating: (a) that Tenant is in default of a monetary obligation under this Lease beyond any applicable notice and cure period; and (b) the amount necessary to cure such default; which shall be the amount which Landlord shall be entitled to draw. If such bond is not delivered within said 15 day period, then Landlord shall have the right to terminate this Lease on written notice to Tenant. Notwithstanding the foregoing, Tenant shall have the right to initially deliver a bond which

extends for a period of twenty-four (24) months after the Effective Date. In such event, Tenant shall deliver a replacement bond for the balance of the term specified in (ii) on or before thirty (30) days prior to the expiration of such 24 month period. If Tenant fails to deliver the replacement bond as aforesaid, then such failure shall be an event of default and Landlord shall have the right to immediately draw the full amount of the bond and retain the same until the replacement bond is delivered; subject to Landlord's right to use any of the drawn funds to cure any other monetary default by the Tenant that remains uncured after any applicable notice and cure period.

## 5. TAXES.

5.1. Payment. For each Tax Year from and after the Rent Commencement Date, the Tenant shall pay to the Landlord, in the manner provided herein, "Tenant's Share of Increased Taxes" which shall be computed by subtracting the Base Taxes from the Taxes for the Tax Year in question, and multiplying the difference by Tenant's Proportionate Share.

5.2. Proration. If only part of any Tax Year falls within the Term, the amount computed as Tenant's Share of Increased Taxes for such Tax Year under this subsection shall be prorated in proportion to the portion of such Tax Year falling within the Term (but the expiration of the Term before the end of a Tax Year shall not impair the Tenant's obligations hereunder to pay such prorated portion of Tenant's Share of Increased Taxes for that portion of such Tax Year falling within the Term, which amount shall be paid on demand).

5.3. Method of Payment. Tenant's Share of Increased Taxes shall be paid by the Tenant, at the Landlord's election (i) in advance, in equal monthly installments in such amounts as are estimated and billed for each Tax Year by the Landlord at the commencement of the Term and at the beginning of each successive Tax Year during the Term, each such installment being due on the first day of each calendar month or (ii) in a lump sum, following the Landlord's receipt of the tax bill for the Tax Year in question, and calculation of Tenant's Share of Increased Taxes with respect thereto. If the Landlord has elected that the Tenant pay Tenant's Share of Increased Taxes in installments, in advance, then, at any time during a Tax Year, the Landlord may re-estimate Tenant's Share of Increased Taxes and thereafter adjust the Tenant's monthly installments payable during the Tax Year to reflect more accurately Tenant's Share of Increased Taxes. Within forty-five (45) days after the Landlord's receipt of tax bills for each Tax Year, the Landlord will notify the Tenant of the amount of Taxes for the Tax Year in question and the amount of Tenant's Share of Increased Taxes thereof. Any overpayment or deficiency in the Tenant's payment of Tenant's Share of Increased Taxes for each Tax Year shall be adjusted between the Landlord and the Tenant; the Tenant shall pay the Landlord or the Landlord shall credit to the Tenant's account (or, if such adjustment is at the end of the Term, the Landlord shall pay the Tenant), as the case may be, within fifteen (15) days after such notice to the Tenant, such amount necessary to effect such adjustment. The Landlord's failure to provide such notice within the time prescribed above shall not relieve the Tenant of any of its obligations hereunder. Landlord shall pay all installments of taxes by their due date and shall provide Tenant with evidence of such payment upon request.

5.4. Taxes on Rent. In addition to Tenant's Share of Increased Taxes, the Tenant shall pay to the appropriate agency any sales, excise and other tax (not including, however, the Landlord's income and franchise taxes) levied, imposed or assessed by the State of Maryland or any political subdivision thereof or other taxing authority upon any Rent payable hereunder. The Tenant shall also pay, prior to the time the same shall become delinquent or payable with penalty, all taxes imposed on its inventory, furniture, trade fixtures, apparatus, equipment, leasehold improvements installed by the Tenant or by the Landlord on behalf of the Tenant and any other property of the Tenant.

5.5 Permitted Contests. If during the Term, but after the tax year used to calculate Base Taxes: (i) the Property is reassessed in a manner which results in an increase in the amount of Taxes applicable to the Property; and (ii) Landlord elects, in its sole discretion, not to contest such increase in Taxes, then the Tenant shall have the right, at its sole expense and only after prior written notice to and consultation with the Landlord, to contest such increase in Taxes by appropriate proceedings conducted with due diligence; provided, that any such contest by Tenant shall not relieve or postpone Tenant's obligation to pay Tenant's Share of Increased Taxes as provided for in Sections 5.1 - 5.3 above. If Tenant's contest results in the amount of Taxes applicable to the Property being increased above what would otherwise have been payable but for Tenant's contest, then Tenant shall be obligated to pay (in the manner specified in this Section 5) one hundred percent (100%) of the difference between such increased amount which is applicable to the entire Property, not just the Premises, and the amount which would otherwise have been payable; it being the parties intention that such increased amount not be passed through to either the Landlord or other tenants. The Landlord shall cooperate in such contest proceedings, but any costs or expenses incurred by Landlord shall be payable by Tenant as Additional Rent.

## 6. USE OF PREMISES AND COMMON AREAS.

6.1. Nature of Use. The Tenant shall use the Premises only for general office purposes (including computer system integration purposes), and for no other purpose whatsoever.

6.2. Compliance with Law and Covenants.

6.2.1 Tenant's Compliance. The Tenant, throughout the Term and at its sole expense, in its use and possession of the Premises, shall:

(a) comply promptly and fully with (i) all laws, ordinances, notices, orders, rules, regulations and requirements of all federal, state and municipal governments and all departments, commissions, boards and officers thereof, including but not limited to The Americans with Disabilities Act, 42 U.S.C. 12101 et. seq., and the ADA Disability Guidelines promulgated with respect thereto, and (ii) all requirements (Y) of the National Board of Fire Underwriters (or any other body now or hereafter constituted exercising similar functions) which are applicable to any or all of the Premises, or (Z) imposed by any policy of insurance covering any or all of the Premises and required by section 7 to be maintained by the Tenant, and (iii) all covenants and restrictions which may encumber the title to any or all of the Premises, all if and to the extent that any of such requirements relate to any or all of the Premises;

(b) (without limiting the generality of the foregoing provisions of this subsection) keep in force throughout the Term all licenses, consents and permits necessary for the lawful use of the Premises for the purposes herein provided;

(c) pay when due all personal property taxes, income taxes, license fees and other taxes assessed, levied or imposed upon the Tenant or any other person in connection with the Tenant's operation of its business upon the Premises or Tenant's use thereof in any other manner;

(d) not obstruct or interfere with the rights of other tenants; and

(e) not allow the transmission of any loud or objectionable sounds or noises from the Premises.

Notwithstanding anything to the contrary contained herein, with respect to The Americans with Disabilities Act and the ADA Disability Guidelines thereto, after substantial completion the Tenant shall be responsible for the entire Premises, including all Premises entry doors and signage (subject, however, to the provisions of subsection 10.2), and the Landlord shall be responsible for the Building and the Common Areas.

6.2.2 Landlord's Compliance. Notwithstanding anything to the contrary contained herein, the Landlord, throughout the Term, shall comply with (i) all laws, ordinances, notices, orders, rules, regulations and requirements of federal, state and municipal governments and all departments, commissions, board and officers thereof, including but not limited to The Americans with Disabilities Act, and (ii) all covenants and restrictions which may encumber the title to any or all of the Property.

### 6.3. Mechanics' Liens.

6.3.1. Without limiting the generality of the foregoing provisions of this section, the Tenant shall not create or permit to be created, and if created shall discharge or have released, any mechanics' or materialmen's lien arising while this Lease is in effect and affecting any or all of the Premises, the Building and/or the Property, and the Tenant shall not permit any other matter or thing whereby the Landlord's estate, right and interest in any or all of the Premises, the Building and/or the Property might be impaired. The Tenant shall defend, indemnify and hold harmless the Landlord against and from any and all liability, claim of liability or expense (including but not limited to that of reasonable attorneys' fees) incurred by the Landlord on account of any such lien or claim.

6.3.2. If the Tenant fails to discharge any such lien within fifteen (15) days after it first becomes effective against any of the Premises, the Building and/or the Property, then, in addition to any other right or remedy held by the Landlord on account thereof, the Landlord may (a) discharge it by paying the amount claimed to be due or by deposit or bonding proceedings, and/or (b) in any such event compel the prosecution of any action for the foreclosure of any such lien by the lienor and pay the amount of any judgment in favor of the lien or with interest, costs and allowances. The Tenant shall reimburse the Landlord for any amount paid by the Landlord to discharge any such lien and all expenses incurred by the Landlord in connection therewith, together with interest thereon at the Interest Rate from the respective dates of the Landlord's making such payments or incurring such expenses (all of which shall constitute Additional Rent).

6.3.3. Nothing in this Lease shall be deemed in any way

(a) to constitute the Landlord's consent or request, express or implied, that any contractor, subcontractor, laborer or materialman provide any labor or materials for any alteration, addition, improvement or repair to any or all of the Premises, the Building and/or the Property, or (b) to give the Tenant any right, power or authority to contract for or permit to be furnished any service or materials, if doing so would give rise to the filing of any mechanics' or materialmen's lien against any or all of the Premises, the Building and/or the Property, or the Landlord's estate or interest therein, or (c) to evidence the Landlord's consent that the Premises, the Building and/or the Property be subjected to any such lien.

6.4. Signs. The Tenant shall have no right to erect signs upon the Premises or the remainder of the Building or the Property unless the Landlord has given its express, written consent thereto, which consent may be withheld in the Landlord's sole discretion; provided, however, that Tenant shall have the right, at its sole cost and expense, to erect one exterior sign on the Building: (a) at a location mutually agreeable to Landlord and Tenant; and (b) subject to Landlord's approval as to type, size and color, which consent shall not be unreasonably withheld; subject, however, to Tenant's full compliance with

all laws, rules and regulations of governmental authorities having jurisdiction over such signage, and compliance with any restrictive covenants applicable to the Property (including the obtaining of any consents required by such covenants). The Landlord shall provide: (a) at the Landlord's sole expense, two (2) lines in the lobby directory of the Building identifying the Tenant or its business, at Landlord's sole expense; and (b) three (3) additional lines at Tenant's sole expense.

#### 6.5. License.

6.5.1. Grant of License. The Landlord hereby grants to the Tenant a non-exclusive license to use (and to permit its officers, directors, agents, employees and invitees to use), in the course of conducting business at the Premises, those areas and facilities of the Property which may be designated by the Landlord from time to time as common areas (portions of which may from time to time be relocated and/or reconfigured by the Landlord in its sole discretion so long as reasonable access to and from the Premises is maintained) (the "Common Areas"), which Common Areas include footways, sidewalks, Parking Areas, lobbies, elevators, stairwells, corridors, restrooms and certain exterior areas on the Property, subject, however, to the Rules and Regulations. "Parking Areas" shall mean those portions of the Common Areas which from time to time are designated by the Landlord for the parking of automobiles and other automotive vehicles while engaged in business upon the Premises (other than while being used to make deliveries to and from the Premises). The Tenant shall be permitted access to the Premises twenty-four (24) hours a day, seven (7) days a week.

6.5.2. Non-Exclusive License. Such license shall be exercised in common with the exercise thereof by the Landlord, the other tenants or occupants of the Property, and their respective officers, directors, agents, employees and invitees.

6.5.3. Parking Areas; Changes. The Landlord reserves the right to change the entrances, exits, traffic lanes, boundaries and locations of the Parking Areas. All Parking Areas and facilities which may be furnished by the Landlord in or near the Property, including any employee parking areas, truckways, loading docks, pedestrian sidewalks and ramps, landscaped areas and other areas and improvements which may be provided by the Landlord for the Tenant's exclusive use or for general use, in common with other tenants, their officers, agents, employees and visitors, shall at all times be subject to the Landlord's exclusive control and management, and the Landlord shall have the right from time to time to establish, modify and enforce reasonable rules and regulations with respect thereto. The Landlord shall have the right to (a) police the Common Areas, (b) establish and from time to time to change the level of parking surfaces, (c) close all or any portion of the Common Areas to such extent as, in the opinion of the Landlord's counsel, may be legally sufficient to prevent a dedication thereof or the accrual of any rights to any person or to the public therein, provided that such closure does not deprive Tenant of access to the Premises, (d) close temporarily all or any portion of the Parking Areas, (e) discourage non-tenant parking, other than Tenant's invitees; and (f) do and perform such other acts in and to the Common Areas as, in the use of good business judgment, the Landlord determines to be advisable with a view to the improvement of the convenience and use thereof by tenants, their officers, agents, employees and visitors. The Tenant shall cause its officers, agents and employees to park their automobiles only in such areas as the Landlord from time to time may designate by written notice to the Tenant as employee parking areas, and the Tenant shall not use or permit the use of any of the Common Areas in any manner which will obstruct the driveways or throughways serving the Parking Areas or any other portion of the Common Areas allocated for the use of others. The Tenant shall not keep parked vehicles on the Parking Areas overnight except for occasional non-recurring employee overnight parking. The Landlord shall not charge Tenant's employees for the use of the Parking Areas. The Tenant shall have the right to utilize no less than forty percent (40%) of the number of parking spaces located on the Property on the Effective Date; and Landlord shall designate five (5) of the aforementioned spaces as reserved spaces reasonably close to the Building entrance for Tenant's use; but Landlord shall not be required to monitor the use of such spaces.

6.5.4. Alterations. The Landlord reserves the right at any time and from time to time (i) to change or alter the location, layout, nature or arrangement of the Common Areas or any portion thereof, including but not limited to the arrangement and/or location of entrances, passageways, doors, corridors, stairs, lavatories, elevators, Parking Areas, and other public areas of the Building, and (ii) to construct additional improvements on the Property and make alterations thereof or additions thereto and build additional stories on or in any such buildings adjoining the same; provided, however, that no such change or alteration shall deprive the Tenant of access to the Premises, or otherwise materially interfere with Tenant's use of the Premises.

6.5.5. Use of Common Areas.

(a) The Landlord shall at all times have full and exclusive control, management and direction of the Common Areas. Without limiting the generality of the foregoing, the Landlord shall maintain and operate lighting facilities on all of the Common Areas.

(b) The Tenant shall use that area designated by the Landlord as the refuse collection area, and shall not place or maintain anywhere within the Property, other than within the area which may be designated by Landlord from time to time as such refuse collection area, any trash, garbage or other items, except as may otherwise be expressly permitted by this Lease.

(c) In its use of the Common Areas, the Tenant shall take reasonable efforts to prevent its agents, employees, invitees, visitors and guests from taking any of the following actions:

(i) the parking or storage of automobiles, or other automotive vehicles anywhere within the Property if such vehicles lack current, valid license plates, or other than in the Parking Areas (and the individual parking spaces from time to time designated therein), or anywhere within the Property if the body, windows or other exterior portions of such vehicles are in an obvious state of damage or disrepair;

(ii) the performance of any body work, maintenance or other repairs to vehicles, or the painting of any vehicle, anywhere within the Premises or the rest of the Property; or

(iii) the parking or storage of any trucks or vans weighing over three-quarters (3/4) of one ton, except for purposes of temporary loading and unloading and occasional overnight parking.

6.6. Liability of Landlord. The Landlord and its agents and employees shall not be liable to the Tenant or any other person whatsoever (a) for any injury to person or damage to property caused by any defect in or failure of equipment, pipes, wiring or broken glass, or the backing up of any drains, or by gas, water, steam, electricity or oil leaking, escaping or flowing into the Premises, or (b) for any loss or damage that may be occasioned by or through the acts or omissions of any other tenant of the Property or of any other person whatsoever, other than for any injury or loss resulting from the gross negligence or intentional wrongdoing of the Landlord's duly authorized employees or agents.

6.7. Floor Load. The Tenant shall not place a load upon any floor of the Premises exceeding the floor load per square foot area which such floor was designed to carry. The Landlord reserves the right to prescribe the weight and position of all safes and other heavy equipment, and to prescribe the reinforcing necessary, if any, which in the opinion of the Landlord may be required under the circumstances, such reinforcing to be at the Tenant's sole



expense. Business machines and mechanical equipment shall be placed and maintained by the Tenant in settings sufficient in the Landlord's judgment to absorb and prevent vibration and noise, and the Tenant shall, at its sole expense, take such steps as the Landlord may direct to remedy any such condition.

6.8. Hazardous Materials. The Tenant warrants and agrees that the Tenant shall not cause or permit any Hazardous Materials to be brought upon, kept or used in or about the Premises by the Tenant, its agents, employees, contractors or invitees. If the Tenant breaches the obligations stated in the preceding sentence, then the Tenant shall indemnify, defend and hold the Landlord harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities or losses (including, without limitation, diminution in value of the Premises, the Building and the Property generally, damages for the loss or restriction on use of rentable or usable space or of any amenity of the Building or the Property generally, damages from any adverse impact on marketing of space in the Building, and sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees) which arise during or after the Term as a result of such contamination. This indemnification of the Landlord by the Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any governmental authority because of Hazardous Material present in the soil or ground water or under the Premises or the Property generally. As used herein (i) "Environmental Laws" means the Clean Air Act, the Resource Conservation Recovery Act of 1976, the Hazardous Material Transportation Act, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, the Resource Conservation and Recovery Act, the Toxic Substances Control Act, the Occupational Safety and Health Act, the Consumer Product Safety Act, the Clean Water Act, the Federal Water Pollution Control Act, the National Environmental Policy Act, Md. Nat. Res. Code Ann., Title 8, and Md. Env. Code Ann., Title 7, as each of the foregoing shall be amended from time to time, and any similar or successor laws, federal, state or local, or any rules or regulations promulgated thereunder; and (ii) "Hazardous Materials" means and includes asbestos; "oil, petroleum products and their by-products;" "hazardous substances;" "hazardous wastes" or "toxic substances," as those terms are used in Environmental Laws; or any substances or materials listed as hazardous or toxic in the United States Department of Transportation, or by the Environmental Protection Agency or any successor agency under any Environmental Laws. The Landlord represents and warrants that to its knowledge no Hazardous Materials are located on the Property or effect the Premises and that the Property is not now in violation of any Environmental Laws. Landlord shall defend, indemnify and save Tenant harmless from any claims, fines, penalties, liabilities, losses, damages, costs and expenses (including reasonable attorney's fees, and other costs of defense) which arise from the violation of any Environmental Laws or any leak, spill, release, discharge, disposal or emission of Hazardous materials that has occurred on the Premises or the Property prior to the Commencement Date, or caused subsequent thereto by the Landlord, its agents, employees or invitees, that does not result from Tenant's breach of its obligations under this Section 6.8.

## 7. INSURANCE AND INDEMNIFICATION.

7.1. Insurance. At all times from and after the earlier of (i) the entry by the Tenant into the Premises, and (ii) the Rent Commencement Date, the Tenant shall take out and keep in full force and effect, at its expense:

- (a) commercial general liability insurance, including Blanket Contractual Liability, Broad Form Property Damage, Completed Operations/Products Liability, Personal Injury Liability, Premises Medical Payments, Interest of Employees as additional insureds, Incidental Medical Malpractice and Broad Form General Liability Endorsement, with a combined single limit of not less than One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) in the aggregate;
- (b) special form property insurance (including but not limited to burglary and theft insurance and plate glass insurance) written at full replacement cost value and with replacement cost endorsement in an amount not less than One Million Dollars (\$1,000,000.00) covering all of Tenant's property, including, without limitation, inventory, trade fixtures, floor coverings, furniture, electronic data processing equipment and any other property removable by Tenant under the provisions of this Lease, except for improvements which are part of the Landlord's Work;
- (c) worker's compensation or similar insurance in form and amounts required by law; and
- (d) such other insurance in such types and amounts as Landlord may reasonably require.

7.2. Tenant's Contractor's Insurance. The Tenant shall require any contractor of the Tenant performing physical facilities-related work in, on or about the Premises on behalf of Tenant to take out and keep in full force and effect, at no expense to the Landlord:

- (a) commercial general liability insurance, including Contractor's Liability coverage, Blanket Contractual Liability coverage, Broad Form Property Damage Endorsement, Contractor's Protective Liability, Completed Operations/Products Liability (Completed Operations/Products Liability coverage to be provided for at least two (2) years after final completion of work), Personal Injury, Premises Medical Payments, Interest of Employees as additional insureds, Incidental Medical Malpractice and Broad Form General Liability Endorsement, in an amount not less than One Million Dollars (\$1,000,000) combined single limit per occurrence and Two Million Dollars (\$2,000,000) in the aggregate;
- (b) comprehensive automobile liability insurance, with a combined single limit of not less than One Million Dollars (\$1,000,000) covering all owned, non-owned or hired automobiles to be used by the contractor;
- (c) worker's compensation or similar insurance in form and amounts required by law; and
- (d) employers liability coverage, including All States Endorsement, in an amount not less than One Million Dollars (\$1,000,000).

### 7.3. Policy Requirements.

7.3.1. The company or companies writing any insurance which the Tenant is required to take out and maintain or cause to be taken out or maintained pursuant to subsections 7.1 and/or 7.2, shall be licensed to do business in the State of Maryland and have a rating of at least A or better and a financial size rating of XII or larger from Best's Key Rating Guide and Supplemental Service (or comparable rating from a comparable insurance rating service). Public liability and all-risk casualty insurance policies evidencing such insurance shall name the Landlord, and their designees (including, without limitation, any Mortgagee) as additional insureds, shall be primary and noncontributory, and shall also contain a provision by which the insurer agrees that such policy shall not be cancelled, materially changed, terminated or not renewed except after thirty (30) days' advance written notice to the Landlord and/or such designees. All such policies, or certificates thereof, shall be deposited with the Landlord promptly upon commencement of the Tenant's obligation to procure the same. None of the insurance which the Tenant is required to carry and maintain or cause to be carried or maintained pursuant to subsections 7.1 and/or 7.2 shall contain deductible provisions in excess of Two Thousand Five Hundred Dollars (\$2,500), unless approved in writing in advance by the Landlord. If the Tenant fails to perform any of its obligations pursuant to this section 7, the Landlord may perform the same and the cost thereof shall be payable by the Tenant as Additional Rent upon the Landlord's demand therefor.

7.3.2. The Landlord and the Tenant agree that on January 1 of the second (2nd) full calendar year during the Term and on January 1 of every second (2nd) calendar year thereafter, the Landlord will have the right to request commercially reasonable changes in the character and/or amounts of insurance required to be carried by the Tenant pursuant to the provisions of this section 7, and the Tenant shall comply with any requested change in character and/or amount within thirty (30) days after the Landlord's request therefor.

### 7.4. Indemnities by Tenant and Landlord.

7.4.1. Subject to the provisions of Sections 7.4.3 and 7.8, the Tenant, for itself and its successors and assigns, to the extent permitted by law, shall defend, indemnify and hold harmless the Landlord, the Landlord's agents, representatives and employees, and any Mortgagee against and from any and all liability or claims of liability by any person asserted against or incurred by the Landlord and/or such agent or Mortgagee in connection with

(i) the use, occupancy, conduct, operation or management of the Premises by the Tenant or any of its agents, contractors, servants, employees, licensees, concessionaires, suppliers, materialmen or invitees during the Term; (ii) any work or thing whatsoever done or not done on the Premises during the Term; (iii) any breach or default in performing any of the obligations under the provisions of this Lease and/or applicable law by the Tenant or any of its agents, contractors, servants, employees, licensees, suppliers, materialmen or invitees during the Term; (iv) any negligent, intentionally tortuous or other act or omission by the Tenant or any of its agents, contractors, servants, employees, licensees, concessionaires, suppliers, materialmen or invitees during the Term; or (v) any injury to or death of any person or any damage to any property occurring upon the Premises (whether or not such event results from a condition existing before the execution of this Lease or resulting in the termination of this Lease), and from and against all costs, expenses and liabilities incurred in connection with any claim, action, demand, suit at law, in equity or before any administrative tribunal, arising in whole or in part by reason of any of the foregoing (including, by way of example rather than of limitation, the fees of attorneys, investigators and experts), all regardless of whether such claim, action or proceeding is asserted before or after the expiration of the Term or any earlier termination of this Lease.

7.4.2. If any such claim, action or proceeding is brought against the Landlord and/or any agent or Mortgagee, the Tenant, if requested by the Landlord or such agent or Mortgagee, and at the Tenant's expense, promptly shall resist or defend such claim, action or proceeding or cause it to be resisted or defended by

an insurer. The Landlord, at its option, shall be entitled to participate in the selection of counsel, settlement and all other matters pertaining to such claim, action or proceeding, all of which shall be subject, in any case, to the prior written approval of the Landlord.

7.4.3. Subject to the provisions of subsection 7.8, the Landlord hereby agrees for itself and its successors and assigns to indemnify and save the Tenant, its agents, representatives and employee, harmless from and against any liability or claims of liability arising solely out of the gross negligence or intentional acts and omissions of the Landlord, its agents or employees.

7.5. Landlord Not Responsible for Acts of Others. The Landlord shall not be responsible or liable to the Tenant, or to those claiming by, through or under the Tenant, for any loss or damage which may be occasioned by or through the acts or omissions of persons occupying or using space adjoining the Premises or any part of the premises adjacent to or connecting with the Premises or any other part of the Building or the Property, or for any loss or damage resulting to the Tenant (or those claiming by, through or under the Tenant) or its or their property, from (a) the breaking, bursting, stoppage or leaking of electrical cable and/or wires, or water, gas, sewer or steam pipes, (b) falling plaster, or (c) dampness, water, rain or snow in any part of the Building. To the maximum extent permitted by law, the Tenant agrees to use and occupy the Premises, and to use such other portions of the Property as the Tenant is herein given the right to use, at the Tenant's own risk.

7.6. Landlord's Insurance. During the Term, the Landlord shall maintain: (a) all risk insurance on the Property at full replacement cost against loss or damage by fire and all of the hazards included in the extended coverage endorsement, (b) commercially reasonable amounts of comprehensive liability and property damage insurance with respect to the Property and all improvement other than those required to be insured by Tenant or other tenants, against claims for personal injury or death, or property damage suffered by others occurring in, on or about the Property, and (c) any other insurance, in such form and in such amounts as are deemed reasonable by the Landlord, including, without limitation, rent continuation and business interruption insurance, theft insurance and workers' compensation, flood and earthquake, and boiler and machinery insurance. The costs and expenses of any and all insurance carried by the Landlord pursuant to the provisions of this subsection 6.6 shall be deemed a part of Operating Costs.

7.7. Increase in Insurance Premiums. The Tenant shall not do or suffer to be done, or keep or suffer to be kept, anything in, upon or about the Premises, the Building or the Property which will contravene the Landlord's policies of hazard or liability insurance or which will prevent the Landlord from procuring such policies from companies acceptable to the Landlord. If anything done, omitted to be done, or suffered by the Tenant to be kept in, upon or about the Premises, the Building or the Property shall cause the rate of fire or other insurance on the Premises, the Building or the Property to be increased beyond the minimum rate from time to time applicable to the Premises or to any such other property for the use or uses made thereof, the Tenant shall either:

(a) cease or modify such activity so as to eliminate such increase in insurance rate; or (b) pay to the Landlord, as Additional Rent, the amount of any such increase upon the Landlord's demand therefor.

7.8. Waiver of Right of Recovery. To the extent that any loss or damage to the Premises, the Building the Property, any building, structure or other tangible property, or resulting loss of income, or losses under workers' compensation laws and benefits, are covered by insurance, neither party shall be liable to the other party or to any insurance company insuring the other party (by way of subrogation or otherwise), even though such loss or damage might have been occasioned by the negligence of such party, its agents or employees; provided, however, that if, by reason of the foregoing waiver, either party shall be unable to obtain any such insurance, then such waiver shall be deemed not to have been made by such party. Notwithstanding the

foregoing, in the event that such waiver of subrogation shall not be available to either party except through the payment of additional premium therefor, the other party shall pay such additional premium.

8. SERVICES AND UTILITIES. As long as an Event of Default shall not exist, the Landlord shall provide the following services and utilities:

(a) nightly janitorial services Monday through Friday in and about the Premises, which shall include normal cleaning and upkeep services, normal removal of trash and rubbish, and vacuuming of carpeting;

(b) electric current for lighting and the operation of HVAC and office equipment;

(c) two (2) elevators to be used in common with other tenants and available on call twenty-four hours a day, seven days a week, provided that such service may be reduced to one (1) elevator during periods of repairs, construction or tenant move-in.

(d) restroom facilities and necessary lavatory supplies, including hot and cold running water at the points of supply, as provided for general use of all tenants in the Building; and

(e) the provision and installation of replacement tubes for all Building Standard light fixtures.

As use herein, "normal business hours" shall be deemed to mean the periods from 8:00 a.m. until 6:00 p.m. on business days (Monday through Friday except legal holidays) and from 8:00 a.m. until 1:00 p.m. on Saturdays.

The Landlord reserves the right to reduce or discontinue, upon five (5) days' prior written notice to the Tenant, any such services and utilities at any time after the occurrence of an Event of Default. The Landlord shall not be liable for any damages resulting from or arising out of any such termination or interruption, and the same shall not constitute a termination of this Lease or an eviction of the Tenant. Any failure by the Landlord to furnish any of the foregoing services or utilities, resulting from circumstances beyond the Landlord's reasonable control or from interruption of such services due to repairs or maintenance, shall not render the Landlord liable in any respect for damages to either person or property, nor be construed as an eviction of the Tenant, nor cause an abatement of rent hereunder, nor relieve the Tenant from any of its obligations hereunder. Notwithstanding the foregoing, in the event of an interruption in utilities or services for a period greater than seven (7) consecutive days, that renders any portion of the Premises unusable for the normal conduct of Tenant's business, then all Base Rent and Additional Rent payable hereunder with respect to such portion of the Premises which is unusable shall thereafter be abated retroactively to the first day of interruption (but only to the extent such business interruption is not otherwise covered by insurance carried by Tenant), and such abatement shall continue until full use of such portion of the Premises is restored to Tenant. Landlord shall endeavor in good faith to promptly commence and diligently pursue to completion any work reasonably necessary to restore the utility or service so interrupted. If any public utility or governmental body shall require the Landlord or the Tenant to restrict the consumption of any utility or reduce any service for the Premises or the Building, the Landlord and the Tenant shall comply with such requirements, whether or not the services and utilities referred to in this section 8 are thereby reduced or otherwise affected, without any liability on the part of the Landlord to the Tenant or any other person or any reduction or adjustment in rent payable hereunder. The Landlord and its agents shall be permitted reasonable access to the Premises for the purpose of installing and servicing systems within the Premises deemed necessary by the Landlord to provide the services and utilities referred to in this section 8 to the Tenant and other tenants in the Building.

With respect to the electrical service for normal business usage supplied to the Premises pursuant to subsection (b) of this Section 8, the Tenant's use of electrical service furnished by the Landlord will be subject to the following limitations:

(i) Design Load. The Tenant's lighting will not have a design load greater than an average of two (2) watts per square foot and four (4) watts per square foot electrical power. Collectively, the Tenant's equipment and lighting will not have an electrical design load greater than the lesser of actual current Building capacity, or an average of six (6) watts per square foot. If the Building's electrical service does not currently have sufficient capacity to permit Tenant to draw an average of six (6) watts per square foot, then the parties shall implement a mutually acceptable course of action to increase Building capacity.

(ii) Primary Consumption. The Base Rent set forth in Section 4.1 hereof includes an allowance of One and 75/100ths Dollars (\$1.75) per square foot of the Premises for electrical service (the "Electrical Expense Stop") for HVAC, lighting and electrical power for the Premises and such of the Common Areas as are located on the second floor of the building (collectively, the "Electrical Service Area"). In connection with the construction of the Landlord's Work and Space Improvements, Landlord and Tenant shall undertake the installation of a submeter to measure all electrical service for the Electrical Service Area. The cost of such installation shall be allocated as follows: (a) Landlord shall pay the first Seven Hundred Fifty Dollars (\$750.00); (b) Tenant shall pay, or reimburse Landlord for the next Seven Hundred Fifty Dollars (\$750.00); and (c) the parties shall each pay (or reimburse Landlord) one-half of any amount in excess of (b). If the cost of the electrical service supplied to the Electrical Service Area during any calendar quarter, prorated for partial calendar quarters, exceeds \$.4375 per square foot, then Tenant shall reimburse the Landlord for the cost of such excess service. Notwithstanding the foregoing, Tenant shall not be required to pay any such excess costs for any calendar quarter if the excess costs for such quarter, together with the electrical service costs for prior quarters, are less than the product of \$.4375 times the number of calendar quarters that have expired in the current year. By way of example, but not of limitation, if the cost of electrical service for the first quarter of the Lease year is \$.40 per square foot and the cost of electrical service for the second quarter is \$.4750, then the Tenant shall not be required to pay the difference between \$.4375 and \$.4750 for excess electrical service costs for said second calendar quarter. The Landlord will bill the Tenant no more frequently than quarterly for such excess service and the Tenant will pay each such invoice within thirty (30) days following the Tenant's receipt thereof. The Tenant will have the right for a period of thirty (30) days following receipt of a statement for such services to inspect at reasonable times and places the Landlord's records forming the basis for such statements. Within sixty (60) days after the end of each calendar year during the Term, the Landlord shall compute the annual cost of electrical service for the Electrical Service Area for the preceding calendar year, prorated for any partial calendar year, and shall submit to Tenant a statement certified as accurate by Landlord setting forth such cost and the amount of quarterly payments made by the Tenant during the preceding calendar year (the "Electrical Expense Statement"). If the cost of electrical service stated in the Electrical Expense Statement is less than the electrical Expense Stop (prorated for any partial calendar year), then no adjustment shall

be made unless during the preceding calendar year the Tenant had made a quarterly payment for excess service pursuant to the foregoing provisions of this subsection; in which event the amount of such prior payment shall be credited to the Tenant's next accruing quarterly payment (or payments) for excess electrical service. If the cost of electrical service stated in the Electrical Expense Statement is greater than the Electrical Expense Stop (prorated for any partial calendar year), then the amount of all quarterly payments made by the Tenant during the preceding calendar year shall be subtracted from such excess and the balance remaining due to Landlord, if any, shall be paid by Tenant with its next payment of Base Rent. If, however, the total amount of quarterly payments made by Tenant during the preceding calendar year are greater than the difference between the actual cost of electrical service and the Electrical Expense Stop, then the amount by which Tenant's quarterly payments exceed such difference shall be credited to the Tenant's next accruing quarterly payment (or payments) for excess electrical service.

(iii) Excess Consumption. If the Tenant's consumption of electrical service exceeds the design loads prescribed by subparagraph (i) above, the Tenant will remove such equipment and/or design lighting to achieve such compliance within ten (10) days after receiving a request do so from the Landlord. Alternatively, such equipment and/or lighting may remain in the Premises, subject to the following: (a) the Tenant will pay to the Landlord as Additional Rent, within thirty (30) days after the Landlord's delivery of an invoice therefor, all reasonable costs of installation and maintenance of wiring, air conditioning and other items required by the Landlord, in the Landlord's reasonable discretion, to accommodate the Tenant's excess design loads and capacities; (b) the Tenant will pay to the Landlord as Additional Rent, within thirty (30) days after the delivery of an invoice therefor, the cost of a professional engineer's services and survey to determine the excess demand and consumption of electrical service;

(c) the Tenant will pay to the Landlord as Additional Rent, within thirty (30) days after the Landlord's delivery of an invoice therefor, the cost of the excess demand and consumption of electrical service at actual rates assessed by the public utility serving the Building, which reimbursement to the Landlord will be in accordance with any applicable laws; and (d) not less than thirty (30) days prior written notice delivered to the Tenant, discontinue the availability of such extraordinary electrical service, provided such electrical service is available directly to the Tenant from the public utility serving the Building. If the Landlord gives any such notice, the Tenant will contract directly with the public utility serving the Building to supply such electrical service to the Premises.

## 9. REPAIRS AND MAINTENANCE.

9.1. Landlord's Duty to Maintain Structure. The Landlord shall maintain or cause to be maintained in good operating condition: (a) the Building

(outside the Premises except to the extent otherwise provided in Section 9.2.1) and Common Areas mechanical, electrical and plumbing systems; and (b) the structure of the Building and shall be responsible for all structural repairs to the exterior walls, load bearing elements, foundations, roofs, windows, structural columns and structural floors with respect thereto, and the Landlord shall make all required repairs thereto, provided, however, that if the necessity for such repairs shall have arisen, in whole or in part, from the negligence or willful acts or omissions of the Tenant, its agents, concessionaires, officers, employees, licensees, invitees or contractors, or by any unusual use of the Premises by the Tenant, then the Landlord may collect the cost of such repairs, as Additional Rent, upon demand.

## 9.2. Tenant's Duty to Maintain Premises.

9.2.1. Except as provided in subsection 9.1, the Tenant shall keep and maintain the Premises and all fixtures, equipment, light fixtures, doors (including, but not limited to, entrance doors to the Premises), door hardware, carpeting, floor and wall tiles, window and door glass, security systems, ventilation fans, window and door treatments (including, but not limited to, blinds, shades, screens and curtains), plumbing fixtures and drains, ceiling tiles and grids, counters, shelving, light switches, base cove and moldings, locks, kitchen equipment and appliances (including, but not limited to, tissue dispensers, handrails, mirrors, cabinets, disposals, dishwashers, sinks, faucets, drinking fountains and water purifiers) located therein in a good, safe, clean and sanitary condition, ordinary wear and tear excepted, and in compliance with all legal requirements with respect thereto. Except as provided in subsection 9.1, all injury, breakage and damage to the Premises (and to any other part of the Building and/or the Property, if caused by any act or omission of the Tenant, its agents, concessionaires, officers, employees, licensees, invitees or contractors) shall be repaired or replaced by the Tenant at its expense (to the extent not covered by Landlord's insurance). Except for Building systems serving all or other tenants, the Tenant shall keep and maintain all pipes and conduits and all mechanical, electrical and plumbing systems installed or contained within the Premises which serve the Premises in good, safe, clean and sanitary condition and shall make all required repairs thereto; provided, however, that the Landlord shall maintain and repair the HVAC system which exclusively serves the Premises and the bathrooms and transformers located on the second floor of the Building. In the event the Landlord agrees, upon request by the Tenant, to repair or maintain any of the items listed in this subsection 9.2.1, the Tenant shall pay all costs and expenses in connection with the Landlord's repair or maintenance services, including, but not limited to, wages, materials and mileage reimbursement. Tenant shall have the option of making said repairs with: (1) its own employees; (2) a service or repair organization acceptable to the Landlord or Landlord's management agent; or (3) Landlord's in house or contract management staff. Tenant will promptly reimburse Landlord for costs Landlord incurred, plus 5%, in making or arranging for the making of the repair.

9.2.2. The Tenant shall keep the Premises in a neat, clean and orderly appearance to a standard of cleanliness and hygiene reasonably satisfactory to the Landlord. The Tenant also shall maintain the Premises free of all pests. The Tenant shall surrender the Premises at the expiration of the Term or at such other time as the Tenant may vacate the Premises in as good condition as when received, except for (i) ordinary wear and tear, (ii) damage by casualty (other than such damage by casualty which is caused, in whole or in part, by the negligence or willful act or omissions of the Tenant, its agents, officers, employees, licensees, invitees or contractors and which is not wholly covered by the Landlord's hazard insurance policy), or (iii) acts of God.

## 10. IMPROVEMENTS.

10.1. By Landlord. The Landlord shall make the improvements to the Premises which are set forth in the plans and specifications listed in Exhibit B (the "Landlord's Work"). The Landlord shall also make the improvements to the Premises (the "Space Improvements") which are to be set forth on plans and specifications to be submitted by the Tenant to the Landlord for its approval (the "Tenant's Plans and Specifications"). The Tenant shall submit the Tenant's Plans and Specifications to the Landlord on or before February 27, 1998, and within five (5) days after receipt of the Tenants Plans and Specifications the Landlord shall provide to the Tenant any comments the Landlord may have to the Tenant's Plans and Specifications. Within five (5) days after the receipt of the Landlord's comments, the Tenant shall cause the Tenant's Plans and Specifications to be: (a) revised to incorporate the Landlord's comments; and (b) submitted to Baltimore County for its approval. The Landlord and the Tenant shall work cooperatively to cause the Tenant's Plans and Specifications to be approved as promptly as possible. The Landlord shall not unreasonably withhold its approval of the Tenant's Plans and Specifications. The Landlord shall pay for the cost of such Space



Improvements up to Seventeen and 50/100ths Dollars (\$17.50) per rentable square foot of the Premises; provided, that Landlord shall not be required to pay more than \$1.50 of said \$17.50 for electrical, computer and telephone wiring of modular furniture. In the event the cost of the Space Improvements, together with the design fees and the cost of the construction drawings in connection therewith, exceeds \$17.50 per square foot, the Tenant shall pay to the Landlord the amount incurred by the Landlord in excess thereof, which excess amount shall be paid by the Tenant to the Landlord within fifteen (15) days after the Landlord notifies the Tenant of such excess cost and supplies the Tenant with appropriate documentation showing excess cost.

10.1.1 Construction Agreement. On or before March 20, 1998, the Landlord and the Tenant will select a contractor (the "General Contractor") for the construction of the Space Improvements and the Landlord will prepare and submit to the contractor a construction agreement acceptable to Landlord and Tenant (the "Construction Agreement"). To select the General Contractor the Landlord and the Tenant will each provide to the other a list of no more than two (2) potential contractors to the other party on or before February 20, 1998. On or before March 9, 1998, the Landlord and the Tenant will then extend an invitation to bid on the construction of the Space Improvements to no fewer than three (3) of the potential contractors which will be jointly selected by the Landlord and the Tenant from the parties' combined list of potential contractors. Firm bids from the three contractors selected shall be due on or before March 16, 1998. Within four (4) business days after the bids are received, the Landlord and the Tenant will examine the bids and jointly select the bid which will most accurately achieve the purposes and interests of both the Landlord and the Tenant, even if such bid is not the lowest bid.

10.1.2 Construction. The Construction Agreement shall provide for the commencement of construction on or before April 1, 1998. If the commencement of construction of the Space Improvements has not occurred by May 1st, then the Tenant shall have the right for a period commencing on May 1st and ending at midnight on May 6th, to terminate this Lease on written notice to the Landlord delivered to Landlord by midnight on May 6th, and in such event this Lease shall be null and void and neither party shall have any further obligation hereunder except as hereinafter set forth in this Section 10.1.2. Notwithstanding the foregoing, if the failure to commence construction by May 1, 1998: (a) results from the Tenant's failure to comply with the schedule set forth in Section 10.1.1 above; or (b) is otherwise attributable to the actions or omissions of the Tenants, including, without limitation, the issuance of change orders by Tenant; then said May 1st and May 6th dates shall be extended by one day for each day of delay in the commencement of construction beyond May 1st resulting therefrom. In order to expedite construction of the Space Improvements, the Tenant may by written notice delivered to the Landlord on or before March 1, 1998, authorize and direct the Landlord to proceed with the demolition of all or a portion of the improvements located in the Premises on the Effective Date with such forces as the Landlord may elect, in its sole discretion. If Tenant so authorizes and directs the Landlord to proceed with demolition and thereafter terminates this Lease pursuant to the foregoing provisions of this Section 10.1.2, then within two (2) business days after such termination Tenant shall pay Landlord all costs and expenses of demolition incurred by the Landlord up to, but not exceeding, Fifty Thousand Dollars (\$50,000.00). Tenant's payment shall be a condition subsequent to the effectiveness of Tenant's termination of this Lease. Notwithstanding anything contained in this Lease to the contrary, substantial completion of the Space Improvements shall not be contingent on the delivery or installation or any of Tenant's modular furniture, or other fixtures or equipment; and any delay in achieving substantial completion which results from or arises out of such failure of delivery or installation shall be attributable to the Tenant for purposes of Section 3.1 hereof.

10.1.3 Change Orders; Inspection. Any change orders for construction of Space Improvements, work in addition to the work shown in the Tenant's Plans and Specifications, deletion of work shown in the Tenant's Plans and Specifications, the use of any construction materials for construction of Space Improvements other than as provided in the Tenant's Plans and Specifications will be subject to the prior written

approval of the Landlord and the Tenant. Any change order must be presented to the other party in writing. Such approval by each of the parties will not be unreasonably withheld or delayed.

10.1.4 Asbestos. If asbestos is uncovered during the construction of the Space Improvements, then the Landlord shall remediate the same in compliance with applicable laws at Landlord's sole expense; and the cost of such remediation shall not be charged against the amount paid by Landlord for Space Improvements pursuant to Section 10.1 hereof.

10.2. Landlord Approval. The Tenant shall not make any alteration, improvement or addition (collectively "Alterations") to the Premises without first (a) presenting to the Landlord plans and specifications therefor and obtaining the Landlord's written consent thereto (which shall not, in the case of (i) non-structural interior Alterations (excluding systems furniture alteration and non-structural alterations less than \$7,500 in each instance), or (ii) Alterations which would not affect any electrical, mechanical, plumbing or other Building systems, be unreasonably withheld so long as such Alterations will not violate applicable law or the provisions of this Lease, or impair the value of the Premises, the Building or the rest of the Property or be visible from the exterior of the Building) and (b) obtaining any and all governmental permits or approvals for such Alterations, which are required by applicable law; provided, that (i) any and all contractors or workmen performing such Alterations must first be approved by the Landlord, (ii) all work is performed in a good and workmanlike manner in compliance with all applicable codes, rules, regulations and ordinances, and (iii) the Tenant shall restore the Premises to its condition immediately before such Alterations were made, by not later than the date on which the Tenant vacates the Premises or the Termination Date, whichever is earlier. The Tenant, at its own expense, shall repair promptly any damage to the Building caused by bringing therein any property for its use, or by the installation or removal of such property, regardless of fault or by whom such damage is caused. As a condition for approving any Alterations on the Premises by the Tenant, the Landlord shall have the right to require the Tenant, or the Tenant's contractor, to furnish a bond in an amount equal to the estimated cost of construction with a corporate surety approved by the Landlord for (i) completion of the construction and (ii) indemnification of the Landlord and the Tenant, as their interests may appear, against liens for labor and materials, which bond shall be furnished before any work has begun or any materials are delivered.

10.3. Acceptance of Possession. The Tenant shall for all purposes of this Lease be deemed to have accepted the Premises and the Building and to have acknowledged them to be in the condition called for hereunder except with respect to those punch list items and defects of which the Tenant notifies the Landlord within thirty (30) days after the Rent Commencement Date; and except with respect to latent defects so long as Tenant notifies Landlord in writing within thirty (30) days after discovering any such latent defects.

10.4. Fixtures. Any and all improvements, repairs, alterations and all other property attached to, used in connection with or otherwise installed within the Premises by the Landlord or the Tenant shall become the Landlord's property without payment therefor by the Landlord, immediately on the completion of their installation; provided that any machinery, equipment or fixtures installed by the Tenant and used in the conduct of the Tenant's trade or business (rather than to service the Premises, the Building or the Property generally) and not part of the Building Service Equipment shall remain the Tenant's property; but further provided that if any leasehold improvements made by the Tenant replaced any part of the Premises, such leasehold improvements that replaced any part of the Premises shall be and remain the Landlord's property.

11. LANDLORD'S RIGHT OF ENTRY. The Landlord and its authorized representatives shall be entitled to enter the Premises without interference with Tenant's business operation, at any reasonable time during the Tenant's usual business hours, after giving the Tenant at least twenty-four (24) hours' oral or written notice thereof, (a) to inspect the Premises, (b) to exhibit the Premises (i) to any existing or prospective purchaser or Mortgagee thereof, or (ii) during the last twelve (12) months of the Term (or at any time if Tenant is in default after notice and applicable cure periods) to any prospective tenant thereof, provided that in doing so the Landlord and each such invitee observes all reasonable safety standards and procedures which the Tenant may require, and (c) to make any repair thereto and/or to take any other action therein which the Landlord is permitted to take by this Lease or applicable law (provided, that in any situation in which, due to an emergency or otherwise, the Landlord reasonably believes the physical condition of the Premises, the Building or any part of the Property would be unreasonably jeopardized unless the Landlord were to take such action immediately, the Landlord shall not be required to give such notice to the Tenant and may enter the same at any time). Nothing in this section shall be deemed to impose any duty on the Landlord to make any such repair or take any such action which it is not otherwise obligated to make or take under the terms of that Lease, and the Landlord's performance thereof shall not constitute a waiver of the Landlord's right hereunder to have the Tenant perform such work. The Landlord shall not in any event be liable to the Tenant for any inconvenience, annoyance, disturbance, loss of business or other damage sustained by the Tenant by reason of the making of such repairs, the taking of such action or the bringing of materials, supplies and equipment upon the Premises during the course thereof, and the Tenant's obligations under this Lease shall not be affected thereby; provided, however, that if Tenant is unable to use all of a substantial portion of the Premises for forty-five (45) days for its business purposes, Tenant shall be deemed to be constructively evicted from the Premises or the relevant portion thereof, and Tenant's obligation to pay Base Rent shall be abated from the date all or such relevant portion of the Premises becomes unusable until rendered usable again.

## 12. DAMAGE OR DESTRUCTION.

12.1. Option to Terminate. If during the Term either the Premises or any portion of the Building or the Property are substantially (meaning more than 20% of the floor area of either) damaged or destroyed by fire or other casualty, the Landlord shall restore the Premises as soon thereafter as is reasonably possible to their condition on the date of completion of the Landlord's Work, taking into account any delay experienced by the Landlord in recovering the proceeds of any insurance policy payable on account of such damage or destruction and in obtaining any necessary permits. If, however, Landlord determines that it can not complete such restoration within one-hundred fifty (150) days after the occurrence of such casualty then either party shall have the right to terminate this Lease upon written notice to the other party delivered within forty-five (45) days after the date of determination that the restoration cannot be completed within said 150-day period; and Tenant shall vacate the Premises within thirty (30) days after the date of termination. If this Lease is not terminated pursuant to this Section 12.1, then until such restoration of the Premises are substantially complete, Tenant shall be required to pay the Rent for only the portion of the Premises that is usable for Tenant's business, unless such casualty was caused by an act or omission of Tenant. Notwithstanding anything to the contrary herein, Landlord shall have the right to terminate this Lease if (a) insurance proceeds are insufficient to pay the full costs of such restoration or (b) zoning or other laws do not permit such restoration.

12.2. No Termination of Lease. Except as is otherwise expressly permitted by subsection 12.1, no total or partial damage to or destruction of any or all of the Premises shall entitle either party hereto to surrender or terminate this Lease, and the Tenant hereby waives any right now or hereafter conferred upon it by statute or otherwise, on account of any such damage or destruction, to surrender this Lease, to quit or surrender any or all of the Premises; provided, however, that the Tenant shall be proportionately relieved, as set forth in Section 12.1, from its liability hereunder to pay in full the Base Rent, any Additional Rent and all other sums and

charges which are otherwise payable by the Tenant hereunder; and Landlord shall restore the Premises to the condition required by Section 12.1.

### 13. CONDEMNATION.

13.1. Termination of Lease. If ten percent (10%) or more of the Premises and/or of that portion of the Property underlying the Premises is taken by the exercise of any power of eminent domain or is conveyed to or at the direction of any governmental entity under a threat of any such taking (each of which is herein referred to as a "Condemnation"), this Lease shall terminate on the date on which the title to so much of the Premises as is the subject of such Condemnation vests in the condemning authority, unless the parties hereto otherwise agree in writing. If all or any substantial portion of the Building or the Property other than that portion thereof underlying the Premises is taken or conveyed in a Condemnation, then either party shall be entitled, by giving written notice thereof to the other party, to terminate this Lease on the date on which the title to so much thereof as is the subject of such Condemnation vests in the condemning authority. If this Lease is not terminated pursuant to this subsection, the Landlord shall restore any of the Premises damaged by such Condemnation substantially to its condition immediately before such Condemnation, as soon after the Landlord's receipt of the proceeds of such Condemnation as is reasonably possible under the circumstances.

13.2. Condemnation Proceeds. Regardless of whether this Lease is terminated under this section, the Tenant shall have no right in any such Condemnation to make any claim on account thereof against the condemning authority, except that the Tenant may make a separate claim for the Tenant's moving expenses and the value of the Tenant's trade fixtures, provided that such claim does not reduce the sums otherwise payable by the condemning authority to the Landlord. Except as aforesaid, the Tenant hereby (a) waives all claims which it may have against the Landlord or such condemning authority by virtue of such Condemnation, and (b) assigns to the Landlord all such claims (including but not limited to all claims for leasehold damages or diminution in value of the Tenant's leasehold interest hereunder).

13.3. Effect on Rent. If this Lease is terminated under this Section, any Base Rent, any Additional Rent and all other sums and charges required to be paid by the Tenant hereunder shall be apportioned and paid to the date of such termination. If this Lease is not so terminated in the event of a Condemnation, then this Lease shall continue in full force and effect as to the part of the Premises not condemned, and the Base Rent (and each installment thereof) and the Additional Rent shall be abated from the date on which the title to so much, if any, of the Premises as is the subject of such Condemnation vests in the condemning authority, through the Termination Date, in proportion to the floor area of such portion of the Premises as is the subject of such Condemnation.

13.4. No Termination of Lease. Except as otherwise expressly provided in this section, no total or partial Condemnation shall entitle either party hereto to surrender or terminate this Lease, or shall relieve the Tenant from its liability hereunder to pay in full the Base Rent, any Additional Rent and all other sums and charges which are otherwise payable by the Tenant hereunder, or from any of its other obligations hereunder, and the Tenant hereby waives any right now or hereafter conferred upon it by statute or otherwise, on account of any such Condemnation, to surrender this Lease, to quit or surrender any or all of the Premises, or to receive any suspension, diminution, abatement or reduction of the Base Rent or any Additional Rent or other sum payable by the Tenant hereunder.

#### 14. ASSIGNMENT AND SUBLETTING.

14.1. Landlord's Consent Required. The Tenant shall not assign this Lease, in whole or in part, nor sublet all or any part of the Premises, nor license concessions or lease departments therein, nor otherwise permit any other person to occupy or use any portion of the Premises, nor enter into a management or other similar agreement transferring control of the business operations of Tenant (collectively, a "Transfer"), without in each instance first obtaining the written consent of the Landlord, which consent may be withheld. This prohibition includes any subletting or assignment which would otherwise occur by operation of law, merger, consolidation, reorganization, transfer or other change of the Tenant's corporate or proprietary structure (including, without limitation, the transfer of partnership interests, the creation of additional partnership interests or the transfer of corporate shares or beneficial interests), or an assignment or subletting to or by a receiver or trustee in any federal or state bankruptcy, insolvency or other similar proceedings. Consent by the Landlord to any assignment, subletting, licensing or other transfer shall not (i) constitute a waiver of the requirement for such consent to any subsequent assignment, subletting, licensing or other Transfer, (ii) relieve the Tenant from its duties, responsibilities and obligations under this Lease, or (iii) relieve any guarantor of this Lease from such guarantor's obligations under its guaranty agreement. Notwithstanding anything to the contrary in subsections 14.1 or 14.2, the Landlord shall not unreasonably withhold its consent to a Transfer provided that (i) the tangible net worth (as determined in accordance with generally accepted accounting principles and is evidenced by a certified financial statement to be submitted to the Landlord) of the assignee or sublessee is not less than the greater of the tangible net worth of the Tenant (a) on the Effective Date and (b) on the day before such Transfer, (ii) such assignee or sublessee continues to operate the business in the Premises in accordance with the permitted use and pursuant to all of the terms and provisions of this Lease, (iii) the Tenant continues to remain liable for the performance of all of the Tenant's obligations under this Lease, including the payment of Rent, (iv) the Tenant is not in default (beyond applicable cure periods, if any) of any of the terms or provisions of this Lease on the effective date of such assignment or subletting, and (v) such assignment or subletting will not result in an increase in demand for parking.

14.2. Permitted Transfers. Notwithstanding the provisions of Paragraph 14.1 of this Lease to the contrary, the Landlord specifically consents to a Transfer to: (a) any entity resulting from a merger or consolidation with the Tenant; (b) any entity succeeding to all or substantially all of the business and assets of the Tenant; or (c) any person, partnership, corporation, joint venture or other business entity which directly or indirectly through one or more intermediaries controls, is controlled by or is under common control with the Tenant. In the event of an assignment or subletting pursuant to this Paragraph 14.2, the Tenant will provide the following to the Landlord at least ten (10) days prior to any such assignment or subletting: (a) the name of the proposed assignee, sub-tenant or occupant; (b) the nature of the proposed assignee's, sub-tenant's or occupant's business to be carried on in the Premises; and (c) the terms and provisions of the proposed assignment or sublease and a copy of such document.

14.3. Acceptance of Rent from Transferee. The acceptance by the Landlord of the payment of Rent from any person following any act, assignment or other Transfer prohibited by this section shall not constitute a consent to such act, assignment or other Transfer, nor shall the same be deemed to be a waiver of any right or remedy of the Landlord's hereunder.

14.4. Conditions of Consent.

14.4.1. If the Tenant receives consent to a Transfer under subsection 14.1 above, then, in addition to any other terms and conditions imposed by the Landlord in the giving of such consent, the Tenant and the transferee shall execute and deliver, on demand, an agreement prepared by the Landlord providing that the

transferee shall be directly bound to the Landlord to perform all obligations of the Tenant hereunder including, without limitation, the obligation to pay all Rent and other amounts provided for herein; acknowledging and agreeing that there shall be no subsequent Transfer of this Lease or of the Premises or of any interest therein without the prior consent of the Landlord pursuant to subsection 14.1 above; acknowledging that the Tenant as originally named herein (and any guarantor) shall remain fully liable for all obligations of the tenant hereunder, including the obligation to pay all Rent provided herein, jointly and severally with the transferee.

14.4.2. All reasonable costs incurred by the Landlord in connection with any request for consent to a Transfer, including costs of investigation and the fees of the Landlord's counsel, shall be paid by the Tenant on demand as a further condition of any consent which may be given.

14.5. Profits from Use or Transfer.

14.5.1. Neither the Tenant nor any other person having an interest in the use, occupancy or other utilization of space in the Premises shall enter into any lease, sublease, license, concession or other Transfer which provides for rent or other payment for such use, occupancy or utilization based in whole or in part on the net income or profits derived from the Premises, and any such purported lease, sublease, license, concession or other Transfer shall be absolutely void and ineffective as a conveyance or creation of any right or interest in the possession, use, occupancy or utilization of any part of the Premises.

14.5.2. The Tenant agrees that in the event of a Transfer, the Tenant shall pay the Landlord, within ten (10) days after receipt thereof, fifty percent (50%) of the net excess of: (i) any and all consideration, money or thing of value, however characterized, received by the Tenant or paid to the Tenant in connection with or arising out of such Transfer, over (ii) all amounts otherwise paid by the Tenant to the Landlord pursuant to this Lease (after deduction for costs of brokers and tenant improvements incurred by Tenant in connection with any Transfers).

15. RULES AND REGULATIONS. The Landlord shall have the right to prescribe, at its sole discretion, reasonable rules and regulations (the "Rules and Regulations") having uniform applicability to all tenants of the Property and governing their use and enjoyment of the Property; provided, that the Rules and Regulations shall not materially interfere with the Tenant's use and enjoyment of the Premises in accordance with this Lease for the purposes listed in subsection 6.1. The Rules and Regulations may govern, without limitation, the use of sound apparatus, noise or vibrations emanating from machinery or equipment, obnoxious fumes and/or odors, the parking of vehicles, lighting and storage and disposal of trash and garbage. The Tenant shall adhere to the Rules and Regulations and shall cause its agents, employees, invitees, visitors and guests to do so. A copy of the Rules and Regulations in effect on the date hereof is attached hereto as Exhibit C. The Landlord shall have the right to amend the Rules and Regulations from time to time.

16. SUBORDINATION AND ATTORNMENT.

16.1. Subordination.

16.1.1. Unless a Mortgagee otherwise shall elect as provided in subsection 16.2, the Tenant's rights under this Lease are and shall remain subject and subordinate to the operation and effect of any mortgage, deed of trust or other security instrument constituting a lien upon the Premises, and/or the Property, whether the same shall be in existence on the date hereof or created hereafter (any such lease, mortgage, deed of trust or other security instrument being referred to herein as a "Mortgage," and the party or parties having the benefit of the same, whether as beneficiary, trustee or noteholder, being referred to hereinafter collectively as

"Mortgage"). The Tenant's acknowledgment and agreement of subordination as provided for in this section is self-operative and no further instrument of subordination shall be required; however, the Tenant shall execute, within ten (10) days after request therefor, a document providing for such further assurance thereof and for such other matters as may be requested from time to time by the Landlord or any Mortgagee, which matters may include, without limitation, additional notice and cure periods for the Mortgagee and a prohibition on lease amendments without the Mortgagee's prior written consent.

16.1.2. The Landlord hereby directs the Tenant, upon (i) the occurrence of any event of default by the Landlord, as mortgagor under any Mortgage, (ii) the receipt by the Tenant of a notice of the occurrence of such event of default under such Mortgage from the Landlord or such Mortgagee, or (iii) a direction by the Mortgagee under such Mortgage to the Tenant to pay all Rent thereafter to such Mortgagee, to make such payment to such Mortgagee, and the Landlord agrees that in the event that the Tenant makes such payments to such Mortgagee, as aforesaid, the Tenant shall not be liable to the Landlord for the same.

16.2. Mortgagee's Unilateral Subordination. If a Mortgagee shall so elect by notice to the Tenant or by the recording of a unilateral declaration of subordination, this Lease and the Tenant's rights hereunder shall be superior and prior in right to the Mortgage of which such Mortgagee has the benefit, with the same force and effect as if this Lease had been executed, delivered and recorded prior to the execution, delivery and recording of such Mortgage, subject, nevertheless, to such conditions as may be set forth in any such notice or declaration.

16.3. Attornment. If any Person shall succeed to all or any part of the Landlord's interest in the Premises, whether by purchase, foreclosure, deed in lieu of foreclosure, power of sale, termination of lease or otherwise, and if such successor-in-interest requests or requires, the Tenant shall attorn to such successor-in-interest and shall execute within ten (10) days after receipt thereof an agreement in confirmation of such attornment in a form as may be reasonably requested by such successor-in-interest. Failure to respond within such (10) day period shall be deemed to be a confirmation by the Tenant of the facts and matters set forth therein.

16.4 Non-Disturbance Agreement. As a condition to Tenant's agreement hereunder to subordinate Tenant's interest in this Lease to any Mortgage made between Landlord and such Mortgagee, and to attorn to and recognize any successor landlord, Landlord shall obtain from such Mortgagee and delivered to Tenant an agreement, in recordable form, pursuant to which such Mortgagee shall agree that if and so long as no Event of Default hereunder shall have occurred and be continuing, the leasehold estate granted to Tenant and the rights of Tenant pursuant to this Lease to quiet and peaceful possession of the Premises shall not be terminate, modified, affected or disturbed by any action which such Mortgagee may take to foreclose any such Mortgage, and that any successor landlord shall recognize this Lease as being in full force and effect as if it were between such successor landlord and Tenant upon all of the terms, covenants, conditions and options granted to Tenant under this Lease. If Landlord shall not have obtained such agreement from the Mortgagee within thirty (30) days after either the Effective Date (for any current Mortgage), or the date of recordation of any future Mortgage, then Tenant shall notify the Landlord of such failure and Landlord shall proceed with due diligence to obtain such agreement.

## 17. DEFAULTS AND REMEDIES.

17.1. "Event of Default" Defined. Any one or more of the following events shall constitute a default under the terms of this Lease ("Event of Default"):

- (a) the failure of the Tenant to pay any Rent or other sum of money due hereunder within ten (10) days after the same is due; provided, however, that the first such failure to pay in any 12-month period shall not be an Event of Default until the Landlord has given the Tenant five (5) days' advance notice (which may be in the form of a late notice) of the same and the Tenant fails to pay such Rent within such 5-day period;
- (b) the sale of the Tenant's interest in the Premises under attachment, execution or similar legal process without the Landlord's prior written approval;
- (c) the filing of a petition proposing the adjudication of the Tenant as a bankrupt or insolvent, or the reorganization of the Tenant, or an arrangement by the Tenant with its creditors, whether pursuant to the Federal Bankruptcy Act or any similar federal or state proceeding, unless such petition is filed by a party other than the Tenant and is withdrawn or dismissed within sixty (60) days after the date of its filing;
- (d) the admission in writing by the Tenant of its inability to pay its debts when due;
- (e) the appointment of a receiver or trustee for the business or property of the Tenant, unless such appointment is vacated within sixty (60) days of its entry;
- (f) the making by the Tenant of an assignment for the benefit of its creditors;
- (g) the failure to provide the performance bond described in Section 4.7.1 within the required fifteen (15) day period;
- (h) a default by the Tenant in the performance or observance of any covenant or agreement of this Lease to be performed or observed by the Tenant (other than as set forth in clauses (a) through (g) above), which default is not cured within thirty (30) days after the giving of written notice thereof by the Landlord, unless such default is of such nature that it cannot be cured within such 30-day period, in which event an Event of Default shall not be deemed to have occurred if the Tenant institutes a cure within the 30-day period and thereafter diligently and continuously prosecutes the curing of the same until completion, but in no event shall such cure period exceed one hundred twenty (120) days; provided, however, that if the Tenant defaults in the performance in any material respect of any such covenant or agreement more than two (2) times during the Term, then notwithstanding that such defaults have each been cured by the Tenant, any further defaults shall be deemed an Event of Default without the ability to cure; or
- (i) the vacating or abandonment of the Premises by the Tenant at any time during the Term, but in such event Landlord's sole remedy shall be to terminate this Lease upon written notice to the Tenant.

17.2. Landlord's Remedies. Upon the occurrence of an Event of Default, the Landlord, without notice to the Tenant in any instance (except where expressly provided for below), may do any one or more of the following:

- (a) perform, on behalf and at the expense of the Tenant, any obligation of the Tenant under this Lease which the Tenant has failed to perform beyond any applicable grace or cure periods and of which the Landlord shall have given the Tenant notice (except in an emergency situation in which no notice is required), the cost of which performance by the Landlord, together with interest thereon at the Interest Rate from



the date of such expenditure, shall be deemed Additional Rent and shall be payable by the Tenant to the Landlord as otherwise set forth herein; (b) elect to terminate this Lease and the tenancy created hereby by giving notice of such election to the Tenant without any right on the part of the Tenant to save the forfeiture by payment of any sum due or by other performance of condition, term, agreement or covenant broken, or elect to terminate the Tenant's possessory rights and all other rights of the Tenant without terminating this Lease, and in either event, at any time thereafter without notice or demand and without any liability whatsoever, re-enter the Premises by force, summary proceedings or otherwise, and remove the Tenant and all other persons and property from the Premises, and store such property in a public warehouse or elsewhere at the cost and for the account of the Tenant without resort to legal process and without the Landlord being deemed guilty of trespass or becoming liable for any loss or damage occasioned thereby;

(c) accelerate the Rent and any other charges, whether or not stated to be Additional Rent, for the entire balance of the Term, or any part of such Rent, and any costs, whether chargeable to the Landlord or the Tenant, as if by the terms of this Lease the balance of the Rent and other charges and expenses were on that date payable in advance;

(d) cause an attorney for the Landlord to proceed in any competent court for judgment in ejectment against the Tenant and all persons claiming under the Tenant for the recovery by the Landlord of possession of the Premises, and if for any reason after such action has been commenced it is canceled or suspended and possession of the Premises remains in or is restored to the Tenant, the Landlord shall have the right upon any subsequent default or upon the expiration or termination of this Lease, or any renewal or extension hereof, to bring one or more actions to recover possession of the Premises; and

(e) exercise any other legal and/or equitable right or remedy which it may have at law or in equity, including rights of specific performance and/or injunctive relief, where appropriate.

In any action for possession of the Premises or for monetary damages, including Termination Damages and Liquidated Damages, or for the recovery of Rent due for the balance of the Term, the Landlord may cause to be filed in such action an affidavit setting forth the facts necessary to authorize the entry of judgment. If a true copy of this Lease (and of the truth of the copy, such affidavit shall be sufficient proof) must be filed in such action, it shall not be necessary to file the original, notwithstanding any law, rule of court, custom or practice to the contrary.

### 17.3. Damages.

(a) If this Lease is terminated by the Landlord pursuant to subsection 17.2, the Tenant nevertheless shall remain liable for any Rent and damages which may be due or sustained prior to such termination, as well as all reasonable costs, fees and expenses, including, without limitation, sheriffs' or other officers' commissions whether chargeable to the Landlord or the Tenant, watchmen's wages, brokers' and attorneys' fees, and repair and renovation costs incurred by the Landlord in pursuit of its remedies hereunder, and/or in connection with any bankruptcy proceedings of the Tenant, and/or in connection with renting the Premises to others from time to time (all such Rent, damages, costs, fees and expenses being referred to herein as "Termination Damages"), plus additional damages for all Rent treated as in arrears ("Liquidated Damages"); provided, however, that Landlord shall use its good faith efforts to relet all or any portion of the Premises in order to mitigate Tenant's damages. At the election of the Landlord, Termination Damages shall be an amount equal to either:

(i) the Rent which, but for the termination of this Lease, would have become due during the remainder of the Term, less the amount or amounts of rent, if any, which the Landlord receives during such period from others to whom the Premises may be rented (other than any additional rent received by the Landlord as a result of any failure of such other person to perform any of its obligations to the Landlord), in which case Termination Damages shall be computed and payable in monthly installments, in advance, on the first business day of each calendar month following the termination of this Lease and shall continue until the date on which the Term would have expired but for such termination, and any action or suit brought to collect any such Termination Damages for any month shall not in any manner prejudice the right of the Landlord to collect any Termination Damages for any subsequent months by similar proceeding; or

(ii) the present worth (as of the date of such termination) of the Rent which, but for the termination of this Lease, would have become due during the remainder of the Term, less the fair rental value of the Premises, as determined by an independent real estate appraiser or broker selected by the Landlord, in which case such Termination Damages shall be payable to the Landlord in one lump sum on demand, and shall bear interest at the Interest Rate. "Present worth" shall be computed by discounting such amount to present worth at a rate equal to one percentage point above the discount rate then in effect at the Federal Reserve Bank of Richmond.

(b) Notwithstanding anything to the contrary set forth in this subsection 17.3, in the event (i) the Landlord must initiate legal action to enforce any one or more of the provisions of this Lease against the Tenant, its successors or assigns, or (ii) the Landlord must consult with and/or engage an attorney(s) in order (A) to enforce any one or more of the provisions of this Lease against the Tenant, its successors or assigns, or (B) in connection with any bankruptcy proceeding of the Tenant, whether or not such consultation and/or engagement results in the initiation of any judicial action or termination of this Lease, then and in any of such events, the Tenant, its successors and assigns, undertakes and agrees to pay any and all reasonable costs incurred by the Landlord in connection therewith, including, by way of illustration and not of limitation, all reasonable attorneys' fees (inclusive of consultation fees, research costs and correspondence fees), court costs (if awarded post-judgment) and any similar professional fees or costs associated therewith.

17.4. Waiver of Jury Trial. Each party hereto hereby waives any right which it may otherwise have at law or in equity to a trial by jury in connection with any suit or proceeding at law or in equity brought by the other against the waiving party or which otherwise relates to this lease, as a result of an event of default or otherwise. The Tenant further agrees that in the event the Landlord commences any summary proceeding for nonpayment of rent or possession of the Premises, the Tenant will not, and hereby waives, all right to interpose any counterclaim of whatever nature in any such proceeding.

18. ESTOPPEL CERTIFICATE. The Tenant shall, without charge, at any time and from time to time, within ten (10) days after receipt of request therefor from the Landlord, execute, acknowledge and deliver to the Landlord, and to such Mortgagee or other party as may be designated by the Landlord, a written estoppel certificate in form and substance as may be requested from time to time by the Landlord, the other party or any Mortgagee, certifying to the other party, any Mortgagee, any purchaser of Landlord's interest in all or any part of the Property, or any other person or entity designated by the other party, as of the date of such estoppel certificate, the following: (a) whether the Tenant is in possession of the Property; (b) whether this Lease is in full force and effect; (c) whether there are any amendments to this Lease, and if so, specifying such amendments; (d) whether there are any then-existing setoffs or defenses against the enforcement of any rights hereunder, and if so, specifying such matters in detail; (e) the dates, if any, to which any rent or other sums due hereunder have been paid in advance and the amount of any security deposit held by the Landlord; (f) that the Tenant has no knowledge of any then-existing defaults of the Landlord under this Lease, or if there are such defaults, specifying

them in detail; (g) that the Tenant has no knowledge of any event having occurred that authorized the termination of this Lease by the Tenant, or if such event has occurred, specifying it in detail; (h) the address to which notices to the Tenant should be sent; and (i) any and all other matters reasonably requested by the Landlord, any Mortgagee and/or any other person or entity designated by the Landlord. Any such estoppel certificate may be relied upon by the person or entity to whom it is directed or by any other person or entity who could reasonably be expected to rely on it in the normal course of business. The failure of the Tenant to execute, acknowledge and deliver such a certificate in accordance with this section within fifteen (15) days after a request therefor by the Landlord shall constitute an acknowledgment by the Tenant, which may be relied on by any person or entity who would be entitled to rely upon any such certificate, that such certificate as submitted by the requesting party to the other party is true and correct, and the requesting party is hereby authorized to so certify.

19. QUIET ENJOYMENT. The Landlord hereby warrants that, so long as all of the Tenant's obligations hereunder are timely performed, the Tenant will have during the Term quiet and peaceful possession of the Premises and enjoyment of such rights as the Tenant may hold hereunder to use the Common Areas, except if and to the extent that such possession and use are terminated pursuant to this Lease.

20. NOTICES. Except as may be otherwise provided in this Lease, any notice, demand, consent, approval, request or other communication or document to be provided hereunder to the Landlord or the Tenant (a) shall be in writing, and (b) shall be deemed to have been provided (i) two (2) days following the date sent as certified mail in the United States mails, postage prepaid, return receipt requested, (ii) on the day following the date it is deposited prior to the close of business with FedEx or another national courier service or (iii) on the date of hand delivery (if such party's receipt thereof is acknowledged in writing), in each case to the address of such party set forth hereinbelow or to such other address as such party may designate from time to time by notice to each other party hereto.

If to the Landlord, notice shall be sent to:

Sterling Rutherford Plaza, L.L.C.

c/o Sterling Advisors  
Suite 200  
31 Light Street  
Baltimore, Maryland 21202  
Attention: Mr. Brian Doyle

If to the Tenant, notice shall be sent to:

8930 Stanford Boulevard  
Columbia, Maryland 21045  
Attention: Corporate Office

21. EXPANSION SPACE. Provided the Tenant is not in default under any of the provisions of this Lease, the Tenant shall have the right to lease (the "Expansion Right") any other office space located within Rutherford Plaza Building which is not on the Effective Date subject to a right of expansion in favor of another tenant in the Building. The Landlord shall give notice to the Tenant when any space becomes available for lease (the "Notice"). The Tenant shall exercise the Expansion Right by giving written notice thereof to the Landlord within twenty (20) days after the Landlord gives Notice to the Tenant. If the Tenant fails to exercise the Expansion Right for the applicable space within such 20-day period, then the same shall terminate and the Landlord shall be free to lease such space to another tenant. The Tenant shall lease the Expansion Space upon

the terms, covenants and conditions as are offered by Landlord in its Notice, provided that such terms, covenants and conditions shall be at least as favorable as what Landlord would offer to third-party tenants comparable to Tenant. If the Tenant exercises the Expansion Right, the Landlord and the Tenant shall enter into an appropriate amendment to this Lease, subjecting such Expansion Space to the terms of this Lease, within fifteen (15) days after the expiration of the 20-day period set forth above. In the event that the Tenant exercises its right to obtain the Expansion Space, the lease term for the Expansion Space shall commence on the date the Landlord tenders possession of the Expansion Space to the Tenant and shall terminate simultaneously with the term for the Premises.

## 22. GENERAL.

22.1. Effectiveness. This Lease shall become effective on and only on its execution and delivery by each party hereto.

22.2. Complete Understanding. This Lease represents the complete understanding between the parties hereto as to the subject matter hereof, and supersedes all prior negotiations, representations, guaranties, warranties, promises, statements and agreements, either written or oral, between the parties hereto as to the same.

22.3. Amendment. This Lease may be amended by and only by an instrument executed and delivered by each party hereto, provided, however, that the Landlord shall have the right at any time, and from time to time, during the Term to amend the provisions of this Lease if the Landlord (or any of its partners) is advised by its counsel that all or any portion of the monies paid, directly or indirectly, by the Tenant to the Landlord (and/or its partners) hereunder are, or may be deemed to be, unrelated business income within the meaning of the United States Internal Revenue Code or regulations issued thereunder, (but only to the extent necessary to address such issue) and the Tenant agrees that it will execute all documents or instruments necessary to effect such amendment or amendments, provided that no such amendment shall result in the Tenant having to pay in the aggregate a larger sum of money on account of its occupancy of the Premises under the terms of this Lease as so amended, and provided further that no such amendment or amendments shall result in the Tenant receiving under the provisions of this Lease less services than it is entitled to receive, nor services or a lesser quality. Furthermore, the Tenant agrees not to take any steps or actions knowingly which may jeopardize the Landlord's (and/or its partners') tax-exempt status.

22.4. Waiver. No party hereto shall be deemed to have waived the exercise of any right which it holds hereunder unless such waiver is made expressly and in writing (and, without limiting the generality of the foregoing, no delay or omission by any party hereto in exercising any such right shall be deemed a waiver of its future exercise). No such waiver made in any instance involving the exercise of any such right shall be deemed a waiver as to any other such instance or any other such right. Without limiting the generality of the foregoing provisions of this subsection, the Landlord's receipt or acceptance of any Base Rent, Additional Rent or other sum from the Tenant or any other person shall not be deemed a waiver of the Landlord's right to enforce any of its rights hereunder on account of any default by the Tenant in performing its obligations hereunder.

22.5. Applicable Law. This Lease shall be given effect and construed by application of the laws of Maryland, and any action or proceeding arising hereunder shall be brought in the courts of Maryland; provided, however, that if any such action or proceeding arises under the Constitution, laws or treaties of the United States of America, or if there is a diversity of citizenship between the parties thereto, so that it is to be brought in a United States District Court, it may be brought only in the United States District Court for Maryland or any successor federal court having original jurisdiction.

22.6. Commissions. The parties hereto hereby acknowledge and agree that, in connection with the leasing of the Premises hereunder, they have used the services of Miller Corporate Real Estate Services, Inc., Casey & Associates and Julian J. Studley, Inc. Any and all commissions due such brokers shall be paid by Landlord in accordance with the terms and conditions set forth in a separate written agreement or agreements between the Landlord and Miller Corporate Real Estate Services, Inc., Casey & Associates and Julian J. Studley. Subject to the foregoing, each party hereto hereby represents and warrants to the other that, in connection with such leasing, the party so representing and warranting has not dealt with any real estate broker, agent or finder, and there is no commission, charge or other compensation due on account thereof. Each party hereto shall indemnify and hold harmless the other against and from any inaccuracy in such party's representation.

22.7. Landlord's Liability. No Person holding the Landlord's interest hereunder (whether or not such Person is named as the "Landlord" herein) shall have any liability hereunder after such Person ceases to hold such interest, except for any such liability accruing while such Person holds such interest. No Mortgagee not in possession of the Premises shall have any liability hereunder. Neither the Landlord nor any principal of the Landlord, whether disclosed or undisclosed, shall have any personal liability under this Lease. If the Landlord defaults in performing any of its obligations hereunder or otherwise, the Tenant shall look solely to the Landlord's equity, interest and rights in the Property to satisfy the Tenant's remedies on account thereof.

22.8. Disclaimer of Partnership Status. Nothing in this Lease shall be deemed in any way to create between the parties hereto any relationship of partnership, joint venture or association, and the parties hereto hereby disclaim the existence of any such relationship.

22.9. Remedies Cumulative. No reference to any specific right or remedy shall preclude the Landlord from exercising any other right or from having any other remedy or from maintaining any action to which it may otherwise be entitled at law or in equity. No failure by the Landlord to insist upon the strict performance of any agreement, term, covenant or condition hereof, or to exercise any right or remedy consequent upon a breach thereof, and no acceptance of full or partial Rent during the continuance of any such breach, shall constitute a waiver of any such breach, agreement, term, covenant or condition. No waiver by the Landlord of any breach by the Tenant under this Lease or of any breach by any other tenant under any other lease of any portion of the Building shall affect or alter this Lease in any way whatsoever.

22.10. Severability. No determination by any court, governmental or administrative body or agency or otherwise that any provision of this Lease or any amendment hereof is invalid or unenforceable in any instance shall affect the validity or enforceability of (a) any other provision hereof, or (b) such provision in any circumstance not controlled by such determination. Each such provision shall remain valid and enforceable to the fullest extent allowed by, and shall be construed wherever possible as being consistent with, applicable law.

22.11. Authority. If the Tenant is a corporation, partnership, limited liability company or similar entity, the person executing this Lease on behalf of the Tenant represents and warrants that (a) the Tenant is duly organized and validly existing and (b) this Lease (i) has been authorized by all necessary parties, (ii) is validly executed by an authorized officer or agent of the Tenant and (iii) is binding upon and enforceable against the Tenant in accordance with its terms.

22.12. Joint and Several Liability. If the Tenant shall be one or more individuals, corporations or other entities, whether or not operating as a partnership or joint venture, then each such

individual, corporation, entity, joint venturer or partner shall be deemed to be both jointly and severally liable for the payment of the entire Rent and other payments specified herein.

22.13. Recordation. Neither this Lease, any amendment to this Lease, nor any memorandum, affidavit or other item with respect thereto shall be recorded by the Tenant or by anyone acting through, under or on behalf of the Tenant, and the recording thereof in violation of this provision shall (i) be deemed an Event of Default and (ii) at the Landlord's election, make this Lease null and void.

22.14. Time of Essence. Time shall be of the essence with respect to the performance of the parties' obligations under this Lease.

22.15. Interpretation. The Landlord and the Tenant hereby agree that both parties were equally influential in negotiating this Lease, and each had the opportunity to seek the advice of legal counsel prior to the execution of this Lease. Therefore, the Landlord and the Tenant agree that no presumption should arise construing this Lease more unfavorably against any one party.

22.16. Headings. The headings of the sections, subsections, paragraphs and subparagraphs hereof are provided herein for and only for convenience of reference and shall not be considered in construing their contents.

22.17. Construction. As used herein, all references made (a) in the neuter, masculine or feminine gender shall be deemed to have been made in all such genders; (b) in the singular or plural number shall be deemed to have been made, respectively, in the plural or singular number as well; and (c) to any section, subsection, paragraph or subparagraph shall be deemed, unless otherwise expressly indicated, to have been made to such section, subsection, paragraph or subparagraph of this Lease.

22.18. Exhibits. Each writing or drawing referred to herein as being attached hereto as a schedule, an exhibit or otherwise designated herein as a schedule or an exhibit hereto is hereby made a part hereof.

22.19 Lien Waiver. Notwithstanding anything to the contrary, Landlord hereby waives any lien that Landlord may have, under applicable law or otherwise, in or with respect to any property of Tenant in the Premises which from time to time, encumbered by a security interest in favor of an unrelated third party lender, and Landlord agrees to confirm such waiver upon Tenant's request from time to time using forms supplied by Tenant.

22.20 Representations and Warranties of Landlord. To induce Tenant to execute this Lease and perform its obligations hereunder, Landlord hereby represents and warrants to Tenant as of the date hereof as follows:

(a) Landlord is a limited liability company, duly organized and validly existing under the laws of the State of Delaware. Landlord has all requisite power to own, lease and operate its assets, and to carry on its business as now conducted. Landlord has full power to execute, deliver and carry out the terms and provisions of this Lease and all documents required on its part to be executed and has taken all necessary limited liability company action to authorize the execution, delivery and performance of this Lease and all other agreements and instruments executed in connection herewith and the performance of those provisions of this Lease required on its part to be carried out. The persons executing this Lease (and all other agreements and instruments entered into by Landlord in furtherance hereof), on behalf of Landlord, have the authority to bind Landlord to the terms and conditions of this Lease (and all said agreements and instruments). To Landlord's knowledge, neither the execution and delivery of this Lease and said agreements and instruments to be executed

by landlord in connection herewith, nor the incurrence by Landlord of the obligations herein set forth, nor the consummation by Landlord of the transactions herein contemplated, nor compliance by Landlord with the terms of this Lease and said agreements and instruments will conflict with or result in a breach of any of the terms, conditions or provisions of, or constitute a default under, the limited liability company agreement of Landlord, or to the knowledge of Landlord, any bond, note or other evidence of indebtedness, contract, indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument, to which Landlord is a party or by which the Property may be bound.

(b) To Landlord's knowledge, there is (i) no pending or threatened condemnation to all or any part of the Property and (ii) no denial of access to the Property from any point of access to the Property, and neither Landlord nor any of its agents or affiliates has received any notice of any of the same.

(c) To Landlord's knowledge, Landlord has not received any legal notice which remains uncured, and Landlord has no knowledge, that the Property violates any laws affecting the Property as modified by any duly issued variance.

(d) Landlord owns fee simple title to the Property.

(e) To Landlord's knowledge, the Property is in compliance with the ADA. To Landlord's knowledge, there is no asbestos or material containing asbestos in the Property.

(f) To Landlord's knowledge, Landlord is not in default or violation of any order, writ injunction, decree or demand of any governmental authority.

(g) Landlord (i) is not in receivership or dissolution,

(ii) has not made an assignment for the benefit of creditors or admitted in writing its inability to pay its debts as they mature, (iii) has not been adjudicated a bankrupt or filed a petition in voluntary bankruptcy or a petition or answer seeking reorganization or an arrangement with creditors under the Federal bankruptcy law or any other similar law or statute of the United States or any jurisdiction and no such petition has been filed against Landlord, and

(iv) to the best of its knowledge, none of the foregoing are pending or threatened.

(h) To Landlord's knowledge, there are no judgments, liens, claims, litigation, proceedings (zoning or otherwise) or investigations by an governmental authorities, pending at law or in equity or threatened in writing against or relating to the Premises or Building, the Landlord or the transactions contemplated by this Lease.



IN WITNESS WHEREOF, each party hereto has executed and ensealed this Lease, or caused it to be executed and ensealed on its behalf by its duly authorized representatives, on the date first above written.

WITNESS or ATTEST:

\_\_\_\_\_

WITNESS or ATTEST:

\_\_\_\_\_

LANDLORD:

STERLING RUTHERFORD PLAZA, L.L.C.

By: /s/ Brian Doyle (SEAL)

Title: Managing Member

TENANT:

GSE SYSTEMS, INC.

By: /s/ Robert W. Stroup (SEAL)

Title: Executive Vice President

This Lease must be executed for the Tenant, if a corporation, by the president or vice president and be attested by the secretary or assistant secretary, unless the bylaws or a resolution of the board of directors shall provide that other officers are authorized to execute this Lease, in which event, a certified copy of the bylaws or resolutions, as the case may be, must be furnished to the Landlord. The Tenant's corporate seal must be affixed hereto.

**EXHIBIT 10.25**

**LEASE**

THIS LEASE (this "Lease") is made as of January 30, 1998, between RED BRANCH ROAD, L.L.C., a Maryland limited liability company ("Landlord"), and GSE SYSTEMS, INC., a Delaware corporation ("Tenant").

**ARTICLE I  
DEFINITIONS**

1.1 Building: a one (1) story building containing approximately fifty-two thousand six hundred eighty-two (52,682) square feet of rentable area and located on approximately 4.779 acres of land at 9189 Red Branch Road, Columbia, Maryland.

1.2 Premises: approximately fifty-two thousand six hundred eighty-two (52,682) square feet of rentable area located on the first floor of the Building.

1.3 Initial Lease Term: one hundred twenty (120) months.

1.4 Anticipated Occupancy Date: June 1, 1998.

1.5 Base Rent: five hundred twenty-six thousand eight hundred twenty (\$526,820.00) for the first Lease Year (which amount is based on ten dollars (\$10.00) per square foot of rentable area).

1.6 Base Rent Annual Escalation Percentage: three percent (3%).

1.7 Security Deposit: forty-three thousand nine hundred one dollars and sixty-seven cents (\$43,901.67).

1.8 Broker(s): Julien J. Studley, Inc. and Atlantic Realty Associates, Inc.

1.9 Tenant Address for Notices: 8930 Stanford Boulevard, Columbia, Maryland 21045 until Tenant has commenced beneficial use of the Premises, and 9189 Red Branch Road, Columbia, Maryland 21045 after Tenant has commenced beneficial use of the Premises.

1.11 Guarantor(s): none.

**ARTICLE II  
PREMISES**

2.1 Tenant leases the Premises from Landlord upon the terms herein. The foregoing notwithstanding, Tenant's right to use the Premises is subject to Head Sports Wear, Inc.'s temporary rights pursuant to Head Sports Wear, Inc.'s lease, a copy of which lease has been provided to Tenant. Landlord shall use commercially reasonable efforts to require Head Sports Wear, Inc. to vacate in accordance with its lease and shall attempt to have Head Sports Wear, Inc. vacate by March 31, 1998. Landlord and Tenant shall use commercially reasonable efforts to accommodate Tenant's and Head Sports Wear, Inc.'s shared use of facilities as contemplated by Head Sports Wear, Inc.'s lease. If Landlord collects money from Head Sports Wear, Inc. as a result of Head Sports Wear, Inc.'s holdover in the Building, then Landlord shall pay to Tenant the lesser of

(a) one half of (1) the money so collected from Head Sports Wear, Inc., minus

(2) all damages paid by Landlord to

Head Sports Wear, Inc. pursuant to Head Sports Wear, Inc.'s lease as a result of interference with Head Sports Wear, Inc.'s occupancy, or (b) the damages suffered by Tenant as a result of Head Sports Wear, Inc.'s holdover.

### **ARTICLE III TERM**

3.1 The term of this Lease (the "Lease Term") shall commence on the Lease Commencement Date specified in Section 3.2. If the Lease Commencement Date is not the first day of a month, then the Lease Term shall be the period set forth in Section 1.3 plus the partial month in which the Lease Commencement Date occurs. The Lease Term shall also include any renewal or extension of the Initial Lease Term.

3.2 The Lease Commencement Date means the earlier of (a) the date the work and materials to be provided pursuant to Exhibit B are deemed substantially complete as determined pursuant to Exhibit B, or (b) the date Tenant commences beneficial use of the Premises. Tenant shall be deemed to have commenced beneficial use of the Premises when Tenant begins to move furniture, furnishings, inventory, equipment or trade fixtures other than modular furniture into the Premises. If Tenant is in breach of any obligation hereunder, then Tenant shall not have any right to commence beneficial use of the Premises.

3.3 Delivery of the Premises is anticipated on or about the Anticipated Occupancy Date. If the Premises are not delivered by such date, then Landlord shall not have any liability whatsoever, and this Lease shall not be rendered voidable, on account thereof. If the Lease Commencement Date does not occur within 90 days after Head Sports Wear, Inc. fully vacates the Building, then Tenant shall have the right to install the improvements pursuant to Exhibit B and Landlord shall reimburse Tenant for all reasonable out-of-pocket expenses incurred by Tenant in installing such improvements.

3.4 Lease Year means a period of one year commencing on the first day of the month in which the Lease Commencement Date occurs and each successive one year period.

3.5 Landlord hereby grants to Tenant the right to renew the Initial Lease Term for one five-year term (the "Renewal Term"). If exercised, the Renewal Term shall commence immediately following the end of the Initial Lease Term. Such right shall be subject to the following conditions: Tenant may exercise such right only by giving Landlord written notice not later than twelve (12) months prior to the expiration of the Initial Lease Term. If Tenant's renewal notice is not given timely, then Tenant's right of renewal shall be of no further force or effect. The parties shall have thirty (30) days after Landlord's timely receipt of such notice in which to agree on the base rent, escalation factor and additional rent which shall be payable during the Renewal Term. Among the factors to be considered by the parties during such negotiations shall be the general office rental market in Columbia and the rents being offered similar tenants for similar space in similar buildings. If during such thirty (30) day period the parties agree on such base rent, escalation factor and additional rent payable during each year of the Renewal Term, then they shall promptly execute an amendment to this Lease stating the rent so agreed upon. If during such thirty (30) day period the parties are unable, for any reason whatsoever, to agree on such base rent, escalation factor and additional rent payable, then within five (5) days thereafter (or, if later, by the beginning of the tenth Lease Year) the parties shall each appoint an appraiser who shall be licensed in the State of Maryland and who specializes in the field of appraising commercial space in the Columbia market, has at least ten (10) years of experience and is recognized within the field as being reputable and ethical. Such two individuals shall each determine within ten (10) business days after their appointment such base rent, escalation factor and additional rent (to be not less than the same payable during the last year of the Initial Lease Term). If such individuals do not agree on such items, then the two individual shall, within five (5) days, render separate written reports of their determinations and together appoint a third similarly qualified individual. The third

individual shall within ten (10) days after his or her appointment make a determination of such base rent, escalation factor and additional rent. The base rent, escalation factor and additional rent applicable during the first Lease Year of the Renewal Term shall equal the median of the three determinations and shall be final. Each party shall bear the cost of its broker. The cost of the third broker shall be shared equally. The parties shall promptly execute an amendment to this Lease stating the rent so determined. If an Event of Default exists under Section 19.1(a) of this Lease on the date Tenant sends a renewal notice or any time thereafter until the Renewal Term is to commence, then, at Landlord's election, the Renewal Term shall not commence and the Lease Term shall expire at the expiration of the Initial Lease Term.

#### **ARTICLE IV BASE RENT**

4.1 Tenant shall pay the Base Rent in equal installments in advance on the first day of each month during a Lease Year. On the first day of the second and subsequent Lease Years, the Base Rent in effect shall be increased by the product of (a) the Base Rent Annual Escalation Percentage, multiplied by (b) the Base Rent in effect. When Tenant executes this Lease, Tenant shall pay an amount equal to one (1) monthly installment of the Base Rent, which amount shall be credited toward the installment of the Base Rent payable for the Lease Term's first full calendar month.

#### **ARTICLE V OPERATING CHARGES AND REAL ESTATE TAXES**

5.1 Tenant shall pay Tenant's proportionate share (100%) of Operating Charges (defined in Section 5.2) during each calendar year falling entirely or partly within the Lease Term .

5.2 Operating Charges mean the following expenses incurred by Landlord in the ownership and operation of the Building and the land upon which the Building is located (the "Land"): (a) water, sewer and other utility charges but excluding charges for electricity; (b) hazard, rent loss and liability insurance premiums; (c) management fees equal to 3% of gross rents from the Building; (d) costs of service and maintenance contracts; (e) maintenance, repair and replacement expenses; (f) amortization (on a straight-line basis over the useful life), with interest at two percentage points over the prime rate specified in Section 19.6 at the time the expenditure was made) of capital expenditures made by Landlord to (1) reduce operating expenses if Landlord reasonably estimates that the annual reduction in operating expenses shall exceed such amortization, or (2) comply with laws or insurance requirements enacted or imposed after the date hereof; (g) Real Estate Taxes (defined in Section 5.3); (h) charges for janitorial services; (i) reasonable reserves for repairs and contingencies relating to the HVAC systems; and (j) any other expense incurred by Landlord in owning, maintaining, repairing or operating the Building and the Land. "Operating Charges" shall mean only those expenses, charges and fees consistent with similar office buildings in Howard County, Maryland which are actually incurred by Landlord but only to the extent incurred in connection with the management, operation, maintenance, servicing, cleaning, and insuring of the Premises or the Building. All Operating Charges shall be determined according to generally accepted accounting principles, consistently applied ("GAAP"). Notwithstanding anything to the contrary contained in this Lease (other than Section 5.2(f)), in the event there exists a conflict as to an expense which is specified to be included in Operating Charges and is also specified to be excluded from Operating Charges as hereinafter described, the exclusions listed below prevail and the expenses shall be deemed excluded. Notwithstanding anything to the contrary contained in this Lease (other than Section 5.2(f)), "Operating Charges" shall not include the following: (1) any ground lease rents; (2) any and all fines and penalties (including but not limited to capital expenditures) incurred or required to be paid due to Landlord's failure to comply with applicable Laws (hereinafter defined in Section 6.1); (3) costs incurred by Landlord for the repair of damage to

the Building to the extent that Landlord is entitled to be reimbursed by insurance (or would have been entitled had Landlord carried the insurance required to be carried hereunder by Landlord); (4) depreciation and amortization of any type, except on materials, tools, supplies and vendor type equipment purchased by Landlord to enable Landlord to supply services Landlord might otherwise contract for with a third party where such depreciation and amortization would otherwise have been included in the charge for such third party's services, all as determined according to GAAP, and when depreciation or amortization is permitted or required, the item shall be amortized over its reasonably anticipated useful life; (5) leasing commissions, attorney's fees, and other costs and expenses incurred in connection with negotiations or disputes with present or prospective tenants or other occupants of the Building;

(6) costs of a capital nature, including, without limitation, capital improvements, capital repairs, capital equipment and capital tools, all as determined under GAAP; (7) interest, principal, points and fees on debt or amortization on any mortgage or mortgages or any other debt instrument encumbering the Building; (8) advertising and promotional expenditures, and costs of signs in or on the Building identifying the owner of the Building or any tenant of the Building; (9) electric power costs for which any tenant directly contracts with the local public service company; (10) costs incurred in connection with replacing, repairing, retrofitting or upgrading the Building to comply with ADA, handicapped, life and safety codes as in effect as of the date hereof; (11) wages, salaries, fees and fringe benefits paid to administrative or executive personnel or officers or partners of Landlord or management agent or anyone else over the level of building supervisor; (12) the cost of any repair made by Landlord because of the total or partial destruction of the Building or the condemnation of a portion of the Building; (13) the cost of overtime or other expense to Landlord due to Landlord's defaults or incurred while performing work expressly provided in this Lease to be borne at Landlord's expense (without recovery pursuant to this Article); (14) allowances, concession, permits, licenses, inspections, and other costs and expenses incurred in completing, fixturing, renovating or otherwise improving, decorating or redecorating space for tenants (including Tenant), prospective tenants or other occupants or prospective occupants of the Building, or vacant leasable space in the Building or constructing or finishing demising walls and public corridors with respect to any such space whether such work or alteration is performed for the initial occupancy by such tenant or occupant or thereafter;

(15) any cost representing an amount paid for first class services and/or materials to a related person, firm or entity to the extent such amount exceeds the amount that would be paid for such first class services and/or materials at the then existing market rates to an unrelated person, firm or entity; (16) provided Tenant is not in default hereunder, costs incurred due to the late payment of taxes, utility bills or other amounts owing, so long as Landlord was obligated to make such payments and did not in good faith dispute the amount of such payments; (17) general overhead and general administrative expenses and accounting record-keeping and clerical support of Landlord or the management agent, except reasonable expenses incurred in connection with the operations of the property management office (on an appropriately prorated basis to the extent such operations are directly servicing the Building and other buildings); (18) increased insurance premiums caused by Landlord's or any tenant's hazardous acts or omissions; (19) costs incurred for any items to the extent Landlord recovers under a manufacturer's, materialmen's, vendor's or contractor's warranty; (20) costs of acquisition of sculpture, paintings or other objects of art; (21) costs directly resulting from the negligence or misconduct of Landlord or its agents;

(22) costs or fees relating to the defense of Landlord's title or interest in the real estate containing the Building; and (23) costs or expenses incurred by Landlord in financing, refinancing, pledging, selling, granting or otherwise transferring or encumbering ownership rights in the Building or the Land. Operating Charges shall be reduced by all cash discounts, trade discounts or quantity discounts received by Landlord or Landlord's managing agent in the purchase of any goods, utilities or services in connection with the prudent operation of the Building. Landlord shall use its reasonable efforts in good faith to effect an equitable proration of bills for services rendered to the Building and to any other property owned by Landlord or an affiliate of Landlord.

5.3 Real Estate Taxes mean (a) real estate taxes (including special assessments) imposed upon Landlord or assessed against the Building or the Land,

(b) future taxes or charges imposed upon Landlord

or assessed against the Building or the Land which are in the nature of or in substitution for real estate taxes, including any tax levied on or measured by rents payable, and (c) expenses incurred in reviewing or seeking a reduction of real estate taxes. Notwithstanding anything to the contrary contained in this Lease, "Real Estate Taxes" shall not include any of the following: (1) tax upon Landlord's net income or profits; (2) federal, state or local income taxes, franchise, gift, transfer, excise, capital stock, estate, succession or inheritance taxes; (3) any fines, interest or penalties incurred by Landlord by reason of Landlord's failure to pay in a timely manner any Real Estate Taxes; and (4) any taxes based on increases in assessed value due to increases in the rentable area of the Building and additions to the area of the Land. Notwithstanding anything to the contrary contained in this Lease, in the event any Real Estate Taxes are payable in installments over time, then Landlord shall elect (or shall be deemed for purposes hereof to have elected) to pay such taxes over the maximum permissible number of installments. Any interest or fee charged by the taxing authority as a condition to Landlord's right to pay such taxes in installments shall be included in Real Estate Taxes. Landlord shall pay all Real Estate Taxes by the date due, and shall upon Tenant's written request furnish Tenant with evidence of such payment. Real Estate Taxes shall be deemed to assume that the Building and the Land upon which the Building is located constitute a separate tax lot, and that the Building is the only building on the Land. Notwithstanding anything to the contrary contained in this Lease, Tenant shall have the right to contest tax assessments if Landlord does not do so despite Tenant's written request and to recover amounts earlier paid resulting from the net proceeds of a successful contest. Landlord shall reasonably cooperate with any such contest by Tenant.

5.4 At the beginning of the Lease Term and each calendar year thereafter, Landlord may submit a statement indicating the amount of Operating Charges that Landlord reasonably expects to be incurred during such year and Tenant's proportionate share of such amount. Tenant shall pay to Landlord on the first day of each month after receipt of such statement, until Tenant's receipt of a succeeding statement, an amount equal to one-twelfth (1/12) of such share. Landlord reserves the right to submit a revised statement if Landlord expects Operating Charges to differ from the prior estimation. If a statement is submitted after the beginning of a year, then the first payment thereafter shall be adjusted to account for any underpayment or overpayment based on the prior statement and subsequent payments shall be based on the latest statement.

5.5 Within approximately one hundred twenty (120) days after the end of 1998 and each subsequent calendar year, Landlord shall submit a categorized statement indicating (a) Tenant's proportionate share of the amount of Operating Charges incurred during such year, and (b) the sum of Tenant's estimated payments for such year. If such statement indicates that such sum exceeds Tenant's actual obligation, then Tenant shall deduct the overpayment from its next payment(s) pursuant to this Article. If such statement indicates that Tenant's actual obligation exceeds such sum, then Tenant shall pay the excess within thirty (30) days.

5.6 If the Lease Term commences or expires on a day other than January 1 or December 31, respectively, then Tenant's liability for Operating Charges incurred during the applicable year shall be proportionately reduced based on the number of days in the Lease Term falling within such year. Notwithstanding anything to the contrary contained in this Lease, after receipt of Landlord's annual reconciliation statement, Tenant at its expense shall have the right at all reasonable times and upon five (5) business days notice to audit Landlord's books and records relating to Operating Charges for the prior calendar year(s); provided, however, that Tenant's right to audit shall expire unless within one hundred twenty (120) days after Landlord has furnished to Tenant such statement of Operating Charges Tenant has notified Landlord in writing of Tenant's election to conduct an audit. If Tenant has timely exercised its option to conduct an audit, Tenant shall have a period of ninety (90) days in which to complete the audit, which ninety (90) day period shall commence only after Landlord has afforded Tenant access to such documents as are in Landlord's possession or control and which are necessary to conduct the audit, including (to the extent within Landlord's possession and control) work papers prepared by Landlord's accountants, canceled checks, invoices and such other documents as may be

reasonably required, and reconciliation of amortized capital expenditures made by Landlord to reduce operating expenses with the resulting operating expenses and the former corresponding operating expenses. Tenants shall have the right to review the documentation described above for the prior calendar year in order to have a basis for comparison of Operating Charges. In the event that it is ultimately determined that a refund of Operating Charges which exceeds one percent (1%) of the total Operating Charges for such year is due and Tenant has not previously conducted an audit for the two (2) years preceding the calendar year for which the audit is being conducted, Tenant shall have the right to audit such two prior years to determine whether refunds (relating to same category of expenses to which the errors determined to have been made relate) are due for such two prior years. Landlord shall fully cooperate with Tenant and its auditor so as to facilitate the performance of Tenant's audit. Tenant may review and (at Tenant's reasonable expense) copy such documentation during normal business hours. Tenant agrees to endeavor in good faith and use its reasonable efforts to conduct the audit in a manner which will cause minimum disruption to the operation of the Building and the management office. In the event that it is ultimately determined (by agreement of the parties or by a final court determination) that the actual Operating Charges for any calendar year, as chargeable to Tenant under this Lease, are less than the amount set forth in the Landlord's reconciliation statement of actual Operating Charges submitted by Landlord for such year, then Landlord shall reimburse Tenant for such overcharge within thirty (30) days of receipt of notice thereof together with interest thereon at the Default Rate until paid. If Operating Charges have been overstated by an amount in excess of three (3%) percent, Landlord shall also pay Tenant's reasonable cost incurred in conducting such audit.

## **ARTICLE VI USE OF PREMISES**

6.1 Tenant shall use the Premises solely for office (non-medical and non-governmental) and warehouse purposes and for no other use or purpose. Landlord represents that the zoning regulations applicable to the Building and any covenants, conditions and restrictions appertaining to the Building permit the use of the Premises for the uses specified in the preceding sentence. Tenant shall not use the Premises for any unlawful purpose, or in any manner that in Landlord's reasonable opinion will constitute waste or in any manner that will increase the number of parking spaces required for the Building or its full occupancy pursuant to present and future laws (including the Americans with Disabilities Act), ordinances, regulations and orders (collectively "Laws"). Tenant shall comply with all Laws concerning the use, occupancy and condition of the Premises and all machinery, equipment and furnishings therein. Landlord shall comply with all Laws concerning the base building systems and the portions of the Building (excluding the Premises) Landlord is required hereunder to maintain and repair. If any Law requires an occupancy or use permit for the Premises, then Tenant shall obtain and keep current such permit at Tenant's expense and promptly deliver a copy thereof to Landlord. Tenant shall not use the Premises in a manner that would (a) violate the terms of any occupancy or use permit, or (b) impair or interfere with any base building system or facility.

6.2 Tenant shall pay timely any business, rent or other tax or fee that is now or hereafter assessed or imposed upon Tenant's use or occupancy of the Premises, the conduct of Tenant's business in the Premises or Tenant's fixtures, furnishings, inventory or personal property. If any such tax or fee is imposed upon Landlord or Landlord is responsible for collection or payment thereof, then Tenant shall pay to Landlord the amount of such tax or fee.

6.3 Notwithstanding anything to the contrary contained in this Lease, Landlord represents that to the best of its knowledge and belief, there are no Hazardous Materials on, in or under the Land or Building. Landlord and Tenant shall not generate, use, release, store or dispose of any Hazardous Materials in or about the Building. Hazardous Materials mean (a) "hazardous wastes" as defined by the Resource Conservation and

Recovery Act of 1976, (b) "hazardous substances" as defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, (c) "toxic substances" as defined by the Toxic Substances Control Act, (d) "hazardous materials" as defined by the Hazardous Materials Transportation Act (as any of such Acts may be amended from time to time), (e) petroleum products, (f) chlorofluorocarbons, and (g) substances whose presence could be detrimental to the Building or hazardous to health or the environment. Hazardous Materials shall exclude reasonable quantities of customary office and cleaning supplies, provided such items are stored, used and disposed of in accordance with Laws.

## **ARTICLE VII ASSIGNMENT AND SUBLETTING**

7.1 Tenant shall not sublet or permit occupancy of (collectively "sublease") the Premises or part thereof, or assign or otherwise transfer (collectively "assign") this Lease or any of Tenant's rights or obligations, without Landlord's prior written consent, which consent shall not be unreasonably withheld or conditioned. If Landlord fails to respond to Tenant's request for such consent within ten business days after receipt of the information specified in Section 7.3, then Landlord shall be deemed to have granted such consent. No assignment of this Lease may be effected by operation of law without Landlord's prior written consent. Any assignment or sublease, Landlord's consent thereto or Landlord's collection of rent from any assignee or subtenant shall not be construed as (a) a waiver or release of Tenant from liability hereunder, or (b) relieving Tenant, any assignee or subtenant from the obligation of obtaining Landlord's prior written consent to any other assignment or sublease. Tenant assigns to Landlord any amount due from any assignee or subtenant as security for performance of Tenant's obligations pursuant to this Lease. Tenant directs each such assignee or subtenant to pay such amount directly to Landlord if such assignee or subtenant receives written notice from Landlord specifying that Tenant is in default under this Lease and that such amount shall be paid directly to Landlord. Each assignee and subtenant shall pay as so directed. Landlord's collection of such amount shall not be construed as an acceptance of such assignee or subtenant as a tenant or as a permitted assignee or subtenant. Tenant's obligations pursuant to this Lease shall be deemed to extend to any subtenant or assignee. Tenant shall cause each subtenant or assignee to comply with such obligations. Any assignee shall be deemed to have assumed obligations as if such assignee had originally executed this Lease and at Landlord's request shall execute promptly a document confirming such assumption. Each sublease is subject to the condition that if the Lease Term is terminated or Landlord succeeds to Tenant's interest in the Premises by voluntary surrender or otherwise, at Landlord's option the subtenant shall be bound to Landlord for the balance of the term of such sublease and shall attorn to and recognize Landlord as its landlord under the then executory terms of such sublease. Tenant shall not mortgage this Lease without Landlord's prior written consent, which consent may be granted or withheld in Landlord's sole and absolute discretion. Tenant shall pay the costs (including reasonable attorneys' fees not to exceed \$500.00 per request) incurred by Landlord in connection with Tenant's request for Landlord to consent to any assignment, sublease or mortgage.

7.2 If Tenant is a partnership, then any event(s) (whether or not voluntary, concurrent or related) which results in a dissolution of Tenant or a withdrawal or change of partners who, on the date of this Lease, own a controlling interest, shall be deemed a voluntary assignment of this Lease. Each general partner shall be deemed to own a controlling interest. If Tenant is a corporation, then any event(s) (whether or not voluntary, concurrent or related) which results in a dissolution, merger, consolidation or other reorganization of Tenant, or sale, transfer or relinquishment of the interest of shareholders who, on the date of this Lease, own a controlling interest, shall be deemed a voluntary assignment of this Lease. The preceding sentence shall not apply to corporations whose stock is traded through a national or regional exchange or an over-the-counter market. Anything in this Article to the contrary notwithstanding, provided no Event of Default has occurred and is continuing, Tenant may, upon prior written notice to Landlord but without Landlord's prior written consent and



without being subject to Landlord's rights and Tenant's obligations set forth in Section 7.4, assign or sublease to a "Permitted Transferee." For purposes of this Lease, a "Permitted Transferee" shall mean a corporation or other business entity: (a) into or with which Tenant shall be merged or consolidated, or to which substantially all of the assets of Tenant may be transferred, provided that the successor shall have a net worth of at least \$20,000,000.00 and reasonable liquidity, and provided that such successor shall assume in writing all of the obligations and liabilities of Tenant under this Lease; or (b) which shall control, be controlled by or be under common control with Tenant. In the event of any such assignment or subletting, Tenant shall remain fully liable as a primary obligor. For purposes of clause (b) above, control shall be deemed to be ownership of fifty percent (50%) or more of the stock and voting interest.

7.3 If Tenant wants to assign or sublet all or part of the Premises or this Lease, then Tenant shall give Landlord written notice ("Tenant's Request Notice") specifying the proposed assignee or subtenant and its business, the commencement date of the proposed assignment or sublease (the "Proposed Sublease Commencement Date"), the area proposed to be assigned or sublet (the "Proposed Sublet Space"), any premium or other consideration being paid for the proposed assignment or sublease and all other terms of the proposed assignment or sublease, and including (if available) the most recent financial statement and Dun and Bradstreet report of such assignee or subtenant and reasonably detailed information regarding such assignee or subtenant's reputation and business experience.

7.4 If pursuant to any agreement effecting or relating to any sublease or assignment (other than a sublease or assignment pursuant to Section 7.2) the subtenant or assignee is to pay any amount in excess of the sum of (a) the rent and other amounts due under this Lease plus (b) the reasonable out-of-pocket expenses (e.g., brokerage, advertising and improvements for the subtenant) incurred by Tenant in connection with the sublease or assignment, then, whether such excess is in the form of an increased rental, lump sum payment, payment for the sale or lease of fixtures or other leasehold improvements or any other form (and if the applicable space does not constitute the entire Premises, then such excess shall be determined on a pro rata basis), Tenant shall pay to Landlord one half of any such excess upon such terms as shall be specified by Landlord and in no event later than ten (10) days after Tenant's receipt (or deemed receipt) thereof. Landlord shall have the right to inspect Tenant's books and records relating to any sublease or assignment upon not less than ten days' prior written notice. The foregoing notwithstanding, Tenant shall have the right to retain all amounts paid by subtenants or assignees for occupancy during the first two years of the Lease Term.

#### **ARTICLE VIII MAINTENANCE AND REPAIRS**

8.1 Except as provided in Section 8.2 below, Tenant shall maintain the Premises and all fixtures and equipment located therein in clean, safe and sanitary condition, take good care thereof, make all repairs and replacements thereto and suffer no waste or injury thereto. Tenant shall give Landlord prompt written notice of any defect in or damage to the Building or any part thereof. Except as otherwise provided in Article XVII, all damage to the Premises or to any other part of the Building or the Land caused by any act or omission of any invitee, agent, employee, subtenant, assignee, contractor, client, family member, licensee, customer or guest of Tenant (collectively "Invitees") or Tenant, shall be repaired by and at Tenant's expense, except that Landlord shall have the right to make any such repair at Tenant's expense. At the expiration or earlier termination of the Lease Term, Tenant shall surrender the Premises broom clean and in good order, condition and repair, except for ordinary wear and tear and as otherwise provided in Article XVII. Landlord shall provide and install replacement tubes for building standard fluorescent light fixtures (subject to reimbursement per Article V); all other bulbs and tubes for the Premises shall be provided and installed at Tenant's expense.

8.2 Landlord shall keep the exterior and demising walls, load bearing elements, foundations and roof and the base building mechanical, electrical, HVAC and plumbing systems, pipes and conduits that are provided by Landlord in the operation of the Building, clean and in good operating condition and, promptly after becoming aware of any such item needing repair, will make all necessary repairs thereto. Landlord shall cleanup the landscaping during the construction of the initial tenant improvements.

## **ARTICLE IX ALTERATIONS**

9.1 The original improvement of the Premises shall be accomplished in accordance with Exhibit B. Landlord is under no obligation to make any alterations, decorations, additions, improvements or other changes (collectively "Alterations") in or to the Premises except as otherwise expressly provided herein.

9.2 Tenant shall not make or permit anyone to make any Alteration in or to the Premises or the Building without Landlord's prior written consent, which consent may be granted or withheld in Landlord's absolute discretion with respect to structural Alteration and any Alteration which affects base Building systems, but which consent shall not be unreasonably withheld with respect to other Alterations and which consent shall not be required with respect to purely cosmetic Alterations. Any Alteration made by Tenant shall be made: (a) in a good, workmanlike, first-class and prompt manner; (b) using new materials only; (c) by a contractor, on days and at times and (if the Alteration requires a building permit or will cost more than \$100,000) under the supervision of an architect approved in writing by Landlord; (d) in accordance with plans and specifications prepared by an engineer or architect approved by Landlord and reviewed (at Landlord's standard charge) by Landlord; (e) in accordance with Laws, requirements of any firm insuring the Building and Building standards; (f) after obtaining a worker's compensation insurance policy approved in writing by Landlord and any bonds required by Landlord; (g) after delivering to Landlord written, unconditional waivers of mechanics' and materialmen's liens against the Premises and the Building from all proposed contractors, subcontractors, laborers and material suppliers; and (h) with respect to electrical and mechanical work, by a contractor designated by Landlord. If a lien (or a petition to establish a lien) is filed in connection with any Alteration, then such lien (or petition) shall be discharged by Tenant at Tenant's expense within ten (10) days thereafter by the payment thereof or filing of a bond acceptable to Landlord. Landlord's consent to an Alteration shall be deemed not to constitute Landlord's consent to subjecting its interest in the Premises or the Building to liens which may be filed in connection therewith. Tenant shall hire Landlord (or its designee) to perform any Alteration, provided that the charge to Tenant therefor is reasonable and consistent with third party proposals and/or bids received by Tenant. Promptly after the completion of an Alteration, Tenant at its expense shall deliver to Landlord three (3) sets of accurate as-built drawings showing such Alteration.

9.3 If an Alteration is made without Landlord's prior written consent, then Landlord shall have the right at Tenant's expense to remove such Alteration and restore the Premises and the Building to their condition immediately prior thereto or to require Tenant to do the same. All Alterations to the Premises or the Building made by Tenant shall become Landlord's property at the expiration or earlier termination of the Lease Term and shall be surrendered with the Premises at the expiration or earlier termination of the Lease Term, except that (a) if Tenant is not in default under this Lease, then Tenant shall have the right to remove, prior to the expiration or earlier termination of the Lease Term, movable furniture, movable furnishings and movable trade fixtures installed in the Premises by Tenant solely at Tenant's expense, and (b) Tenant shall be required to remove all Alterations to the Premises or the Building which Landlord designates in writing for removal. At Tenant's written request, Landlord shall notify at the time Tenant requests Landlord's approval or any Alteration whether Tenant will be required to remove such Alteration. Landlord waives any lien right with respect to any of Tenant's personal property which is leased or financed. Movable furniture, furnishings and trade fixtures shall be deemed

to exclude without limitation any item the removal of which might cause damage to the Premises or the Building or which would normally be removed from the Premises with the assistance of any tool or machinery other than a dolly. Landlord shall have the right to repair at Tenant's expense any damage to the Premises or the Building caused by such removal or to require Tenant to do the same. If any such item is not removed prior to the expiration or earlier termination of the Lease Term, then such item shall become Landlord's property and shall be surrendered with the Premises as a part thereof; provided, however, that Landlord shall have the right to remove such item from the Premises at Tenant's expense.

## **ARTICLE X SIGNS**

10.1 Landlord will list Tenant's name in the Building directory. So long as Tenant is the sole tenant of the Building, Tenant shall have sole use of the directory (but Landlord may list its name and the Building manager's name thereon). Subject to Tenant's obtaining Landlord's approval (which approval shall not be unreasonably withheld) and any necessary governmental or Columbia approval, Tenant shall have the right to install a sign on the exterior of the Building. Tenant shall pay for maintenance of such sign and shall remove such sign at the expiration or earlier termination of the Lease Term. Except as provided herein, Tenant shall not paint, affix or otherwise display on any part of the exterior or interior of the Building any sign, advertisement or notice.

## **ARTICLE XI SECURITY DEPOSIT**

11.1 Tenant shall deliver the Security Deposit when Tenant executes this Lease. Landlord shall not be required to pay interest on the Security Deposit or to maintain the Security Deposit in a separate account. Within three (3) days after notice of Landlord's use of the Security Deposit, Tenant shall restore the Security Deposit to its prior amount. Within approximately ninety (90) days after the expiration or earlier termination of the Lease Term, Landlord shall return the Security Deposit less such portion thereof as Landlord may have used to satisfy Tenant's obligations with respect to an Event of Default. If Landlord transfers the Security Deposit to a transferee of the Building or Landlord's interest therein, then such transferee (and not Landlord) shall be liable for its return. Tenant shall have the right to deliver to Landlord an unconditional, irrevocable letter of credit in substitution for the cash Security Deposit. Tenant shall cause such letter of credit to be: (a) in form and substance reasonably satisfactory to Landlord; (b) issued by a commercial bank reasonably acceptable to Landlord in the Washington, D.C. metropolitan area (or if issued by a bank not in the Washington, D.C. metropolitan area, then confirmed by a bank in the Washington, D.C. metropolitan area); (c) made expressly transferable and assignable to the owner from time to time of the Building; (d) automatically renewed (without necessity of the issuer's or any one else's taking any action) from time to time through the ninetieth (90th) day after the expiration or earlier termination of the Lease Term unless the issuer gives Landlord thirty (30) days prior written notice of nonrenewal; and (e) replaced with cash in the amount of the Security Deposit within five (5) days after receipt of any notice pursuant to Section 11.1(d).

**ARTICLE XII  
HOLDING OVER**

12.1 Tenant acknowledges that it is extremely important that Landlord have substantial advance notice of the date Tenant will vacate the Premises because Landlord will (a) require an extensive period to secure a replacement tenant, and (b) plan its entire leasing and renovation program for the Building in reliance on its lease expiration dates. If the Premises are not surrendered at the expiration or earlier termination of Tenant's right of possession, then it will be conclusively presumed that the value of possession, and the resulting loss that will be suffered by Landlord, far exceed the Base Rent and additional rent that would have been payable had the Lease Term continued during such holdover period. Therefore if upon the expiration or earlier termination of Tenant's right of possession Tenant (or anyone claiming through Tenant) does not surrender immediately the Premises (or portion thereof), then the rent shall be increased to equal the greater of the following percentage of the Base Rent, additional rent and other sums that would have been payable pursuant to the provisions of this Lease (assuming the Lease Term for the entire Premises had continued during such holdover period): one hundred three percent (103%) if Landlord has given Tenant written permission to holdover; one hundred twenty-five percent (125%) if Landlord has not given Tenant written permission to holdover but Landlord does not have a lease or purchase agreement executed with another party and does not intend for itself or its affiliates to occupy; or one hundred fifty percent (150%) in any other case. Such rent shall be computed on a monthly basis and shall be payable on the first day of such holdover period and the first day of each calendar month thereafter during such holdover period until the Premises have been vacated. Nothing herein shall limit Landlord's right to recover possession of the Premises upon the expiration or earlier termination of the Lease Term.

**ARTICLE XIII  
INSURANCE**

13.1 Tenant shall not conduct any activity or place any item in or about the Building which may violate the requirements or increase the rate of any insurance covering the Building. If any increase in such rate is due to any such activity or item, then (whether or not Landlord has consented to such activity or item) Tenant shall pay such increase. The statement of any insurance company or insurance rating or similar organization that such an increase is due to any such activity or item shall be conclusive evidence thereof.

13.2 Tenant shall maintain throughout the Lease Term with a company licensed to do business in the jurisdiction in which the Building is located, approved in writing by Landlord and having a rating equal to or exceeding A:XI in Best's Insurance Guide (a) broad form commercial general liability insurance (written on an occurrence basis and including contractual liability coverage insuring Tenant's obligations pursuant to Section 15.2, premises and operations, broad form property damage and independent contractors coverages, and an endorsement for personal injury), and (b) all-risk property insurance. Such liability insurance shall be in minimum amounts typically carried by prudent tenants engaged in similar operations, but in no event shall be in an amount less than two million dollars (\$2,000,000) combined single limit per occurrence. Such property insurance shall be in an amount not less than that required to replace all Alterations and all other contents of the Premises (other than the improvements installed pursuant to Exhibit B). All such insurance shall name Landlord (and, at Landlord's option, its partners, members, employees and building manager) and the holder of any Mortgage as additional named insureds, contain an endorsement that such insurance shall remain in full force and effect notwithstanding that the insured may have waived its claims against any person prior to the occurrence of a loss, provide that the insurer waives all right of recovery by way of subrogation against Landlord, its partners, agents and employees, be primary and noncontributory, and contain an endorsement prohibiting cancellation, failure to renew, reduction in amount or change of coverage (1) as to the interests of Landlord or the holder of any Mortgage by reason of any act or omission of Tenant, and (2) without the insurer's giving Landlord thirty

(30) days' prior written notice of such action. Tenant shall deliver a certificate of such insurance and receipts evidencing payment of the premium for such insurance (and, upon request, copies of all required insurance policies, including endorsements and declarations) to Landlord on or before the Lease Commencement Date and at least annually thereafter. Landlord reserves the right to increase reasonably (and in accordance with industry practice for similar tenants in similar buildings) from time to time the minimum amounts of insurance Tenant is required to maintain.

13.3 Landlord shall maintain all risk property insurance (with replacement cost coverage) on the base Building in an amount sufficient to avoid the application of any coinsurance provision. Landlord waives its right of recovery against Tenant and releases Tenant from any and all liabilities claims and losses for which Tenant may otherwise be liable to the extent Landlord is covered by such insurance (or would have been covered by insurance if Landlord had maintained the insurance required hereunder). Landlord shall secure a waiver of subrogation endorsement from its insurance carrier.

#### **ARTICLE XIV SERVICES AND UTILITIES**

14.1 Landlord will furnish to the Premises air-conditioning and heating during the seasons they are required in Landlord's reasonable judgment. Landlord will provide: janitorial service on Monday through Friday (excluding holidays); electricity; water; elevator service; and exterior window-cleaning service. The Building's normal operating hours are 8:00 a.m. to 6:00 p.m. on Monday through Friday (excluding holidays) and 9:00 a.m. to 1:00 p.m. on Saturday (excluding holidays) and such other hours as Landlord and Tenant reasonably determine. Notwithstanding anything to the contrary contained in this Lease, if any interruption of utilities or services shall continue for more than three (3) consecutive business days and shall render any portion of the Premises unusable for the normal conduct of Tenant's business, then all Base Rent and additional rent payable hereunder with respect to such portion of the Premises which Tenant does not occupy shall be abated retroactively to the first (1st) business day of such interruption and such abatement shall continue until full use of such portion of the Premises is restored to Tenant. Except in the case of an emergency, Landlord will give Tenant at least three (3) business days prior notice if Landlord intends to interrupt any services required to be furnished by the Landlord. Landlord shall endeavor in good faith and use its commercial best efforts to promptly commence and diligently pursue to completion any work reasonably necessary to restore the utility or service so interrupted. Notwithstanding any of the foregoing to the contrary, Tenant and Tenant's employees shall have access to the Building and Premises twenty-four (24) hours a day, seven (7) days a week, 365 days a year.

14.2 Tenant shall pay directly to BG & E for all electricity consumed in the Building or on the Land.

#### **ARTICLE XV LIABILITY OF LANDLORD**

15.1 Landlord, its employees and agents shall not be liable to Tenant, Invitees or any other person or entity for any damage (including indirect and consequential damage), injury, loss or claim (including claims for the interruption of or loss to business) based on or arising out of any cause whatsoever, including without limitation: repair to any portion of the Premises or the Building; interruption in the use of the Premises or any equipment therein; accident or damage resulting from any use or operation (by Landlord, Tenant or any other person or entity) of heating, cooling, electrical, sewerage or plumbing equipment; termination of this Lease by reason of damage to or condemnation of the Premises or the Building; fire, robbery, theft, vandalism, mysterious disappearance or any other casualty; actions of any other tenant of the Building or other person or entity; failure or inability to furnish or interruption in any utility or service specified in this Lease; and leakage in any part of

the Premises or the Building. If a condition exists which may be the basis of a claim of constructive eviction, then Tenant shall give Landlord written notice thereof and a reasonable opportunity to correct such condition, and in the interim Tenant shall not claim that it has been constructively evicted or is entitled to a rent abatement. Any property placed by Tenant or Invitees in or about the Premises or the Building shall be at the sole risk of Tenant, and Landlord shall not in any manner be responsible therefor. Any person receiving an article delivered for Tenant shall be acting as Tenant's (not Landlord's) agent. For purposes of this Article, the term "Building" shall be deemed to include the Land. The foregoing notwithstanding, Landlord shall not be released from liability for physical injury to natural persons caused by Landlord's negligence or willful misconduct.

15.2 Except for Landlord's negligence or willful misconduct, Tenant shall reimburse Landlord, its employees and agents for, and shall indemnify, defend upon request and hold them harmless from and against, all costs, damages, claims, liabilities, expenses (including attorneys' fees), losses and court costs suffered by or claimed against them, directly or indirectly, based on or arising out of, in whole or in part, (a) use and occupancy of the Premises or the business conducted therein, (b) any act or omission of Tenant or any Invitee, (c) any breach of Tenant's obligations or warranties under this Lease, including failure to surrender the Premises upon the expiration or earlier termination of the Lease Term, or (d) entry by Tenant or Invitees upon the Land prior to the Lease Commencement Date.

15.3 A landlord shall not be liable for any obligation or liability based on or arising out of any event or condition occurring during any period such landlord was not the owner of the Building. A landlord shall be relieved of an obligation or liability incurred during its period of ownership if and only if and to the extent the successor landlord agrees to assume such obligation or liability of the prior landlord. If a landlord transfers its interest in the Building, then Tenant shall attorn to the transferee and execute, acknowledge and deliver within five (5) days after request any document submitted to Tenant to confirm the attornment.

15.4 Tenant shall not have the right to offset, deduct or assert a counterclaim for any amount owed or allegedly owed to it, against any payment to Landlord. Tenant's sole remedy for recovery of such amount is to institute an independent action.

15.5 If Tenant is awarded a money judgment against Landlord or with respect to any breach of Landlord's obligations, then recourse for satisfaction of such judgment shall be limited to execution against Landlord's estate and interest in the Building. No other asset of Landlord, any officer, director, partner or member of Landlord (collectively "Officer") or any other person or entity shall be available to satisfy or subject to such judgment, nor shall any Officer or other person or entity have personal liability for satisfaction of any claim or judgment against Landlord or any Officer. Nothing in this Section shall limit Tenant's rights and remedies pursuant to the last sentence of Section 22.1.

15.6 Neither party shall be liable for punitive damages.

## **ARTICLE XVI RULES**

16.1 Tenant shall observe: the rules specified in Exhibit A; and any other reasonable rule that Landlord may promulgate for the Building, provided notice thereof is given and such rule is not inconsistent with this Lease. Landlord shall have no duty to enforce such rules or any provision of any other lease against any other tenant.

**ARTICLE XVII  
DESTRUCTION**

17.1 If the Premises are rendered totally or partially inaccessible or unusable by fire or other casualty, then Landlord shall diligently restore the Premises and the Building to substantially the same condition they were in prior to such casualty, except that if in Landlord's judgment such restoration cannot be completed within one year after the occurrence of such casualty (taking into account the time needed for effecting a settlement with any insurance company, removal of debris, preparation of plans and issuance of all required governmental permits), then either party shall have the right to terminate the Lease Term as of the sixtieth (60th) day after such casualty by giving written notice within forty-five (45) days after the occurrence of such casualty. If this Lease is not terminated pursuant to this Article, then until such restoration of the Premises are substantially complete Tenant shall be required to pay the Base Rent for only the portion of the Premises that in Landlord's judgment is usable while such restoration is being made, except that if such casualty was caused by the act or omission of Tenant or an Invitee, then Tenant shall not be entitled to any rent reduction. After receipt of the insurance proceeds (including proceeds of any insurance maintained by Tenant), Landlord shall restore the Premises and the Building, except that (a) if such casualty was caused by the act or omission of Tenant or an Invitee, then Tenant shall pay the amount by which such expenses exceed any property insurance proceeds actually received by Landlord on account of such casualty, and (b) Landlord shall not be required to repair or restore any Alteration previously made by Tenant or any of Tenant's trade fixtures, furnishings, equipment or personal property. Anything to the contrary notwithstanding, Landlord shall have the right to terminate this Lease if (1) insurance proceeds are insufficient to pay the full cost of such restoration, (2) any Mortgage holder does not make such proceeds available for such restoration, (3) zoning or other Laws do not permit such restoration, or (4) restoration costs exceed twenty-five percent (25%) of the Building's replacement value.

**ARTICLE XVIII  
CONDEMNATION**

18.1 If ten percent or more of the Premises or occupancy thereof is condemned or sold under threat of condemnation (collectively "condemned"), then this Lease shall terminate on the day prior to the date title vests in the condemnor (the "Vesting Date"). If less than such ten percent is condemned, then this Lease shall continue in full force and effect as to the part of the Premises not condemned, except that as of the Vesting Date rent shall be reduced proportionately.

18.2 All awards, damages and compensation paid on account of such condemnation shall belong to Landlord. Tenant assigns to Landlord all rights thereto. Tenant shall not make any claim against Landlord or the condemnor for any portion thereof attributable to damage to the Premises, value of the unexpired portion of the Lease Term, loss of profits or goodwill, leasehold improvements or severance damages. The foregoing shall not prevent Tenant from pursuing a separate claim against the condemnor for the value of movable furnishings and movable trade fixtures installed in the Premises solely at Tenant's expense and relocation expenses, provided that such claim in no way diminishes any award, damages or compensation payable to Landlord.

**ARTICLE XIX**  
**DEFAULT**

19.1 An Event of Default is (a) Tenant's failure to make when due any payment of the Base Rent, additional rent or other amount, which failure continues for five (5) days after written notice, (b) Tenant's breach of any other covenant or warranty, which breach continues for thirty (30) days after written notice (or such longer period of time as may be reasonably required to cure such breach provided Tenant diligently pursues such cure during such period and thereafter diligently pursues such cure to completion), (c) an Event of Bankruptcy as specified in Article XX, or (d) Tenant's dissolution or liquidation.

19.2 This Lease is on the express condition that if an Event of Default occurs (even if prior to the Lease Commencement Date), then this Section shall apply. Except as otherwise provided in this Section, Landlord's obligations pursuant to this Lease shall cease and failure to perform such obligations shall not relieve Tenant from any obligation. Landlord shall have the right to terminate this Lease. In addition, with or without terminating this Lease, Landlord may re-enter, terminate Tenant's right of possession and take possession of the Premises. The provisions of this Article shall operate as a notice to quit. Tenant waives any other notice to quit or of Landlord's intention to re-enter the Premises or terminate this Lease. If necessary, Landlord may proceed to recover possession of the Premises under applicable law, or by such proceedings, including re-entry and possession, as may be applicable. Landlord may relet the Premises or any part thereof, alone or together with other space, for such term(s) (which may extend beyond the date on which the Lease Term would have expired but for any termination thereof) and on such terms and conditions (which may include concessions) as Landlord, in its sole discretion, may determine, but Landlord shall not be liable for, nor shall Tenant's obligations be diminished by reason of, Landlord's failure to relet all or any portion of the Premises or collect any rent due upon such reletting. Whether or not this Lease is terminated or any suit is instituted, Tenant shall be liable for: (a) the Base Rent, additional rent, damages or other sums which may be due or sustained prior to such default, and for all costs, fees and expenses (including without limitation reasonable attorneys' fees, brokerage fees, advertising expenses, expenses incurred in placing the Premises in first-class rentable condition and concessions granted by Landlord) incurred by Landlord in pursuit of its remedies and in renting the Premises to others from time to time; and (b) additional damages which at Landlord's election shall be either: (1) an amount equal to the Base Rent and additional rent which would have become due from the date of Tenant's default through the expiration (or what but for any termination thereof would have been such expiration), less the amount of rental, if any, which Landlord receives during such period from others to whom the Premises may be rented (other than any additional rent received as a result of any failure of such other person to perform any of its obligations), which amount shall be computed and payable in monthly installments, in advance, on the first day of each calendar month following Tenant's default and continuing until the expiration of the Lease Term (or what but for any termination thereof would have been such expiration). Separate suits may be brought from time to time to collect any such damages for any month(s) (and any such suit shall not in any manner prejudice Landlord's right to collect any such damages for any subsequent month(s)) or Landlord may defer initiating any such suit until after the expiration of the Lease Term (in which event such deferral shall not be construed as a waiver of Landlord's rights as set forth herein and Landlord's cause of action shall be deemed not to have accrued until the expiration of the Lease Term); or (2) an amount equal to the present value (as of the date of Tenant's default) of (c) the Base Rent and additional rent due or which would have become due from time to time through the expiration of the Lease Term (or what but for any termination thereof would have been such expiration), minus (d) the net rental value (as determined by an appraiser selected by Landlord) of the Premises through the expiration of the Lease Term, which liquidated and agreed final damages shall be payable to Landlord in a lump sum on demand. For purpose of this Section, present value shall be computed by discounting at a rate equal to one (1) whole percentage point above the discount rate in effect (as of the date of payment) at the Federal Reserve Bank located in Richmond, Virginia. Landlord may bring suit to collect any such damages at any time after an Event of Default. Tenant



waives any right of redemption, re-entry or restoration of the operation of this Lease under any present or future law, including any such right which Tenant would otherwise have if Landlord obtains possession of the Premises after an Event of Default. Whether or not the Lease Term and/or Tenant's right of possession is terminated, Landlord shall have the right to terminate any renewal or expansion right and to withhold any consent or approval in its sole and absolute discretion. If Landlord is entitled, or Tenant is required, pursuant to any provision hereof to take any action upon the termination of the Lease Term, then Landlord shall be entitled, and Tenant shall be required, to take such action also upon the termination of Tenant's right of possession. Provided Tenant has vacated fully the Premises and has given Landlord written notice thereof, Landlord shall use reasonable efforts to mitigate damages.

19.3 Landlord's rights and remedies set forth in this Lease are cumulative and in addition to Landlord's other rights and remedies at law or in equity, including those available as a result of any anticipatory breach. Landlord's exercise of any such right or remedy shall not prevent the concurrent or subsequent exercise of any other right or remedy. Landlord's delay or failure to exercise or enforce any of Landlord's rights or remedies or Tenant's obligations shall not constitute a waiver of any such rights, remedies or obligations. Landlord's acceptance of any payment with knowledge of a breach shall not constitute a waiver of such breach. Landlord shall be deemed not to have granted any waiver unless such waiver is set forth expressly in an instrument signed by Landlord. Any such waiver shall not be construed as a waiver of any matter except as specified therein. Neither Tenant's payment of an amount less than a sum due nor Tenant's endorsement or statement on any check or letter accompanying such payment shall be deemed an accord and satisfaction. Notwithstanding any request or designation by Tenant, Landlord may apply any payment received from Tenant to any payment then due. Landlord's acceptance of any payment (including any payment pursuant to Section 12.1) shall be deemed not to constitute a waiver of any breach or prejudice Landlord's rights and remedies. Re-entry and acceptance of keys shall not be considered an acceptance of a surrender of this Lease.

19.4 If more than one natural person and/or entity shall constitute Tenant, then the liability of each such person or entity shall be joint and several. If Tenant is a general partnership or other entity the partners or members of which are subject to personal liability, then the liability of each such partner or member shall be joint and several.

19.5 If Tenant fails to make any payment to any third party or to do any act required hereby to be made or done by Tenant, and if such failure is not cured within the cure period specified in Section 19.1(b), then Landlord may, but shall not be required to, make such payment or do such act. Landlord's taking such action shall not be considered a cure of such failure by Tenant or prevent Landlord from pursuing any remedy it is otherwise entitled to in connection with such failure. If Landlord elects to take such action, then Tenant shall pay all expenses incurred (including a ten percent (10%) fee to cover Landlord's administrative expenses).

19.6 If Tenant fails to pay the Base Rent, additional rent or any other payment due Landlord by the date such payment is due (without regard to any grace period specified in this Lease), then (without limiting Landlord's rights and remedies) Tenant shall pay a late fee of five percent (5%) of the amount of such payment. Such payment shall bear interest at the Default Rate from the date such payment was due to the date of payment. The Default Rate shall equal the rate per annum which is two (2) whole percentage points above the prime rate published from time to time in the Money Rates section of the Wall Street Journal (or substitute prime rate reasonably designated by Landlord). The foregoing notwithstanding, no late fee shall be payable with respect to the first late payment in any calendar year provided such payment is made within ten (10) days after written notice.

**ARTICLE XX  
BANKRUPTCY**

20.1 An Event of Bankruptcy is the occurrence with respect to Tenant of any of the following: (a) such person's becoming insolvent, as that term is defined in Title 11 of the United States Code (the "Bankruptcy Code"), or under the insolvency laws of any state (the "Insolvency Laws"); (b) appointment of a receiver or custodian for any property of such person, or the institution of a foreclosure or attachment action upon any property of any such person; (c) filing by such person of a voluntary petition under the provisions of the Bankruptcy Code or Insolvency Laws; (d) filing of an involuntary petition against such person as the subject debtor under the Bankruptcy Code or Insolvency Laws, which either (1) is not dismissed within thirty (30) days after filing, or (2) results in the issuance of an order for relief against the debtor; or (e) such person's making or consenting to an assignment for the benefit of creditors or a composition of creditors.

20.2 After the commencement of a case (the "Case") in which Tenant is the subject debtor under the Bankruptcy Code, (a) Tenant or its trustee in bankruptcy (collectively "Trustee") shall perform all of Tenant's post-petition obligations under this Lease, and (b) if Landlord is entitled to damages (including without limitation unpaid rent), then all such damages shall be entitled to administrative expense priority pursuant to Section 507(a)(1) of the Bankruptcy Code. If the Lease is assigned pursuant to the Bankruptcy Code, then the assignee shall be deemed without further act to have assumed all of Tenant's obligations under this Lease arising from and after such assignment and at Landlord's request shall execute an instrument confirming such assumption. Trustee shall not have the right to assume or assume and assign this Lease unless Trustee promptly (a) cures all defaults under this Lease, (b) compensates Landlord for damages incurred as a result of such defaults, (c) provides adequate assurance of future performance on the part of Trustee as debtor in possession or Trustee's assignee, and (d) complies with all other requirements of the Bankruptcy Code. If Trustee fails to assume or assign this Lease in accordance with the requirements of the Bankruptcy Code within sixty (60) days after the initiation of the Case (or, if shorter, the shortest period of time in which Trustee may be required to so act), then Trustee shall be deemed to have rejected this Lease. If this Lease is rejected or deemed rejected, then Landlord may exercise all rights and remedies available pursuant to Article XIX. Adequate assurance of future performance shall require (among other things) that the following minimum criteria be met: (1) Tenant's gross receipts in the ordinary course of business during the thirty (30) days preceding the Case must be greater than ten (10) times the next monthly installment of the Base Rent and additional rent; (2) Both the average and median of Tenant's monthly gross receipts in the ordinary course of business during the seven (7) months preceding the Case must be greater than ten (10) times the next monthly installment of the Base Rent and additional rent; (3) Trustee must pay its estimated pro rata share of the cost of all services performed or provided by Landlord (whether directly or through agents or contractors and whether or not previously included as part of the Base Rent) in advance of the performance or provision of such services; (4) Trustee must agree that Tenant's business shall be conducted in a first-class manner, and that no liquidating sale, auction or other non-first-class business operation shall be conducted in the Premises; (5) Trustee must agree that the use of the Premises as stated in this Lease shall remain unchanged and that no prohibited use shall be permitted; (6) Trustee must agree that the assumption or assumption or assignment of this Lease shall not violate or affect the rights of other tenants in the Building; (7) Trustee must pay at the time the next monthly installment of the Base Rent is due, in addition to such installment, an amount equal to the monthly installments of the Base Rent and additional rent due for the next six (6) months thereafter, such amount to be held as a security deposit; (8) Trustee must agree to pay immediately after Landlord draws on such security deposit the amount drawn; (9) Trustee must comply with all of Tenant's obligations under this Lease; and (10) All assurances of future performance specified in the Bankruptcy Code must be provided.

**ARTICLE XXI  
SUBORDINATION**

21.1 This Lease is subject and subordinate to the lien, provisions, operation and effect of all mortgages, deeds of trust, ground leases or other security instruments which may now or hereafter encumber the Building or the Land (collectively "Mortgages"), to all funds and indebtedness intended to be secured thereby, and to all renewals, extensions, modifications, recastings or refinancings thereof. The holder of a Mortgage to which this Lease is subordinate shall have the right (subject to any required approval of the holder of any other Mortgage) at any time to declare this Lease to be superior to the lien, provisions, operation and effect of such Mortgage. The foregoing notwithstanding, subordination of this Lease to any Mortgage is conditioned on the holder of such Mortgage's agreeing to execute a subordination, nondisturbance and attornment agreement (on such holder's customary form).

21.2 At Landlord's request Tenant shall execute promptly any requisite or appropriate document confirming such subordination. Tenant waives the provisions of any statute or rule of law now or hereafter in effect which may give Tenant any right to terminate or otherwise adversely affect this Lease or Tenant's obligations in the event any such foreclosure proceeding is prosecuted or completed or in the event the Land, the Building or Landlord's interest therein is transferred by foreclosure sale or by deed in lieu of foreclosure. If this Lease is not extinguished upon such transfer or by the transferee following such transfer, then, at the request of such transferee, Tenant shall attorn to such transferee and shall recognize such transferee as landlord. Upon such attornment such transferee shall not be (a) bound by any payment of the Base Rent or additional rent more than one (1) month in advance, (b) bound by any amendment of this Lease made without the consent of the holder of each Mortgage existing as of the date of such amendment, (c) liable for any breach, act or omission of any prior landlord, (d) subject to any offsets or defenses which Tenant might have against any prior landlord, or (e) liable for return of the Security Deposit unless such transferee actually receives the Security Deposit. Within five (5) days after receipt, Tenant shall execute, acknowledge and deliver any requisite or appropriate document submitted to Tenant confirming such attornment.

21.3 If a (prospective or current) holder of a Mortgage requires that modifications to this Lease be obtained, and provided that such modifications (a) are reasonable, (b) do not adversely affect Tenant's use of the Premises as herein permitted, and (c) do not increase the rent and other sums to be paid by Tenant, then Landlord may submit to Tenant an amendment to this Lease incorporating such modifications. Tenant shall execute, acknowledge and return such amendment within five (5) days after receipt if Tenant reasonably approves such amendment.

**ARTICLE XXII  
QUIET ENJOYMENT**

22.1 If Tenant shall perform timely all of its obligations, then, subject to the provisions of this Lease, Tenant shall during the Lease Term peaceably and quietly occupy and enjoy possession of the Premises without hindrance by Landlord or anyone claiming through Landlord. The foregoing notwithstanding, this Lease is contingent upon Landlord's purchasing the Building. If Landlord does not purchase the Building by May 1, 1998, then this Lease shall terminate.

22.2 Landlord reserves the right to: (a) change the street address and name of the Building; (b) (if Tenant is not the sole tenant of the Building) change the arrangement and location of entrances, passageways, doors, doorways, corridors, elevators, stairs, restrooms or other public parts of the Building; (c) erect, use and maintain pipes, conduits and other equipment in and through the Premises; (d) (if Tenant is not the sole tenant of the Building) grant to anyone the exclusive right to conduct any particular business in the Building not inconsistent with the permitted use of the Premises; (e) use or lease exclusively the roof, sidewalks and other exterior areas; (f) resubdivide the Land or to combine the Land with other lands; (g) (if Tenant is not the sole tenant of the Building) construct improvements on the Land and in the public and common areas of the Building; (h) relocate any parking area designated for Tenant's use; (i) during the last 12 months of the Lease Term, display signs, advertisements and notices on any part of the exterior or interior of the Building; and (j) make alterations to the Premises after Tenant vacates the Premises or portion thereof and without relieving Tenant of its obligation to pay rent through the expiration of the Lease Term. Exercise of any such right shall not be considered a constructive eviction or a disturbance of Tenant's business or occupancy. Landlord shall use reasonable effort to minimize any disruption.

**ARTICLE XXIII  
GENERAL PROVISIONS**

23.1 Tenant acknowledges that neither Landlord nor any broker, agent or employee of Landlord has made any representation or promise with respect to the Premises or the Building except as expressly set forth herein, and no right is being acquired by Tenant except as expressly set forth herein. This Lease contains the entire agreement of the parties and supersedes all prior agreements, negotiations, letters of intent, proposals, representations, warranties and discussions between the parties. This Lease may be changed in any manner only by an instrument signed by both parties.

23.2 Nothing contained herein shall be construed as creating a relationship between the parties other than that of landlord and tenant.

23.3 Each party warrants that in connection with this Lease it has not employed or dealt with any broker, agent or finder other than the Broker (s). Landlord shall pay each Broker pursuant to a separate agreement with such Broker.

23.4 From time to time upon ten (10) days' prior written notice, Tenant and each subtenant and assignee of Tenant shall execute, acknowledge and deliver to Landlord and its designees a written statement certifying: (a) that this Lease is unmodified and in full force and effect (or that this Lease is in full force and effect as modified and stating the modifications); (b) the dates to which rent and any other charges have been paid; (c) that Landlord is not in default in the performance of any obligation (or specifying the nature of any default); (d) the address to which notices are to be sent; (e) that this Lease is subordinate to all Mortgages; (f) that Tenant has accepted the Premises and all work therefor has been completed (or specifying the incomplete

work); and (g) such other matters as Landlord may reasonably request. Any such statement may be relied upon by any owner of the Building or the Land, any prospective purchaser of the Building or the Land, any holder or prospective holder of a Mortgage or any other person or entity. Time is of the essence to the delivery of such statements.

**23.5 LANDLORD AND TENANT WAIVE TRIAL BY JURY IN ANY ACTION, CLAIM OR COUNTERCLAIM BROUGHT IN CONNECTION WITH ANY MATTER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS LEASE, THE LANDLORD-TENANT RELATIONSHIP, TENANT'S USE OR OCCUPANCY OF THE PREMISES OR ANY CLAIM OF INJURY OR DAMAGE.**

Tenant consents to service of process relating to any such action at the Premises; provided, however, that nothing herein shall be construed as requiring such service at the Premises. Landlord and Tenant waive any objection to the venue of any action filed in any court situated in the jurisdiction in which the Building is located and waive any right under the doctrine of forum non conveniens or otherwise to transfer any such action to any other court.

23.6 Any notice or other required communication shall be in writing and deemed duly given when delivered in person (with receipt therefor) or sent (postage prepaid, return receipt requested) by Federal Express, other overnight courier, or certified or registered mail, to the following addresses: (a) if to Landlord, 8227 Old Courthouse Road, Suite 100, Vienna, Virginia 22182; or (b) if to Tenant, at the Tenant Address for Notices. A party may change its address for the receiving of notices by notice given in accordance with this Section. If Landlord or the holder of any Mortgage notifies Tenant that a copy of each notice to Landlord shall be sent to such holder at a specified address, then Tenant shall give (in the manner specified in this Section and at the same time such notice is given to Landlord) a copy of each such notice to such holder, and no such notice shall be considered duly given unless such copy is so given to such holder. If Tenant claims that Landlord has breached any obligation, then Tenant shall give such holder notice specifying the breach and permit such holder a reasonable opportunity (not less than sixty (60) days) to cure the breach. Such holder's curing of Landlord's default shall be deemed performance by Landlord.

23.7 Each provision shall be valid and enforceable to the fullest extent permitted by law. If any provision or its application to any person or circumstance shall be invalid or unenforceable to any extent (e.g., an interest rate is usurious), then such provision shall be deemed to be replaced by the valid and enforceable provision most substantively similar thereto (e.g., the highest non-usurious interest rate) and the remainder of this Lease and the application of such provision to other persons or circumstances shall not be affected.

23.8 Headings are used for convenience and shall not be considered in construing this Lease. Gender appropriate pronouns and plural or singular forms shall be substituted as the context may require. This Lease may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document.

23.9 This Lease shall be binding upon and inure to the benefit of each party and its successors and assigns, subject to the provisions restricting assignment or subletting.

23.10 Upon reasonable prior notice, Tenant shall permit Landlord and its designees to enter the Premises, without rent abatement, to inspect and exhibit the Premises (but exhibition to prospective tenants shall be limited to the last 18 months of the Lease Term) and make such alterations and repairs as Landlord deems necessary.

23.11 This Lease shall be governed by the laws of the State of Maryland.

- 23.12 The submission to Tenant of correspondence or an unsigned copy of this document shall not constitute an offer or option to lease. This Lease shall become effective only upon execution and delivery by both parties.
- 23.13 Time is of the essence with respect to each obligation of Tenant and Landlord.
- 23.14 Landlord reserves the right to make changes to the Building's plans and specifications, provided such changes do not alter Tenant's use and enjoyment of the Premises or increase the cost for taxes, services and utilities for which Tenant is responsible.
- 23.15 All amounts payable by Tenant shall be paid to Landlord by check (subject to collection) drawn upon a local clearinghouse bank and delivered to the address to which notices to Landlord are to be given or to such other party or such other address as Landlord may designate in writing. Except as otherwise specified, any amount owed by Tenant to Landlord, and any cost, expense, damage or liability incurred by Landlord for which Tenant is liable, shall be considered additional rent payable pursuant to this Lease and paid by Tenant within ten (10) days after the date Landlord notifies Tenant of the amount thereof.
- 23.16 Tenant's liabilities existing as of the expiration or earlier termination of the Lease Term shall survive such expiration or termination.
- 23.17 If either party is delayed or prevented from performing any obligation due to fire, act of God, governmental act or failure to act, labor dispute, inability to procure materials or any cause beyond such party's reasonable control (whether similar or dissimilar to the foregoing), then the time for performance shall be excused for the period of such delay or prevention and extended for a period equal to the period of such delay or prevention. The foregoing notwithstanding, this Section shall not excuse any late payment or extend the Lease Term.
- 23.18 Landlord's review, approval and consent powers (including the right to review plans and specifications) are for its benefit only. Such review, approval or consent (or conditions imposed in connection therewith) shall be deemed not to constitute a representation concerning legality, safety or any other matter. Tenant waives any right to damages based upon Landlord's actually or allegedly wrongfully withholding or delaying any approval or consent. Tenant's sole remedy therefor shall be a proceeding for specific performance, injunction or declaratory judgment.
- 23.19 From time to time (but not more than twice per year) time upon fifteen (15) days' prior written notice, Tenant shall submit such information regarding the financial condition of Tenant as Landlord may reasonably request. Tenant warrants that all such information heretofore or hereafter submitted is and shall be correct and complete.
- 23.20 Deletion of any printed, typed or other portion of this Lease or prior draft hereof shall not evidence an intention to contradict such deleted portion. Such deleted portion shall be deemed not to have been inserted in this Lease. Interpretation of this Lease shall not be affected by any claim that this Lease has been prepared by either party.
- 23.21 The person executing on Tenant's behalf warrants due authorization to so act.

IN WITNESS WHEREOF, the parties have executed this Lease as of the date first above written.

WITNESS:

/s/ Stan Barg

-----

WITNESS:

/s/ Thomas K. Milhollan

-----

LANDLORD:

RED BRANCH ROAD, L.L.C.

BY: Atlantic Realty Companies, Inc., Manager

By: /s/ Charles Nulsen

-----

Title: Executive Vice President

-----

TENANT:

GSE SYSTEMS, INC.

By: /s/ Robert W. Stroup

-----

Title: Executive Vice President

-----

**EXHIBIT 10.26**

March 6, 1998

**GSE POWER SYSTEMS, INC.**

f/k/a Simulation, Systems and  
Services Technologies Company, Inc.  
MSHI, Inc.  
8930 Stanford Boulevard  
Columbia, Maryland 21045

Re: Letter of Credit, Loan and Security Agreement dated as of January 30, 1996 (the "Loan Agreement") by and among GSE Power Systems, Inc. ("GSE"), MSHI, Inc. ("MSHI") and CoreStates Bank, N.A. ("CoreStates").

Dear Sirs:

GSE, MSHI and CoreStates are parties to the Loan Agreement, as the same has been amended from time to time. GSE Systems, Inc. is a guarantor of the obligations under the Loan Agreement.

Pursuant to its terms, the Loan Agreement expired December 31, 1997. CoreStates agreed on December 29, 1997, to extend the Expiration Date (as such term is defined in the Loan Agreement) to March 31, 1998. Please be advised that CoreStates hereby agrees to extend the Expiration Date until June 30, 1998 provided, however, that for such extension to be effective, the Export-Import Bank of the United States must agree to a corresponding extension of its Working Capital Guarantee No. AP066390XB.

Please signify your acceptance of this extension by executing this letter agreement in the space provided below.

Very truly yours,

*/s/ Derrick R. Davis*

-----  
*Derrick R. Davis,*  
*Vice President*



The foregoing extension is accepted and acknowledged this 6th day of March 1998.

**GSE POWER SYSTEMS, INC.**

*By: /s/ Robert W. Stroup*

-----  
*Its: Executive Vice President,  
Secretary & Treasurer*

**CONSENT OF GUARANTORS**

GSE Systems, Inc., as guarantor of the obligations of GSE Power Systems, Inc. and MSHI, Inc. pursuant to their certain Guaranty and Suretyship Agreement dated January 30, 1996 hereby consents to the extension of the Expiration Date as set forth above this 6th day of March 1998.

**GSE SYSTEMS, INC.**

*By: /s/ Robert W. Stroup*

-----  
*Its: Executive Vice President,  
Secretary & Treasurer*

**EXHIBIT 10.27**

March 6, 1998

**GSE PROCESS SOLUTIONS, INC.**

8930 Stanford Boulevard  
Columbia, Maryland 21045

Re: Amended and Restated Letter of Credit, Loan and Security Agreement dated October 13, 1995 (the "Loan Agreement") by and between GSE Process Solutions, Inc. ("GSE") and CoreStates Bank, N.A. ("CoreStates").

Dear Sirs:

GSE and CoreStates are parties to the Loan Agreement, as the same has been amended from time to time. Pursuant to its original terms, the Loan Agreement expired December 31, 1997. By letter dated December 29, 1997, CoreStates agreed to extend the Termination Date, as such term is defined in the Loan Agreement, until March 31, 1998. GSE Systems, Inc. and GSE Erudite Software, Inc. guarantee the obligations under the Loan Agreement. GSE Systems, Inc. has advised CoreStates that it is considering the sale of GSE Erudite Software, Inc. Capitalized terms used in this letter shall have the same meanings as given to such terms in the Loan Agreement, unless the context requires otherwise.

GSE has requested that CoreStates (a) permit Advances in excess of the current Collateral Value by increasing the amount of the Collateral Value from the date hereof until the earlier to occur of the sale of GSE Erudite Software, Inc. or May 15, 1998 by the amount of \$1,500,000 (the "Overadvance Limit") and (b) extend the Termination Date until June 30, 1998. CoreStates is agreeable to such increase and extension provided the following terms and conditions are met:

1. Delivery of each of the following:

(a) Guaranty agreements (each a "Guaranty") of G P Strategies Corporation ("Strategies") and ManTech International Corporation ("ManTech") assuring payment of the obligations of GSE to CoreStates due under the Loan Agreement each in the amount of \$1,500,000 and in the aggregate amount of \$3,000,000, in the form attached hereto as Exhibit A. (ManTech and Strategies are hereafter sometimes called "Guarantors".)

(b) A copy, certified in writing by the Secretary or an Assistant Secretary of each of ManTech and Strategies, of (i) resolutions of the Board of Directors of each "Guarantor" evidencing approval of the Guarantees and each matter contemplated thereby and (ii) each document evidencing other corporate action and governmental approvals, if any, with respect to the Guarantees and (iii) a statement as to the names and signatures of the officers of each Guarantor authorized to sign the Guarantees and the other documents or certificates to be executed or delivered pursuant thereto; and

(c) A favorable opinion of counsel to each Guarantor in form and substance as attached hereto as Exhibit B.

2. Retroactive to February 1, 1998, (a) each Prime Rate Loan shall bear interest as provided in the Loan Agreement, except that the rate shall be applied at Prime Rate plus 1.00% and (b) each Eurodollar Loan shall bear interest as provided in the Loan Agreement, except that the rate shall be applied at the LIBO Rate plus 3.00%.

3. (a) No Loan shall continue as a Eurodollar Loan after the expiration of the current Interest Period, no new Eurodollar Loans shall be made and no Prime Rate Loan shall be converted into a Eurodollar Loan.

(b) No Letters of Credit shall be issued under the Loan Agreement.

(c) GSE shall pay no cash fees to either Guarantor for the issuance of its Guaranty.

4. (a) GSE will pay on demand all costs and expenses (including the reasonable fees and out-of-pocket expenses of the Bank's counsel and the Bank's auditors and consultants) incurred by the Bank in connection with (i) audits and Collateral review, (ii) the preparation and negotiation of this letter agreement and the Guarantees, and (iii) the enforcement and protection of the rights of the Bank in connection with this letter agreement or either of the Guarantees.

(b) In consideration for the establishment of the Overadvance Limit and the extension of the Termination Date until June 30, 1998, GSE will pay to the Bank a restructuring and waiver fee in the total amount of \$70,000.

5. Beginning with Monday, March 9, 1998, and on each Wednesday thereafter, GSE shall deliver a Borrowing Certificate with information completed as of the previous Friday to CoreStates in the same form as Exhibit B to the Loan Agreement.

6. In the event of a sale of GSE Erudite Software, Inc., the Commitment shall immediately be reduced to \$3,000,000 and GSE shall thereupon make such payments on the Loans as are required to reduce the total of the outstanding balances of the Loans and the Letter of Credit Obligations to not more than the lesser of (a) the Collateral Value or (b) the Commitment. For the purpose of this paragraph such sale shall be deemed to have occurred at such time as the legal or equitable title to all or substantially all of the assets or stock of GSE Erudite Software, Inc. shall have been transferred to the purchaser thereof.

7. GSE has informed CoreStates that the financial statements that will be issued as of December 31, 1997 and March 31, 1998 will almost certainly report results that will fail to meet the Cash Flow Coverage Ratio and the Tangible Net Worth provisions found in Sections 10.1 and 10.3 of the Loan Agreement, respectively. CoreStates hereby waives any Default or Event of Default caused by the failure to meet the Cash Flow Coverage Ratio for the periods ending December 31, 1997 and March 31, 1998 only and waives any Default or Event of Default caused by the failure to meet the Tangible Net Worth provision for the periods ending December 31, 1997 and March 31, 1998, provided, however, that the Tangible Net Worth shall be at least \$5.5 million for the period ending December 31, 1997 and \$3 million for the period ending March 31, 1998.

Except as the Loan Agreement is specifically amended or modified or any provision thereof is waived, all provisions of the Loan Agreement and the other Financing Documents shall remain in full force and effect and CoreStates reserves all of its rights thereunder.

Please signify your acceptance of this extension by executing this letter agreement in the space provided below.

Very truly yours,

*/s/ Derrick R. Davis*

-----  
*Derrick R. Davis,  
Vice President*

The foregoing agreement is accepted and acknowledged this 6th day of March 1998.

**GSE PROCESS SOLUTIONS, INC.**

*By: /s/ Robert W. Stroup*

-----  
*Its: Executive Vice President,  
Secretary & Treasurer*

**CONSENT OF GUARANTORS**

GSE Systems, Inc. and GSE Erudite Software, Inc., each as guarantor of the obligations of GSE Process Solutions, Inc. pursuant to their respective guarantees of February 23, 1996 and November 11, 1997 hereby consent to the terms and conditions set forth above this 6th day of March 1998.

**GSE SYSTEMS, INC.**

*By: /s/ Robert W. Stroup*

-----  
*Its: Executive Vice President,  
Secretary & Treasurer*

**GSE ERUDITE SOFTWARE, INC.**

*By: /s/ Robert W. Stroup*

-----  
*Its: Executive Vice President,  
Secretary & Treasurer*

**EXHIBIT 11.1**

**STATEMENT REGARDING COMPUTATION OF EARNINGS PER SHARE**

(in thousands, except per share data)

	Year Ended December 31,		
	1997	1996	1995
	-----	-----	-----
Net (loss) income before preferred dividend....	\$(8,703)	\$ 4,143	\$ 3,676
Preferred dividend .....	--	--	--
	-----	-----	-----
Net (loss) income available to common shares...	\$(8,703)	\$ 4,143	\$ 3,676
Weighted averaged common shares outstanding.....	5,066	5,066	4,049
Dilutive effect of common stock equivalents - stock options.....	0	7	10
	-----	-----	-----
Total shares used for earnings per share.....	5,066	5,073	4,059
	=====	=====	=====
Loss (earnings) per share (Basic and diluted).....	\$ (1.72)	\$ .82	\$ .91
	=====	=====	=====

## EXHIBIT 21.1

### SUBSIDIARIES OF THE REGISTRANT

The companies listed below are directly or indirectly owned 100% by GSE Systems, Inc. and are included in its consolidated financial statements. GS Information Systems FSC Ltd, GSE Systems International Ltd, MSHI, Inc., GSE Power Systems AB and GSE Process Solutions, Inc. are wholly owned subsidiaries of GSE Systems, Inc. GP International Engineering & Simulation, Inc. and GSE Services Company L.L.C. are wholly owned subsidiaries of GSE Power Systems, Inc. which is a wholly owned subsidiary of MSHI, Inc. GSE Process Solutions B.V. is a wholly owned subsidiary of GSE Process Solutions, Inc. GSE Process Solutions Belgium N.V. and GSE Process Solutions Singapore (Pte) Limited are wholly owned subsidiaries of GSE Process Solutions B.V. J. L. Ryan, Inc., acquired by GSE Power Systems, Inc. in December 1997, has been merged with and into GSE Power Systems, Inc. as of February 1998, with GSE Power Systems, Inc. being the surviving corporation.

Name -----	Jurisdiction of Organization -----
GS Information Systems FSC Ltd.	Barbados
GSE Systems International Ltd.	State of Delaware
MSHI, Inc.	State of Virginia
GSE Power Systems, Inc.	State of Delaware
GP International Engineering & Simulation, Inc.	State of Delaware
GSE Services Company L.L.C.	State of Delaware
GSE Power Systems AB	Sweden
GSE Process Solutions, Inc.	State of Delaware
GSE Process Solutions B.V.	Netherlands
GSE Process Solutions Belgium N.V.	Belgium
GSE Process Solutions Singapore (Pte) Limited	Singapore

**EXHIBIT 23.1**

**CONSENT OF INDEPENDENT ACCOUNTANTS**

We consent to the incorporation by reference in the registration statement of GSE Systems, Inc. on Form S-8 (File No.333-08805) of our report dated March 31, 1998, on our audits of the consolidated financial statements of GSE Systems, Inc. as of December 31, 1997 and 1996, and for the years ended December 31, 1997, 1996 and 1995, which report is included in this Annual Report on Form 10-K.

**Coopers & Lybrand LLP**

McLean, Virginia  
March 31, 1998

**GSE SYSTEMS, INC.**  
8930 Stanford Blvd.  
Columbia, Maryland 21045

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS that the undersigned Officers and Directors of GSE Systems, Inc., a Delaware corporation, hereby constitute and appoint Robert W. Stroup and Thomas K. Milhollan, and each of them, the true and lawful agents and attorneys-in-fact of the undersigned with full power and authority in said agents and attorneys-in-fact, and in any one or both of them, to sign, for the undersigned and in their respective names as Officers and Directors of the Corporation the Annual Report on Form 10-K of the Corporation to be filed with the Securities and Exchange Commission, Washington, D.C., under the Securities Exchange Act of 1934, as amended, and any amendment or amendments to such Annual Report; hereby ratifying and confirming all acts taken by such agents and attorneys-in-fact, or any one or more of them, as herein authorized.

*Dated: March 25, 1998*

<i>Name</i> -----	<i>Title</i> -----
<i>/s/ JEROME I. FELDMAN</i> ----- <i>Jerome I. Feldman</i>	<i>Chairman of the Board</i>
<i>/s/ CHRISTOPHER M. CARNAVOS</i> ----- <i>Christopher M. Carnavos</i>	<i>Director and President</i> <i>(Principal Executive Officer)</i>
<i>/s/ ROBERT W. STROUP</i> ----- <i>Robert W. Stroup</i>	<i>Executive Vice President, Secretary &amp; Treasurer</i> <i>(Principal Financial and Accounting Officer)</i>
<i>/s/ EUGENE D. LOVERIDGE</i> ----- <i>Eugene D. Loveridge</i>	<i>Director and Senior Vice President</i>
<i>/s/ HANS I. EBENFELT</i> ----- <i>Hans I. Ebenfelt</i>	<i>Director</i>
<i>/s/ SHELDON L. GLASHOW</i> ----- <i>Sheldon L. Glashow</i>	<i>Director</i>
<i>/s/ JOHN A. MOORE, JR.</i> ----- <i>John A. Moore, Jr.</i>	<i>Director</i>
<i>/s/ GEORGE J. PEDERSEN</i> ----- <i>George J. Pedersen</i>	<i>Director</i>
<i>/s/ MARTIN M. POLLAK</i> ----- <i>Martin M. Pollak</i>	<i>Director</i>
<i>/s/ SYLVAN SCHEFLER</i> ----- <i>Sylvan Scheffler</i>	<i>Director</i>



**ARTICLE 5**

CIK: 0000944480

NAME: GSE Systems, Inc.

MULTIPLIER: 1

CURRENCY: U.S. Dollars

PERIOD TYPE	12 MOS
FISCAL YEAR END	DEC 31 1997
PERIOD START	JAN 01 1997
PERIOD END	DEC 31 1997
EXCHANGE RATE	1
CASH	334
SECURITIES	0
RECEIVABLES	24,371
ALLOWANCES	0
INVENTORY	2,700
CURRENT ASSETS	31,714
PP&E	11,312
DEPRECIATION	(7,448)
TOTAL ASSETS	40,362
CURRENT LIABILITIES	30,068
BONDS	0
PREFERRED MANDATORY	0
PREFERRED	0
COMMON	5,066
OTHER SE	0
TOTAL LIABILITY AND EQUITY	48,362
SALES	0
TOTAL REVENUES	79,711
CGS	58,326
TOTAL COSTS	58,326
OTHER EXPENSES	30,812
LOSS PROVISION	(9,427)
INTEREST EXPENSE	765
INCOME PRETAX	(11,420)
INCOME TAX	(2,717)
INCOME CONTINUING	(8,703)
DISCONTINUED	0
EXTRAORDINARY	0
CHANGES	0
NET INCOME	(8,703)
EPS PRIMARY	(1.72)
EPS DILUTED	(1.72)

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