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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended December 31, 2009

OR

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

For the transition period from to

Commission File Number 1-6549

American Science and Engineering, Inc.

(Exact name of Registrant as specified in its charter)

Massachusetts	**04-2240991**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
829 Middlesex Turnpike Billerica, Massachusetts	**01821**
(Address of principal executive offices)	(Zip Code)

(978) 262-8700

(Registrant s telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

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 x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes o No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer x
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes o No x

The number of shares of the registrant s common stock, $0.66 2/3 par value, outstanding as of February 3, 2010 was 8,997,983.

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PART I FINANCIAL INFORMATION

ITEM 1 FINANCIAL STATEMENTS

AMERICAN SCIENCE AND ENGINEERING, INC. AND SUBSIDIARY

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited)

(In thousands, except share and per share amounts)		December 31, 2009		March 31, 2009
Assets				
Current assets:				
Cash and cash equivalents	$	48,366	$	105,419
Restricted cash and investments		974		35
Short-term investments, at fair value		109,564		36,384
Accounts receivable, net of allowances of $345 and $286 at December 31, 2009 and March 31, 2009, respectively		28,695		36,956
Unbilled costs and fees		2,066		6,316
Inventories		47,305		47,975
Prepaid expenses and other current assets		10,729		7,224
Deferred income taxes		1,314		1,807
Total current assets		249,013		242,116
Restricted cash and investments		893		
Building, equipment and leasehold improvements, net		18,295		19,488
Deferred income taxes		4,534		5,290
Other assets, net		724		1,393
Total assets	$	273,459	$	268,287
Liabilities and Stockholders Equity				
Current liabilities:				
Accounts payable	$	11,477	$	10,639
Accrued salaries and benefits		10,304		10,387
Accrued warranty costs		889		1,130
Accrued income taxes				63
Deferred revenue		11,843		28,003
Customer deposits		10,363		14,818
Current portion of lease financing liability		1,277		1,163
Other current liabilities		4,022		6,893
Total current liabilities		50,175		73,096
Lease financing liability, net of current portion		7,402		8,377
Other long term liabilities		6,719		4,748
Total liabilities		64,296		86,221
Stockholders equity:				
Preferred stock, no par value, 100,000 shares authorized; no shares issued				
Common stock, $0.66 2/3 par value, 20,000,000 shares authorized; 8,990,693 and 8,810,760 shares issued and outstanding at December 31, 2009 and March 31, 2009, respectively		5,993		5,873
Capital in excess of par value		94,936		86,477
Accumulated other comprehensive loss, net		(50)		(47)

Retained earnings		108,284		89,763
Total stockholders equity		209,163		182,066
Total liabilities and stockholders equity	$	273,459	$	268,287

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

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AMERICAN SCIENCE AND ENGINEERING, INC. AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three Months Ended		Nine Months Ended	
(In thousands, except per share amounts)	**December 31, 2009**	**December 31, 2008**	**December 31, 2009**	**December 31, 2008**
Net sales and contract revenues:				
Net product sales and contract revenues	$ 37,035	$ 45,810	$ 114,008	$ 107,114
Net service revenues	17,854	19,480	56,821	53,963
Total net sales and contract revenues	54,889	65,290	170,829	161,077
Cost of sales and contracts:				
Cost of product sales and contracts	23,206	25,616	63,940	63,484
Cost of service revenues	9,056	10,914	29,188	31,777
Total cost of sales and contracts	32,262	36,530	93,128	95,261
Gross profit	22,627	28,760	77,701	65,816
Expenses:				
Selling, general and administrative expenses	9,624	9,132	26,335	24,225
Research and development costs	4,152	4,815	14,909	12,554
Total operating expenses	13,776	13,947	41,244	36,779
Operating income	8,851	14,813	36,457	29,037
Other income (expense):				
Interest and investment income	170	477	473	2,113
Interest expense	(39)	(36)	(105)	(110)
Other, net	40	(252)	152	(335)
Total other income	171	189	520	1,668
Income before provision for income taxes	9,022	15,002	36,977	30,705
Provision for income taxes	3,203	4,943	13,127	10,596
Net income	$ 5,819	$ 10,059	$ 23,850	$ 20,109
Income per share - Basic	$ 0.65	$ 1.16	$ 2.69	$ 2.32
Income per share - Diluted	$ 0.64	$ 1.13	$ 2.63	$ 2.26
Weighted average shares Basic	8,929	8,670	8,868	8,679
Weighted average shares Diluted	9,136	8,940	9,069	8,917
Dividends declared per share	$ 0.20	$ 0.20	$ 0.60	$ 0.60

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

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AMERICAN SCIENCE AND ENGINEERING, INC. AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

	For the Nine Months Ended	
(In thousands)	**December 31, 2009**	**December 31, 2008**
Cash flows from operating activities:		
Net income	$ 23,850	$ 20,109
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	3,384	3,194
Provisions for contracts, inventory and accounts receivable reserves	1,358	1,874
Amortization of bond (discount) premium	554	(401)
Deferred income taxes	1,249	(1,954)
Stock compensation expense	4,345	3,126
Changes in assets and liabilities:		
Accounts receivable	8,189	(16,754)
Unbilled costs and fees	4,250	1,197
Inventories	(616)	(6,648)
Prepaid expenses and other assets	(2,836)	(3,761)
Accounts payable	838	1,298
Accrued income taxes	(63)	2,198
Customer deposits	(4,455)	9,702
Deferred revenue	(14,171)	861
Accrued expenses and other liabilities	(2,471)	5,191
Sale of leased asset		116
Net cash provided by operating activities	23,405	19,348
Cash flows from investing activities:		
Purchases of short-term investments	(166,998)	(50,500)
Proceeds from maturities of short-term investments	93,261	75,650
Purchases of property and equipment	(2,191)	(1,270)
Net cash (used for) provided by investing activities	(75,928)	23,880
Cash flows from financing activities:		
(Increase) decrease in restricted cash and investments	(1,832)	2,464
Proceeds from exercise of stock options	5,761	4,602
Repurchase of shares of common stock	(2,922)	(14,382)
Repayment of leasehold financing	(861)	(849)
Payment of common stock dividend	(5,329)	(5,267)
Reduction of income taxes paid due to the tax benefit from employee stock option expense	653	1,181
Net cash used for financing activities	(4,530)	(12,251)
Net (decrease) increase in cash and cash equivalents	(57,053)	30,977
Cash and cash equivalents at beginning of period	105,419	52,418
Cash and cash equivalents at end of period	$ 48,366	$ 83,395

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

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AMERICAN SCIENCE AND ENGINEERING, INC. AND SUBSIDIARY

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. GENERAL

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All significant intercompany transactions and balances have been eliminated.

The unaudited condensed consolidated financial statements have been prepared in accordance with the requirements of Form 10-Q and consequently do not include all disclosures required by Form 10-K. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and the notes included in the Company s Annual Report on Form 10-K for the fiscal year ended March 31, 2009.

The unaudited condensed consolidated financial statements, in the opinion of management, include all necessary adjustments, consisting solely of normal recurring adjustments, to present fairly the Company s financial position, results of operations and cash flows. These quarterly results are not necessarily indicative of the results to be expected for the entire year.

Nature of Operations

The Company is engaged in the development and manufacture of sophisticated X-ray inspection systems for critical detection and security screening solutions for sale primarily to U.S. and foreign government agencies. The Company has only one reporting segment, X-ray screening products.

Significant Accounting Policies

For systems that are produced in a standard manufacturing operation and have shorter order to delivery cycles, the Company recognizes sales at the time of shipment of the system to the customer and when other revenue recognition criteria (such as transfer of risk) are met. Revenues on cost reimbursable and custom long-term fixed price contracts are generally recorded as costs are incurred using the percentage of completion method.

The other significant accounting policies followed by the Company and its subsidiary in preparing its consolidated financial statements are set forth in Note 1 to the consolidated financial statements included in its Form 10-K for the year ended March 31, 2009. In the quarter ended December 31, 2009, the Company adopted the provisions of Accounting Standards Update No. 2009-13, *Revenue Recognition (Topic 605)*

Multiple-Deliverable Revenue Arrangements (A Consensus of the FASB Emerging Issues Task Force) (ASU 2009-13), which amends existing accounting standards for revenue recognition for multiple-element arrangements. The Company adopted the provisions of ASU 2009-13 in the current quarter and has applied the amendments in ASU 2009-13 retrospectively from the beginning of the current fiscal year. The adoption of these provisions did not have a material impact on our previously reported Consolidated Financial Statements. There have been no other changes to our critical accounting policies during the nine months ended December 31, 2009.

Comprehensive Income

Comprehensive income is comprised of the following:

	Three Months Ended		Nine Months Ended	
	December 31,	**December 31,**	**December 31,**	**December 31,**
(In thousands)	**2009**	**2008**	**2009**	**2008**
Net income	$ 5,819	$ 10,059	$ 23,850	$ 20,109
Other comprehensive income (loss)	(13)	229	(3)	(101)
Comprehensive income	$ 5,806	$ 10,288	$ 23,847	$ 20,008

Stock Repurchase Program

The Board of Directors approved a Stock Repurchase Program which authorized the Company to repurchase up to $35.0 million of shares of its common stock from time to time on the open market. During the three months ended December 31, 2009, the Company did not purchase any shares under this Stock Repurchase Program. During the nine months ended December 31, 2009, a total of 51,299 shares were repurchased at an average price of $56.97 per share. As of December 31, 2009, the maximum dollar value of shares that may still be purchased under the program is $23,807,000.

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Dividends

(In thousands)	Three Months Ended December 31, 2009	Three Months Ended December 31, 2008	Nine Months Ended December 31, 2009	Nine Months Ended December 31, 2008
Dividends declared	$ 0.20	$ 0.20	$ 0.60	$ 0.60
Dividends paid	$ 0.20	$ 0.20	$ 0.60	$ 0.60

On February 9, 2010, the Company declared a cash dividend of $0.30 per share. The dividend will be paid on March 4, 2010 to all shareholders of record at the close of business on February 22, 2010. Future dividends will be declared at the discretion of the Board of Directors and will depend upon such factors as the Board of Directors deems relevant.

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents, investments and accounts and unbilled receivables. At times, the Company maintains cash balances in excess of insured limits. The Company maintains its cash and cash equivalents with major financial institutions. The Company s credit risk is managed by investing its cash in high quality U.S. treasury bills, high quality money market funds, commercial paper, investment grade corporate debentures / bonds, U.S. Government agency bonds and certificates of deposit.

Recent Accounting Changes

In June 2009, the Financial Accounting Standards Board (FASB) issued FASB Accounting Standards Codification (FASB ASC) 105, *Generally Accepted Accounting Principles*, which establishes the FASB Accounting Standards Codification as the sole source of authoritative generally accepted accounting principles. Pursuant to the provisions of FASB ASC 105, the Company has updated references to generally accepted accounting principles (GAAP) in its financial statements issued for the period ended December 31, 2009. The adoption of FASB ASC 105 did not impact the Company s financial position or results of operations.

In February 2008, the FASB issued FASB ASC 820-10-65-1, *Fair Value Measurements and Disclosures*. FASB ASC 820-10-65-1 delayed the effective date of FASB ASC 820-10 for nonfinancial assets and nonfinancial liabilities, except for certain items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually) until fiscal years beginning after November 15, 2008, and interim periods within those fiscal years. The Company adopted the provisions of FASB ASC 820-10 for nonfinancial assets and nonfinancial liabilities effective April 1, 2009. The adoption of these provisions did not have a material impact on our Consolidated Financial Statements.

In June 2008, the FASB issued FASB ASC 260-10-55-76C, *Earnings per Share Implementation Guidance*, effective for fiscal years beginning after December 15, 2008. FASB ASC 260-10-55-55-76C clarifies that unvested share-based awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and must be included in the computation of EPS pursuant to the two-class method. The Company adopted the provisions of FASB ASC 260-10-55-55-76C effective April 1, 2009 and calculated the impact of this adoption on prior periods. The adoption of FASB ASC 260-10-55-55-76C did not have a material impact on reported earnings per share.

In June 2008, the FASB issued FASB ASC 815-40-15 *Derivatives and Hedging*. FASB ASC 815-40-15 addresses the determination of whether provisions that introduce adjustment features (including contingent adjustment features) would prevent treating a derivative contract or an embedded derivative on a company s own stock as indexed solely to the company s stock. FASB ASC 815-40-15 is effective for fiscal years beginning after December 15, 2008. The Company adopted the provisions of FASB ASC 815-40-15 effective April 1, 2009. The adoption of these provisions did not have a material impact on our Consolidated Financial Statements.

In October 2009, the FASB issued Accounting Standards Update No. 2009-13, *Revenue Recognition (Topic 605) Multiple-Deliverable Revenue Arrangements (A Consensus of the FASB Emerging Issues Task Force)* (ASU 2009-13), which amends existing accounting standards for revenue recognition for multiple-element arrangements. To the extent a deliverable within a multiple-element arrangement is not accounted for pursuant to other accounting standards, including ASC 985-605, *Software-Revenue Recognition*, ASU 2009-13 establishes a selling price hierarchy that allows for the use of an estimated selling price to determine the allocation of arrangement consideration to a deliverable in a multiple element arrangement where neither vendor-specific objective evidence nor third-party evidence is available for that deliverable. ASU 2009-13 is to be applied prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, however early adoption is permitted. The Company has decided to adopt the provisions of ASU 2009-13 in the current quarter and has applied the amendments in ASU 2009-13 retrospectively from the beginning of the current fiscal year. The adoption of these provisions did not have a material impact on our previously reported Consolidated Financial Statements.

In October 2009, the FASB issued Accounting Standards Update 2009-14, *Revenue Recognition (Topic 605) Applicability of AICPA Statement of Position 97-2 to Certain Arrangements That Include Software Elements* (ASU 2009-14). ASU 2009-14 excludes tangible products containing software components and non-software components that function together to deliver the product s essential functionality from the scope of ASC 605-985, *Software-Revenue Recognition*. ASU 2009-14 shall be applied on a prospective basis to revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010.

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Early adoption is permitted. Upon adoption, we must apply ASU 2009-14 retrospectively to the beginning of the fiscal year of adoption or to all periods presented. The Company is currently evaluating the impact of the pending adoption of ASU 2009-14 on our Consolidated Financial Statements.

2. ACCOUNTING FOR STOCK-BASED COMPENSATION

The Company accounts for stock based awards made to employees and its Board of Directors in accordance with FASB ASC 718, *Compensation Stock Compensation*, which requires the measurement and recognition of all compensation costs for stock based awards made to employees and the Board of Directors based upon fair value over the requisite service period for awards expected to vest.

The Company recognized $1,687,000 and $888,000 of share-based compensation costs in the consolidated statements of income for the three months ended December 31, 2009 and December 31, 2008, respectively. The Company recognized $4,345,000 and $3,126,000 of share-based compensation costs in the consolidated statements of income for the nine months ended December 31, 2009 and December 31, 2008, respectively. The income tax benefit recognized related to this compensation for the three months ended December 31, 2009 and December 31, 2008 was approximately $599,000 and $273,000, respectively. The income tax benefit related to this compensation for the nine months ended December 31, 2009 and December 31, 2008 was approximately $1,539,000 and $1,061,000, respectively.

The following table summarizes share-based compensation costs included in the Company s consolidated statement of income:

	Three Months Ended		Nine Months Ended	
	December 31,	December 31,	December 31,	December 31,
(In thousands)	2009	2008	2009	2008
Cost of revenues	$ 285	$ 198	$ 693	$ 448
Selling, general and administrative	1,402	690	3,652	2,678
Total share-based compensation expense before tax	$ 1,687	$ 888	$ 4,345	$ 3,126

The Company uses the Black-Scholes option pricing model as the most appropriate method for determining the estimated fair value for the stock awards. The Black-Scholes method of valuation requires several assumptions: (1) the expected term of the stock award, (2) the expected future stock volatility over the expected term and (3) a risk-free interest rate. The expected term represents the expected period of time the Company believes the options will be outstanding based on historical information. Estimates of expected future stock price volatility are based on the historic volatility of the Company s common stock and the risk free interest rate is based on the U.S. Zero-Bond rate.

There were 63,993 and 64,191 options granted in the nine month period ended December 31, 2009 and December 31, 2008, respectively. The fair value of the options at date of grant was estimated with the following assumptions for grants made during the period presented:

	Nine Months Ended	
	December 31, 2009	December 31, 2008

Assumptions:		
Option life	5 years	5 years
Risk-free interest rate	2.4%	3.0%
Stock volatility	46%	49%
Dividend yield	1.24%	1.25%

Stock Option and Other Compensation Plans

The Company has various stock option and other compensation plans for non-employee directors, officers, and employees. The Company had the following stock option and other compensation plans outstanding as of December 31, 2009: the 1995 Combination Plan, the 1997 Non-Qualified Option Plan, the 1998 Non-Qualified Option Plan, the 1999 Combination Plan, the 2000 Combination Plan, the 2002 Combination Plan, the 2003 Stock Plan for Non-Employee Directors and the 2005 Equity and Incentive Plan. There are 3,980,000 shares authorized under these plans. As of December 31, 2009, 370,709 shares remain available for future issuance under these plans. Vesting periods are at the discretion of the Compensation Committee of the Board of Directors, or their designee, and typically range between one and three years. Options under these plans are granted at fair market value and have a term of five or ten years from the date of grant.

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Stock Options

The following tables summarize stock option activity for the nine months ended December 31, 2009.

	Number of Shares		Weighted Average Exercise Price	Weighted Average Contractual Life		Aggregate Intrinsic Value
Options outstanding at March 31, 2009	709,254	$	44.47	5.69		
Grants	63,993		64.28		$	740,000
Exercises	(141,838)		40.62			
Cancellations	(450)		53.55			
Options outstanding at December 31, 2009	630,959	$	47.34	5.36		
Options exercisable at December 31, 2009	542,150	$	44.89		$	16,780,000

Information related to the stock options outstanding as of December 31, 2009 is as follows:

Range of Exercise Prices	Number of Shares	Weighted-Average Remaining Contractual Life (years)		Weighted-Average Exercise Price	Exercisable Number of Shares		Exercisable Weighted-Average Exercise Price
$ 6.50 - $20.00	92,430	3.53	$	12.70	92,430	$	12.70
$20.01 - $30.00	68,234	4.49		28.13	68,234		28.13
$30.01 - $40.00	32,000	4.92		39.07	32,000		39.07
$40.01 - $50.00	71,000	5.57		45.84	71,000		45.84
$50.01 - $60.00	138,671	5.38		53.35	127,086		53.51
$60.01 - $67.98	228,624	6.35		65.04	151,400		65.64
$ 6.50 - $67.98	630,959	5.36	$	47.34	542,150	$	44.89

As of December 31, 2009, there was approximately $1,311,000 of unrecognized compensation costs related to options granted. This cost is expected to be recognized over a weighted average of 1.1 years.   Non-vested common stock options are subject to the risk of forfeiture until the fulfillment of specified conditions.

Restricted Stock and Restricted Stock Units

The Company has instituted long term incentive plans for certain key employees. These plans call for the issuance of restricted stock which vests upon the achievement of certain performance based goals as well as service time incurred. Restricted stock and restricted stock units may also be granted to other employees with vesting periods that range from one to three years. In addition, annually on January 10th each non-employee member of the Board of Directors is granted restricted stock. These restricted stock awards vest in equal monthly installments for each month of service performed. The fair value of these restricted stock awards is equal to the market price per share of the Company s common stock on the date of grant.

Non-vested restricted stock and stock unit awards are subject to the risk of forfeiture until the fulfillment of specified conditions. As of December 31, 2009 there was $4,925,000 of total unrecognized compensation cost related to non-vested restricted stock and stock unit awards granted under the Company s stock plans. This cost is expected to be recognized over a weighted average of 1.3 years.

The following table summarizes the status of the Company s non-vested restricted stock and stock unit awards for the nine months ended December 31, 2009:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at March 31, 2009	137,687	$ 56.74
Granted	76,424	61.59
Vested	(53,713)	57.42
Forfeited	(200)	55.60
Outstanding at December 31, 2009	160,198	$ 58.83

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3. INVENTORIES

Inventories consist of material, labor and manufacturing overhead and are recorded at the lower of cost, using the weighted average cost method, or net realizable value. Excessive manufacturing overhead costs attributable to idle facility expenses, freight, handling costs and wasted material (spoilage) attributable to abnormally low production volumes (levels that materially differ from budgeted production plans due primarily to changes in customer demand) are excluded from inventory and recorded as an expense in the period incurred.

The components of inventories at December 31, 2009 and March 31, 2009 were as follows:

(In thousands)	December 31, 2009	March 31, 2009
Raw materials, completed sub-assemblies, and spare parts	$ 23,313	$ 20,527
Work-in-process	18,258	13,911
Finished goods	5,734	13,537
Total	$ 47,305	$ 47,975

4. INCOME PER COMMON AND COMMON EQUIVALENT SHARE

Basic earnings per common share is computed by dividing net income available to common stockholders by the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share include the dilutive impact of options and restricted stock units using the average share price of the Company s common stock for the period. For the three months ended December 31, 2009 and December 31, 2008, common stock equivalents of 2,000 and 100,000, respectively, are excluded from diluted earnings per share, as their effect is anti-dilutive. For the nine months ended December 31, 2009 and December 31, 2008, common stock equivalents of 95,000 and 266,000, respectively, are excluded from diluted earnings per share, as their effect is anti-dilutive.

	Three Months Ended		Nine Months Ended	
(In thousands except per share amounts)	December 31, 2009	December 31, 2008	December 31, 2009	December 31, 2008
Income Per Share				
Basic:				
Net income	$ 5,819	$ 10,059	$ 23,850	$ 20,109
Weighted average number of common shares outstanding basic	8,929	8,670	8,868	8,679
Net income per share basic	$ 0.65	$ 1.16	$ 2.69	$ 2.32
Diluted:				
Net income	$ 5,819	$ 10,059	$ 23,850	$ 20,109
Weighted average number of common shares outstanding	8,929	8,670	8,868	8,679
Assumed exercise of stock options and restricted stock units, using the treasury stock method	207	270	201	238
Weighted average number of common and potential common shares outstanding diluted	9,136	8,940	9,069	8,917
Net income per share diluted	$ 0.64	$ 1.13	$ 2.63	$ 2.26

Note: Earnings per share for the year may not equal the sum of quarterly earnings per share due to changes in weighted share calculations.

5. LINE OF CREDIT

On November 13, 2009, the Company modified its Loan and Security Agreement with Silicon Valley Bank to extend the facility through November 12, 2010 and to decrease the facility from $40.0 million to $30.0 million to support the Company s routine letters of credit and working capital needs. If the Company maintains a cash and investments balance of $40.0 million or greater, then the maximum amount available for borrowing under the facility is $30.0 million minus the amount of all outstanding letters of credit less certain reserves, and minus the outstanding principal balance of any advances. If the Company s cash and investment balance falls below $40.0 million for a period of 30 consecutive days, then the maximum amount available for borrowings under the facility is the lesser of (i) $30.0 million, or (ii) 80% of eligible domestic accounts receivable minus the amount of outstanding letters of credits adjusted for certain reserves and minus the principal balance of any advances.

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The credit facility bears an interest rate of the greater of 4.0% or the Silicon Valley Bank prime rate (4.0% at December 31, 2009). The credit agreement is collateralized by certain assets of the Company and contains certain restrictions, including limitations on the amount of distributions that can be made to stockholders, and the disposition or encumbrances of assets, and requires the maintenance of certain financial covenants. As of December 31, 2009, the Company was in compliance with these covenants.

In the normal course of business, the Company may provide certain customers and potential customers with performance guarantees, which are generally backed by standby letters of credit. In general, the Company would only be liable for the amount of these guarantees in the event of default in the performance of our obligations; the probability of which management believes is low. As of December 31, 2009, the Company had outstanding $21,351,000 in standby letters of credit against the Loan and Security Agreement with $8,649,000 remaining availability. The outstanding letters of credit are primarily for guaranteeing performance on certain international projects. No amounts have been drawn against these letters of credit. In addition at December 31, 2009, the Company had a restricted cash balance of $1,867,000 related to certain bank required deposits for outstanding letters of credit issued and other bank related fees.

6. FAIR VALUE MEASUREMENTS

The Company has categorized our financial assets, based on the priority of the inputs to the valuation technique, into a three-level fair value hierarchy as set forth below. If the inputs used to measure the financial instruments fall within different levels of the hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument.

Financial assets recorded on the Condensed Consolidated Balance Sheets are categorized based on the inputs to the valuation techniques as follows:

Level 1 - Financial assets whose values are based on unadjusted quoted prices for identical assets or liabilities in an active market that the Company has the ability to access at the measurement date (examples include actively exchange-traded equity securities, listed derivatives, and most U.S. Government and agency securities).

Level 2 - Financial assets whose values are based on quoted prices in markets where trading occurs infrequently or whose values are based on quoted prices of instruments with similar attributes in active markets. Level 2 inputs include the following:

- Quoted prices for identical or similar assets or liabilities in non-active markets (examples include corporate and municipal bonds which trade infrequently);

- Inputs other than quoted prices that are observable for substantially the full term of the asset or liability (examples include interest rate and currency swaps); and

- Inputs that are derived principally from or corroborated by observable market data for substantially the full term of the asset or liability (examples include certain securities and derivatives).

Level 3 - Financial assets whose values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. These inputs reflect management s own assumptions about the assumptions a market participant would use in pricing the asset or liability. The Company currently does not have any Level 3 financial assets or liabilities.

The following table presents the financial assets and liabilities we measure at fair value on a recurring basis, based on the fair value hierarchy as of December 31, 2009:

(In thousands)		**December 31, 2009**
Level 1 Financial Assets		
U.S. Treasury bills	$	24,966
Level 2 Financial Assets		
Corporate debentures/bonds		40,427
Money market funds		34,706
Commercial paper		17,980
Certificates of deposit		16,001
U.S. Government agency bond		10,190
Total Level 2 Financial Assets		119,304
Total cash equivalents and short-term investments	$	144,270

These investments are classified as available-for-sale and are recorded at their fair market value using the specific identification

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method. Realized gains and losses on the sale of securities available-for-sale are determined using the specific identification method and are reported as a separate component of other income in the Statements of Income. Unrealized gains and losses are included as a separate item in computing comprehensive income.

(In thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate debentures/bonds	$ 40,416	$ 52	$ (41)	$ 40,427
Money market funds	34,706			34,706
U.S. Treasury bills	24,955	20	(9)	24,966
Commercial paper	17,979	1		17,980
Certificates of deposit	16,001			16,001
U.S. Government agency bond	10,204		(14)	10,190
Total	$ 144,261	$ 73	$ (64)	$ 144,270
Classified as:				
Cash equivalents				$ 34,706
Short term investments				109,564
Total				$ 144,270

7. INCOME TAXES

The Company accounts for income taxes in accordance with FASB ASC 740, *Income Taxes* and recognizes deferred income taxes based on the expected future tax consequences of differences between the financial statement basis and the tax basis of assets and liabilities, calculated using enacted tax rates in effect for the year in which the differences are expected to be reflected in the tax return. The Company evaluates the need for a valuation allowance against its net deferred tax assets at year end based upon its three year cumulative income and its projections of future income, and records a valuation allowance against any net deferred tax assets if it is more likely than not that they will not be realized.

The Company is currently open to audit under the statute of limitations by the Internal Revenue Service and by state taxing authorities for the fiscal years ending March 31, 2006 through 2009. The Company has recently completed an audit by the Internal Revenue Service for tax years 2006 and 2007. The results of this examination did not have a material impact on the Company s financial position or results of operations. The Company is currently under audit by the Massachusetts state taxing authorities for tax years 2007 and 2008. Management does not believe that the ultimate outcome of this examination will have a material impact on the Company s financial position or results of operations. The Company believes that there are no uncertain tax positions that required a reserve as of December 31, 2009.

8. GUARANTEES

Certain of the Company s products carry a one-year warranty, the costs of which are accrued for at time of shipment or delivery. Accrual rates are based upon historical experience over the preceding twelve months and management s judgment of future exposure. Warranty experience for the three and nine months ended December 31, 2009 and 2008 is as follows:

(In thousands)	Three Months Ended December 31, 2009	Three Months Ended December 31, 2008	Nine Months Ended December 31, 2009	Nine Months Ended December 31, 2008
Warranty accrual - beginning of period	$ 891	$ 2,216	$ 1,130	$ 1,671
Accruals for warranties issued during the period	242	538	1,020	2,202
Adjustment of preexisting accrual estimates	(171)	(140)	(865)	(797)
Warranty costs incurred during the period	(73)	(398)	(396)	(860)
Warranty accrual end of period	$ 889	$ 2,216	$ 889	$ 2,216

9. LEASE COMMITMENTS

In March 2005, the Company renewed its lease agreement for its corporate headquarters and manufacturing facilities in Billerica, Massachusetts. As part of the lease agreement, the Company s landlord agreed to certain renovations to the Billerica facility including the construction of additional high bay manufacturing space. The Company was responsible for a portion of the construction costs and was deemed to be the owner of the building during the construction period under FASB ASC 840, *Leases.* In January 2007, the Company amended this lease agreement to expand its lease to include the remaining available space in the building. A total of $7,182,000 was capitalized to record the facility on its books with an offsetting credit to the lease financing liability. In addition, amounts paid for construction were capitalized to fixed assets and the landlord construction allowances of $6,009,000 were recorded as additional lease financing liability.

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At the completion of the construction of the initial renovations in February 2006, the lease was reviewed for potential sale-leaseback treatment in accordance with FASB ASC 840-40, *Leases Sale-Leaseback Transactions*. Based on this review, it was determined that the lease did not qualify for sale-leaseback treatment in accordance with FASB ASC 840-40. As a result, building and tenant improvement and associated lease financing liabilities remain on the Company s books. The lease financing liability is being amortized over the lease term based on the payments designated in the agreement and the building and tenant improvement assets are being depreciated on a straight line basis over the lessor of their useful lives or the lease term.

10. COMMITMENTS AND CONTINGENCIES

Lease Liability

In conjunction with the sale of certain assets and contracts of the Company s High Energy Systems Division in January of 2005, the lease for the California operations of the High Energy Systems Division was assigned to Accuray, Incorporated. The Company remains secondarily liable for the remaining lease payments in the event of default by Accuray, Incorporated during the lease term which expires in February 2011. Total remaining lease payments at December 31, 2009 totaled $464,000. No accrual for this contingent liability has been recorded at December 31, 2009 as management believes the probability of payment of this liability is low.

Deferred Revenue

The Company offers to its customers extended warranty and service contracts. These contracts typically cover a period of one to five years, and include advance payments that are recorded as deferred revenue. Revenue is recognized as services are performed over the life of the contract, which represents the period over which these revenues are earned. Costs associated with these extended warranty and service contracts are expensed to cost of goods sold as incurred.

A significant number of the Company s contracts with the U.S. Government contain clauses permitting the government to terminate the contract for convenience upon certain terms and conditions, including partial payment to the Company for work performed. Included in deferred revenue at December 31, 2009 and March 31, 2009 was $4,926,000 and $4,341,000, respectively, related to contracts with U.S Government agencies and subcontractors which may include these termination for convenience clauses.

ITEM 2 MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve risks and uncertainties. The statements contained in this report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Without limiting the foregoing, the words may, will, should, could, expects, plans, anticipates, believes, estimates, predicts, potential and similar expressions are intended to identify forward-looking statements. All forward-looking statements included in this Quarterly Report on Form 10-Q are based on information available to us up to, and including, the date of this report, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the following: significant reductions or delays or cancellation (in full or in part) in procurements of our systems by the United States and other governments; disruption in the supply of any source component incorporated into our products; litigation seeking to restrict the use of intellectual property we use; potential product liability claims against us; global political trends and events which affect public perception of the threat presented by drugs, explosives and other contraband; global economic developments and the ability of governments and private organizations to fund purchases of our products to address such threats; the potential insufficiency of our resources, including human resources, capital, plant and equipment and management systems, to accommodate any future growth; future delays in federal funding; and other factors discussed in Item 1A Risk Factors and elsewhere in this Form 10-Q. You should carefully review those factors and also carefully review the risks outlined in other documents that we file from time to time with the Securities and Exchange Commission, or the SEC.

Overview

American Science and Engineering, Inc., which is referred to in this report as we or the Company , develops and manufactures state-of-the-art X-ray inspection systems for homeland security, force protection, and other critical defense applications. We provide maintenance, warranty, research, engineering, and training services related to these solutions.

Our primary technologies are: (1) Z Backscatter technology which is used to detect plastic explosives, illegal drugs, and other contraband even when artfully concealed in complex backgrounds; and (2) Shaped Energy X-ray inspection technology which combine the material discrimination features of the Z Backscatter technology with the penetration capability of high-energy X-rays for dense cargos.

Net sales and contract revenues for the third quarter of fiscal 2010 decreased by 16% to $54,889,000 compared to the third

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quarter of fiscal 2009 revenues of $65,290,000. We reported income before provision for income taxes of $9,022,000 for the third quarter of fiscal 2010 compared to income before provision for income taxes of $15,002,000 for the third quarter of fiscal 2009. Net income for the third quarter of fiscal 2010 was $5,819,000 ($0.64 per share, on a diluted basis) as compared to net income of $10,059,000 ($1.13 per share, on a diluted basis) for the third quarter of fiscal 2009.

For the nine months ended December 31, 2009, net sales and contract revenues increased by 6% to $170,829,000 compared to the nine months ended December 31, 2008 revenues of $161,077,000. We reported income before provision for income taxes of $36,977,000 for the nine months ended December 31, 2009 compared to income before provision for income taxes of $30,705,000 for the nine months ended December 31, 2008 net income for the nine months ended December 31, 2009 was $23,850,000 ($2.63 per share, on a diluted basis) as compared to net income of $20,109,000 ($2.26 per share, on a diluted basis) for the nine months ended December 31, 2008.

Critical Accounting Policies

We believe that several accounting policies are important to understanding our historical and future performance. We refer to these policies as critical because these specific areas generally require us to make judgments and estimates about matters that are uncertain at the time we make the estimate, and different estimates which also would have been reasonable could have been used, which would have resulted in different financial results.

The critical accounting policies we identified in our most recent Annual Report on Form 10-K for the fiscal year ended March 31, 2009 are policies related to revenue recognition, inventories and related allowances for obsolete and excess inventory, and income taxes. It is important that the discussion of our operating results that follows be read in conjunction with the critical accounting policies disclosed in our Annual Report on Form 10-K, as filed with the SEC on June 15, 2009. In the quarter ended December 31, 2009, the Company adopted the provisions of Accounting Standards Update No. 2009-13, *Revenue Recognition (Topic 605) Multiple-Deliverable Revenue Arrangements (A Consensus of the FASB Emerging Issues Task Force)* (ASU 2009-13), which amends existing accounting standards for revenue recognition for multiple-element arrangements. The Company adopted the provisions of ASU 2009-13 in the current quarter and has applied the amendments in ASU 2009-13 retrospectively from the beginning of the current fiscal year. The adoption of these provisions did not have a material impact on our previously reported Consolidated Financial Statements. There have been no other changes to our critical accounting policies during the nine months ended December 31, 2009.

Results of Operations

Net revenues for the third quarter ended December 31, 2009 decreased by $10,401,000 to $54,889,000 compared to the corresponding period a year ago. This decrease is attributable primarily to a decrease of $8,775,000 in product sales. Factors contributing to the product sales decrease include: 1) a $6,035,000 decrease in shipments of Z Backscatter systems, 2) a decrease of $3,158,000 in contract research and development revenues as compared to the corresponding prior year period attributable to the termination for convenience of one research and development contract which contributed $3,097,000 in revenues in the prior period; and 3) a decrease of $2,330,000 in aftermarket spare parts sales on lower volume. These decreases were offset in part by an increase of $2,414,000 in CargoSearch system revenues as several systems completed installation and were accepted in the period, and an increase of $333,000 in ParcelSearch systems revenues as compared to the prior year. Service revenues decreased by $1,626,000 to $17,854,000 compared to the third quarter of fiscal 2009 due primarily to certain service contracts not being renewed in the current period as the equipment under contract was decommissioned or taken out of service at the end of the contract term.

Net revenues for the nine months ended December 31, 2009 increased by $9,752,000 to $170,829,000 compared to the corresponding period a year ago. This increase is attributable primarily to an increase of $6,894,000 in product sales. Product sales increases were recognized for Z Backscatter systems whose revenues increased $10,253,000 on increased shipments and for CargoSearch systems whose revenues increased $5,818,000 as compared to the corresponding prior year period as a number of units recognized on a completed contract basis were accepted in the period. These increases were offset by a decrease of $6,846,000 in contract research and development revenues as compared to the corresponding prior year period attributable to the termination for convenience of one research and development contract which contributed $7,029,000 in revenues in the prior period; a decrease of $3,917,000 in ParcelSearch system revenues due to a decrease in the volume of shipments in the period and a decrease of $2,749,000 in aftermarket spare parts sales on lower volume. Service revenues increased by $2,858,000 to $56,821,000 compared to the nine months ended December 31, 2008 due primarily to an increase in the volume of service contracts over the prior year related to the increase in install base over the prior year.

Total cost of sales and contracts for the third quarter of fiscal 2010 decreased by $4,268,000 to $32,262,000 as compared to the corresponding period a year ago. Cost of sales and contracts related to product revenues decreased by $2,410,000 to $23,206,000 as compared to the corresponding period a year ago. Cost of product sales and contract revenues represented 63% of revenues versus 56% of revenues for the corresponding period last year. The resultant decrease in gross margin percentage from the prior year is due primarily to the mix of products sold in the quarter. In the three months ended December 31, 2009, 44% of product revenues were derived from our higher margin Z Backscatter Systems products as compared to 49% for the three months ended December 31, 2008. This product line historically experiences higher margins due to manufacturing and installation efficiencies. In addition, in the current quarter, certain CargoSearch projects experienced some installation cost overruns impacting the margin on these projects. The cost of service revenues for the third quarter ended December 31, 2009 decreased by $1,858,000 to $9,056,000 as compared to the corresponding period a year ago. Cost of service revenues represented 51% of revenues versus 56% for the corresponding period last year. This increase in gross margin percentage from the prior year is due primarily to a reduction in material costs required to service systems under contract from the prior year as well as a decrease in freight costs as the Company had incurred significant freight costs in the prior fiscal period while establishing certain international spare parts depots.

Total cost of sales and contracts for the nine months ended December 31, 2009 decreased by $2,133,000 to $93,128,000 as compared to the corresponding period a year ago. Cost of sales and contracts related to product revenues increased by $456,000 to $63,940,000 as compared to the corresponding period a year ago. Cost of product sales and contract revenues represented 56% of revenues versus 59% of revenues for the corresponding period last year. The resultant increase in gross margin percentage from the prior year is due primarily to the mix of products sold in the period and to our successfully controlling unit production costs on new builds. In the nine months ended December 31, 2009, 56% of product revenues were derived from our higher margin Z Backscatter Systems products as compared to 50% for the nine months ended December 31, 2008. These product lines experienced higher margins due to manufacturing and installation efficiencies and cost reductions efforts expended in this past fiscal year. The cost of service revenues for the nine months ended December 31, 2009 decreased by $2,589,000 to $29,188,000 as compared to the corresponding period a year ago. Cost of service revenues represented 51% of revenues versus 59% for the corresponding period last year. This increase in gross margin percentage from the prior year is due primarily to a reduction in material costs required to service systems under contract from the prior year as well as a decrease in freight costs as the Company had incurred significant freight costs in the prior fiscal period while establishing certain international spare parts depots.

Selling, general and administrative expenses for the third quarter of fiscal 2010 increased by $492,000 to $9,624,000 as compared to the corresponding period a year ago. Selling, general and administrative expenses represented 18% of revenues in the current period compared to 14% for the corresponding period last year. The increase in selling, general and administrative expenses costs over the prior period was primarily the result of an increase in incentive and stock compensation expense ($953,000) and an increase in sales and marketing related expenses ($143,000). These expenses were partially offset by a decrease in legal fees ($790,000) associated with the patent litigation described under Item 1 Legal Proceedings in Part II of this quarterly report, which was settled during the first quarter of this fiscal year.

Selling, general and administrative expenses for the nine months ended December 31, 2009 increased by $2,110,000 to $26,335,000 as compared to the corresponding period a year ago. Selling, general and administrative expenses remained constant at 15% of total revenues for both periods reported. The increase in selling, general and administrative expenses costs over the prior period was primarily the result of an increase in incentive and stock compensation expense ($1,685,000), an increase in sales and marketing related expenses ($203,000) and an increase in salaries and benefits associated primarily with increased headcount ($259,000). These expenses were partially offset by a decrease in legal fees ($495,000) associated with the patent litigation described under Item 1 Legal Proceedings in Part II of this quarterly report, which was settled during the first quarter of this fiscal year.

Company funded research and development expenses for the third quarter of fiscal 2010 decreased by $663,000 to $4,152,000 as compared to the corresponding period last year. Research and development expenses represented 8% of revenues in the current quarter compared to 7% for the corresponding period last year. This decrease in research and development expenses in the quarter was a result of engineering efforts being expended in the quarter in existing product support and process improvement initiatives.

Company funded research and development expenses for the nine months ended December 31, 2009 increased by $2,355,000 to $14,909,000 as compared to the corresponding period last year. Research and development expenses represented 9% of revenues in the nine months ended December 31, 2009 compared to 8% for the corresponding period last year. This year over year increase was attributable to planned expenditures in research and development activity as we continue to focus on new product development and product enhancements as a primary strategic goal.

Other income was $171,000 for the third quarter of fiscal 2010 as compared to $189,000 for the corresponding period a year ago. This decrease in other income is attributable primarily to a decrease in interest and investment income attributable to lower interest rates and returns on investments as compared to the prior period.

Other income was $520,000 for the nine months ended December 31, 2009 as compared to $1,668,000 for the corresponding period a year ago. This decrease in other income is attributable primarily to a decrease in interest and investment income attributable to lower interest rates and returns on investments as compared to the prior period.

We reported pre-tax income of $9,022,000 in the three months ended December 31, 2009 as compared to pre-tax income of $15,002,000 in the corresponding period a year ago and pre-tax income of $36,977,000 in the nine months ended December 31, 2009 as compared to pre-tax income of $30,705,000 in the corresponding period a year ago due to the factors described above.

Our projected effective tax rate for the nine months ended December 31, 2009 was 35.5% as compared to 34.5% for the corresponding periods a year ago. In the third quarter of fiscal 2009, our effective tax rate dropped to 33% for the quarter as a result of increases in stock option exercises for which we received a tax deduction and the reinstatement in the third quarter of fiscal 2009 of certain research and development tax credits.

We had net income of $5,819,000 for the third quarter of fiscal 2010 as compared to net income of $10,059,000 in the third quarter of fiscal 2009. For the nine months ended December 31, 2009, we had net income of $23,850,000 as compared to net income of $20,109,000 for the corresponding period last year. The significant factors contributing to these results are noted in the above sections.

Liquidity and Capital Resources

Cash and cash equivalents decreased by $57,053,000 to $48,366,000 at December 31, 2009 compared to $105,419,000 at March 31, 2009. This decrease is attributable primarily to a net increase of $73,737,000 in short-term investments as we transferred maturing cash equivalents into short-term investments during the year. We also expended $2,922,000 to repurchase outstanding shares of common stock as part of our Stock Repurchase Program and paid $5,329,000 in dividends to shareholders as part of our quarterly dividend program. Offsetting this was $23,405,000 in net cash provided by operating activities due mainly to the net income earned in the period offset by certain non-cash items and decreases in accounts receivable and unbilled costs and fees of $12,439,000 due to the timing of certain milestone invoices and payments. These operating cash inflows were offset by decreases in deferred revenue of $14,171,000 attributable primarily to revenue earned on prepaid system orders and other prepaid service contracts in the period, decreases in customer deposits of $4,455,000 as revenue was earned against deposits received in prior periods and decreases in accrued expenses of $2,471,000 attributable primarily to the payment of incentive compensation and the payment of certain project related costs, both of which had been accrued for at year end.

On November 13, 2009, we modified our Loan and Security Agreement with Silicon Valley Bank to extend the facility through November 12, 2010 and to decrease the facility from $40.0 million to $30.0 million to support our routine letters of credit and working capital needs. If we maintain a cash and investments balance of $40.0 million or greater, then the maximum amount available for borrowing under the facility is $30.0 million minus the amount of all outstanding letters of credit less certain reserves, and minus the outstanding principal balance of any advances. If our cash and investment balance falls below $40.0 million for a period of 30 consecutive days, then the maximum amount available for borrowings under the facility is the lesser of (i) $30.0 million, or (ii) 80% of eligible domestic accounts receivable minus the amount of outstanding letters of credit adjusted for certain reserves and minus the principal balance of any advances.

The credit facility bears an interest rate of the greater of 4.0% or the Silicon Valley Bank prime rate (4.0% at December 31, 2009). The credit agreement is collateralized by certain of our assets and contains certain restrictions, including limitations on the amount of distributions that can be made to stockholders, and the disposition or encumbrances of assets, and requires the maintenance of certain financial covenants. As of December 31, 2009, we were in compliance with these covenants.

In the normal course of business, we may provide certain customers and potential customers with performance guarantees, which are generally backed by standby letters of credit. In general, we would only be liable for the amount of these guarantees in the event of default in the performance of our obligations; the probability of which management believes is low. As of December 31, 2009, we had outstanding $21,351,000 in standby letters of credit against the Loan and Security Agreement with $8,649,000 remaining availability. The outstanding letters of credit are primarily for guaranteeing performance on certain international projects. No amounts have been drawn against these letters of credit. In addition, at December 31, 2009, the Company had a restricted cash balance of $1,867,000 related to certain bank required deposits for certain outstanding letters of credit and other bank related fees.

ITEM 3 QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The cash accounts for our operations in Hong Kong, England, the Netherlands, and Abu Dhabi are maintained in Hong Kong dollars, pounds sterling, Euros and dirham, respectively. The gains and losses from foreign currency transactions are included in the statements of operations for the period and were immaterial. A hypothetical 10% change in foreign currency rates would not have a material impact on our results of operations or financial position.

As of December 31, 2009, we held short-term investments consisting of U.S. treasury bills, money market funds, commercial paper, corporate debentures/bonds, U.S. government agency bonds and certificates of deposit. Our primary objective with our investment portfolio is to invest available cash while preserving principal and meeting liquidity needs. These investments have an average interest rate of approximately 0.449% and are subject to interest rate risk. As a result of the average maturity and conservative nature of the investment portfolio, a sudden change in interest rates would not have a material adverse effect on the value of these investments. To minimize this risk, we maintain a significant portion of our cash balances in money market funds. In general, money market funds are not subject to interest rate risk because the interest paid on such funds fluctuates with the prevailing interest rate.

ITEM 4 CONTROLS AND PROCEDURES

a) Evaluation of disclosure controls and procedures

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As of the end of the period covered by this report, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, the Company reviewed and evaluated the effectiveness of the Company s disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 as amended (the Exchange Act). Based upon their evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by the Company in the reports filed and submitted by it under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission s rules and forms, and to provide reasonable assurance that information required to be disclosed by the Company in such reports is accumulated and communicated to the Company s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

b) Changes in internal control over financial reporting

There have been no changes in our internal control over financial reporting as such term is defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act during the period covered by this report that have materially affected, or are reasonably likely to materially affect, the Company s internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1 LEGAL PROCEEDINGS

On October 3, 2007, the Company commenced litigation in the United States District Court for the Eastern District of Virginia against AutoClear, LLC, and its affiliates Control Screening, LLC, and Scan-Tech Security, LP, for infringement of the Company s United States Patent No. 5,313,511, seeking relief, including an injunction. This case was settled in June of 2009 with the court holding that the defendants had infringed on the Company s United States Patent No. 5,313,511. Under the terms of the settlement agreement, the Company has granted the defendants a limited license under the patent. Other terms of the settlement agreement are confidential.

The Company is also subject to various legal proceedings and claims that arise in the ordinary course of business. At the present time, it is not possible to predict the outcome of these matters; however, the Company currently believes that resolving these matters will not have a material adverse impact on its financial condition, results of operations or cash flows.

ITEM 1A RISK FACTORS

You should carefully review and consider the information regarding certain factors which could materially affect our business, financial condition or future results set forth under Item 1A. Risk Factors in our Form 10-K for the year ended March 31, 2009. There have been no material changes from the factors disclosed in our Form 10-K for the year ended March 31, 2009, although we may disclose changes to such factors or disclose additional factors from time to time in our future filings with the Securities and Exchange Commission.

ITEM 2 UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The Board of Directors approved a Stock Repurchase Program which authorizes the Company to repurchase up to $35 million of shares of its common stock from time to time on the open market. As of December 31, 2009, the maximum dollar value of shares that may yet be purchased under this program is $23,807,000.

During the quarter ended December 31, 2009, the Company did not purchase any securities under this Stock Repurchase Program.

ITEM 6 EXHIBITS

See the exhibit index following the signature page to this quarterly report.

The information required by Exhibit Item 11 (Statement re: Computation of Income per Common and Common Equivalent Share) may be found in Note 4 to the Unaudited Condensed Consolidated Financial Statements in this quarterly report.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned hereunto duly authorized.

	AMERICAN SCIENCE AND ENGINEERING, INC.
Date: February 9, 2010	/s/ Kenneth J. Galaznik
	Kenneth J. Galaznik
	Senior Vice President, Chief Financial Officer and Treasurer

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EXHIBIT INDEX

Exhibit Number	Description of Exhibits
10.1	Fifth Loan Modification Agreement dated November 13, 2009 between the registrant and Silicon Valley Bank (filed as Exhibit 99.1 to the registrant s Current Report on Form 8-K (File No. 001-06549) on November 18, 2009 and incorporated herein by reference)
31.1	Certification by Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification by Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002