SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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 March 31, 2001

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 0-23621

MKS INSTRUMENTS, INC.

(Exact name of registrant as specified in its charter)

Massachusetts	04-2277512
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
Six Shattuck Road, Andover, Massachusetts	01810
(Address of principal executive offices)	(Zip Code)
Registrant's telephone number, including area code	(978) 975-2350

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 [ ].

Number of shares outstanding of the issuer's common stock as of April 30, 2001: 37,599,096

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

MKS INSTRUMENTS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	March 31, 2001 (Unaudited)	December 31, 2000 (Note 1)
ASSETS		
Current assets:		
Cash and cash equivalents	$111,423	$123,082
Short-term investments	14,824	17,904
Trade accounts receivable, net	82,725	95,076
Inventories	78,497	69,165
Deferred tax asset	7,358	9,976
Other current assets	5,351	4,433
Total current assets	300,178	319,636
Property, plant and equipment, net	70,849	64,133
Goodwill and acquired intangible assets, net	38,101	45,325
Long-term investments	17,230	17,100
Other assets	14,033	8,209
Total assets	$440,391	$454,403
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	$ 16,558	$ 15,741
Current portion of long-term debt	1,373	2,783
Current portion of capital lease obligations	638	610
Accounts payable	19,218	23,653
Accrued compensation	8,175	17,003
Other accrued expenses	14,138	14,588
Income taxes payable	5,541	7,937
Total current liabilities	65,641	82,315
Long-term debt	9,825	11,439
Long-term portion of capital lease obligations	669	947
Deferred tax liability	963	1,663
Other liabilities	508	517
Commitments and contingencies		
Stockholders' equity:		
Preferred Stock, $0.01 par value, 2,000,000 shares authorized; none issued and outstanding	--	--
Common Stock, no par value, 50,000,000 shares authorized; 36,895,686 and 36,645,665 issued and outstanding at March 31, 2001 and December 31, 2000, respectively	113	113
Additional paid-in capital	271,252	263,723
Retained earnings	91,130	93,235
Accumulated other comprehensive income	290	451
Total stockholders' equity	362,785	357,522
Total liabilities and stockholders' equity	$440,391	$454,403

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

MKS INSTRUMENTS, INC.
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share data)
(Unaudited)

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000 (Note 1)
Net sales	$ 110,888	$ 96,158
Cost of sales	67,693	54,933
Gross profit	43,195	41,225
Research and development	11,151	7,123
Selling, general and administrative	19,057	15,220
Amortization of goodwill and acquired intangible assets	2,240	378
Goodwill impairment charge	3,720	--
Merger expenses	7,708	--
Income (loss) from operations	(681)	18,504
Interest expense	402	429
Interest income	1,794	1,211
Other income (expense), net	--	(9)
Income before income taxes	711	19,277
Provision for income taxes	2,816	7,318
Net income (loss)	$ (2,105)	$ 11,959
Historical net income (loss) per share:		
Basic	$ (0.06)	$ 0.36
Diluted	$ (0.06)	$ 0.34
Historical weighted average common shares outstanding:		
Basic	36,820	33,618
Diluted	36,820	35,331

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

MKS INSTRUMENTS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Cash flows from operating activities:		
Net income (loss)	$ (2,105)	$ 11,959
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	4,958	2,700
Goodwill impairment charge	3,720	--
Other	27	(468)
Changes in operating assets and liabilities net of effects of businesses acquired:		
Trade accounts receivable	14,220	(7,352)
Inventories	(875)	(8,099)
Other current assets	(1,232)	(917)
Accrued expenses and other current liabilities	(13,155)	4,274
Accounts payable	(3,590)	3,377
Net cash provided by operating activities	1,968	5,474
Cash flows from investing activities:		
Proceeds from (purchases of) investments	(5,393)	7,429
Purchases of property, plant and equipment	(4,898)	(2,566)
(Increase) decrease in other assets	(408)	322
Purchases of companies, net of cash acquired	--	(6,164)
Net cash used in investing activities	(10,699)	(979)
Cash flows from financing activities:		
Proceeds from short-term borrowings	11,825	1,670
Payments on short-term borrowings	(10,988)	--
Principal payments on long-term debt	(695)	(514)
Proceeds from exercise of stock options	796	1,138
Proceeds from issuance of common stock, net of issuance costs	--	259
Principal payments under capital lease obligations	(250)	(308)
Net cash provided by financing activities	688	2,245
Effect of exchange rate changes on cash and cash equivalents	(474)	95
Increase (decrease) in cash and cash equivalents	(8,517)	6,835
Cash and cash equivalents at beginning of period	123,082	67,489
Effect of excluded results of ASTeX (Note 1)	(3,142)	--
Cash and cash equivalents at end of period	$ 111,423	$ 74,324
Supplemental disclosure of cash flow information:		
Cash paid during the period for:		
Interest	$ 365	$ 267
Income taxes	$ 5,053	$ 2,555
Acquisitions:		
Fair value of assets acquired	$ --	$ 15,803
Less: liabilities assumed	--	1,161
Stock and options issued	--	8,433
Cash acquired	--	45
Acquisitions, net of cash acquired	$ --	$ 6,164

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

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Tables in thousands, except per share data)

1) BASIS OF PRESENTATION

The interim financial data as of March 31, 2001 and for the three months ended March 31, 2001 and 2000 is unaudited; however, in the opinion of MKS Instruments, Inc., the interim data includes all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the results for the interim periods. The unaudited financial statements presented herein have been prepared in accordance with the instructions to Form 10-Q and do not include all the information and note disclosures required by generally accepted accounting principles. The financial statements should be read in conjunction with the December 31, 2000 audited financial statements and notes thereto included in the MKS Annual Report on Form 10-K filed with the Securities and Exchange Commission on April 2, 2001 and the MKS Current Report on Form 8-K filed with the Securities and Exchange Commission on April 20, 2001.

On January 26, 2001 MKS completed its acquisition of Applied Science and Technology, Inc. ("ASTeX") in a transaction accounted for under the pooling of interests method of accounting. Under the terms of the agreement, each outstanding share of ASTeX common stock was exchanged for 0.7669 newly issued shares of common stock of MKS Instruments, Inc., resulting in the issuance of approximately 11.2 million shares of common stock of MKS Instruments, Inc., representing approximately 30% of its then outstanding shares. There were no material adjustments required to conform the accounting policies of the two companies. The unaudited financial statements for the three months ended March 31, 2000 combine the historical financial statements of MKS Instruments, Inc. for the three months ended March 31, 2000 with the historical financial statements of ASTeX for the three months ended September 25, 1999. The following table presents details of the results of operations for the separate companies.

	MKS Instruments, Inc. Three Months Ended March 31, 2000	ASTeX Three Months Ended September 25, 1999	Combined
Net sales.....	$65,556	$30,602	$96,158
Net income....	$ 9,331	$ 2,628	$11,959

The December 31, 2000 Balance Sheet combines the balance sheet of MKS Instruments, Inc. as of December 31, 2000 with the balance sheet of ASTeX as of June 30, 2000.

The terms "MKS" and the "Company" refer to MKS Instruments, Inc., including ASTeX.

As a result of conforming dissimilar fiscal year-ends, the ASTeX results of operations for the six-month period ended December 31, 2000 are excluded from the consolidated financial statements of MKS for the year ended December 31, 2000. The following is information related to the ASTeX financial results for the six-month period ended December 31, 2000:

Net sales..	$89,193
Net income...	5,968
Net cash used by operating activities........................	(3,500)
Net cash provided by investing activities....................	245
Net cash provided by financing activities....................	43

Included in the March 31, 2001 stockholders' equity is a $5,968,000 adjustment resulting from conforming the two companies' dissimilar year ends, which represents the ASTeX results of operations for the six-month period ended December 31, 2000.

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)
(Tables in thousands, except per share data)

2) USE OF 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 dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

3) CASH AND CASH EQUIVALENTS AND INVESTMENTS

Cash equivalents consist of the following:

	March 31, 2001	December 31, 2000
Cash and Money Market Instruments	$ 44,893	$ 36,687
Commercial Paper	24,955	74,895
Federal Government and Government Agency Obligations	--	1,000
State and Municipal Government Obligations	2,000	2,000
Corporate Obligations	39,575	8,500
	$111,423	$123,082

Short-term available-for-sale investments maturing within one year consist of the following:

	March 31, 2001	December 31, 2000
Federal Government and Government Agency Obligations	$ 5,602	$10,101
State and Municipal Government Obligations	4,622	--
Corporate Obligations	4,600	1,000
Commercial Paper	--	6,803
	$14,824	$17,904

Long-term available-for-sale investments maturing within two years consist of the following:

	March 31, 2001	December 31, 2000
Federal Government and Government Agency Obligations	$ --	$ 4,000
State and Municipal Government Obligations	17,230	13,100
	$17,230	$17,100

4) NET INCOME PER SHARE

The following is a reconciliation of basic to diluted net income per share:

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Net income (loss)	$ (2,105)	$ 11,959
Shares used in net income per common share - basic ...	36,820	33,618
Effect of dilutive securities:		

Employee and director stock options	--	1,713
Shares used in net income per common share - diluted..	36,820	35,331
Net income (loss) per common share - basic	$ (0.06)	$ 0.36
Net income (loss) per common share - diluted	$ (0.06)	$ 0.34

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)
(Tables in thousands, except per share data)

For purposes of computing diluted earnings per share, weighted average common share equivalents do not include stock options with an exercise price greater than the average market price of the common shares during the period. Options to purchase 43,000 shares of common stock which were outstanding during the three months ended March 31, 2000, were not included in the calculation of diluted net income per common share because the option price was greater than the average market price of the common shares during the period. All options outstanding during the three months ended March 31, 2001 are excluded from the calculation of diluted net income per common share because their inclusion would be anti-dilutive. There were options to purchase approximately 5,131,000 shares of the Company's common stock outstanding as of March 31, 2001.

5) INVENTORIES

Inventories consist of the following:

	March 31, 2001	December 31, 2000
Raw material	$29,864	$23,765
Work in process	19,785	20,856
Finished goods	28,848	24,544
	$78,497	$ 69,165

6) STOCKHOLDERS' EQUITY

Total comprehensive income was as follows:

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Net income (loss)	$ (2,105)	$ 11,959
Other comprehensive income, net of taxes:		
Changes in value of financial instruments designated as hedges of currency and interest rate exposures	758	192
Foreign currency translation adjustment	(606)	(101)
Unrealized gain (loss) on investments	(313)	(102)
Other comprehensive income (loss), net of taxes	(161)	(11)
Total comprehensive income (loss)	$ (2,266)	$ 11,948

7) SEGMENT INFORMATION AND SIGNIFICANT CUSTOMER

Segment Information for the three months ended March 31, 2001 and 2000:

		North America	Far East	Europe	Total
Net sales to unaffiliated customers	2001	$81,132	$17,363	$12,393	$110,888
	2000	74,327	13,977	7,854	96,158
Intersegment net sales	2001	$18,392	$ 330	$ 392	$ 19,114
	2000	14,922	371	337	15,630
Income (loss) from operations	2001	$(5,012)	$ 1,885	$ 2,446	$ (681)
	2000	16,099	1,363	1,042	18,504

The Company had one customer comprising 23% and 29% of net sales for the three months ended March 31, 2001 and 2000, respectively.

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)
(Tables in thousands, except per share data)

8) ACQUISITIONS

On August 4, 1999, the Company acquired substantially all of the assets of the Shamrock product line from Sputtered Films, Inc., a designer, manufacturer and seller of high performance sputtering equipment for the semiconductor and magnetic storage industries. Cash consideration of approximately $6,382,000 was paid for the assets. The costs of the acquisition were allocated on the basis of the estimated fair market value of the assets acquired and resulted in an allocation of $4,463,000 to goodwill. The allocation of the purchase price is as follows:

Current assets	$ 646
Goodwill	4,463
Property and equipment and other assets	1,377
Liabilities assumed	(104)
	$ 6,382

On March 10, 2000 the Company acquired Compact Instrument Technology, LLC ("Compact Instrument"), a start-up company with proprietary technology in process monitoring for semiconductor manufacturing and other manufacturing processes. The acquisition has been accounted for by the purchase method of accounting. The purchase price was $8,700,000 and consisted of $8,400,000 in stock and $300,000 in assumed net liabilities. The purchase price was allocated to the assets acquired based upon their estimated fair values. This allocation resulted in goodwill of $7,600,000 and acquired technology of $1,600,000, which are being amortized on a straight-line basis over 5 years and 3 years, respectively.

9) GOODWILL IMPAIRMENT CHARGE

When the Company acquired the Shamrock product line, it was expected that sales of the existing system design and development of new system designs would generate future revenues. Since the acquisition, the Company has provided potential customers with purchase quotations for Shamrock systems, including a quotation to a potential customer in January 2001 for the sale of several systems. The customer did not purchase the systems, and the quotation expired in March 2001. The Company has been unsuccessful in selling any systems of the product line since the acquisition and, with the expiration of the significant quote in March 2001, believes that future Shamrock system sales are not probable. Additionally, the Company has no plans for future development of new system designs. Consequently, the Company believed that the carrying amount of the Shamrock related goodwill was impaired. To measure the impairment, the Company performed a cash flow analysis for the product group and determined that the estimated future cash flows of the group would be insignificant. As a result, the Company has written off the carrying value of the related goodwill of approximately $3,720,000.

10) MERGER COSTS

On January 26, 2001 MKS completed its acquisition of ASTeX in a transaction accounted for under the pooling of interest method of accounting. Under the pooling of interests method of accounting, fees and expenses related to the merger are expensed in the period of the merger. During the three months ended March 31, 2001, MKS expensed approximately $7.7 million of merger related expenses, consisting of $6.9 million of investment banking, legal, accounting, printing and other professional fees, $0.6 million of employee related costs, and $0.2 million of regulatory and other fees. Approximately $0.7 million of the merger costs were accrued and unpaid at March 31, 2001.

11) SUBSEQUENT EVENT

On April 27, 2001 MKS completed its acquisition of On-Line Technologies, Inc. ("On-Line), a supplier of measurement and control products used for gas analysis, wafer metrology and process control. The acquisition will be accounted for under the purchase method of accounting. The purchase price included approximately 660,000 shares of MKS common stock, assumption of On-Line debt of approximately $9,200,000 and contingent payments of up to $1,500,000.

ITEM 2.

MKS INSTRUMENTS, INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains a number of statements, including, without limitation, statements relating to MKS's beliefs, expectations and plans which are forward-looking statements, as are statements that certain actions, conditions or circumstances will continue. Such statements are based upon management's current expectations and are subject to a number of factors and uncertainties. Information contained in these forward-looking statements is inherently uncertain and actual performance and results may differ materially due to many important factors. See "Factors That May Affect Future Results" for some, but not all, factors that could cause actual results to differ materially from any forward-looking statements made by MKS. The terms "MKS", the "Company", "we", "us" and "our" refer to MKS Instruments, Inc., including ASTeX.

On January 26, 2001 MKS completed its acquisition of Applied Science and Technology, Inc. ("ASTeX") in a transaction accounted for under the pooling of interests method of accounting. Because the fiscal years for MKS and ASTeX differ, the periods combined for the purposes of the consolidated financial statements for the three months ended March 31, 2000 were as follows:

MKS	ASTeX
Three months ended March 31, 2000	Three months ended September 25, 1999

MKS develops, manufactures and supplies gas measurement, control and analysis products, reactive gas generator and power delivery products used in semiconductor manufacturing and other advanced thin-film manufacturing processes. We estimate that during 2000 approximately 76% of our net sales were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. The following table sets forth for the periods indicated the percentage of total net sales of certain line items included in MKS's consolidated statement of income data.

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Net sales	100.0%	100.0%
Cost of sales	61.0	57.1
Gross profit	39.0	42.9
Research and development	10.1	7.4
Selling, general and administrative	17.2	15.9
Amortization of goodwill and acquired intangible assets	2.0	0.4
Goodwill impairment charge	3.4	--
Merger expenses	6.9	--
Income (loss) from operations	(0.6)	19.2
Interest income, net	1.2	0.8
Other income, net	--	--
Income before income taxes	0.6	20.0
Provision for income taxes	2.5	7.6
Net income (loss)	(1.9)%	12.4%

Results of Operations

Net Sales. Net sales increased 15.3% to $110.9 million for the three months ended March 31, 2001 from $96.2 million for the three months ended March 31, 2000. International net sales were approximately $29.8 million for the three months ended March 31, 2001 or 26.8% of net sales and $21.8 million for the three months ended March 31, 2000 or 22.7% of net sales. The increase in net sales was due to increased worldwide sales volume of MKS' existing products, which resulted primarily from increased sales to the Company's semiconductor capital equipment manufacturer and semiconductor device manufacturer customers.

Gross Profit. Gross profit as a percentage of net sales decreased to 39.0% for the three months ended March 31, 2001 from 42.9% for the three months ended March 31, 2000. The change was primarily due to increased overhead costs resulting from the Company increasing capacity throughout 2000, and a higher proportion of lower margin products.

Research and Development. Research and development expense increased 56.5% to $11.2 million or 10.1% of net sales for the three months ended March 31, 2001 from $7.1 million or 7.4% of net sales for the three months ended March 31, 2000. The increase was primarily due to increased spending of $2.0 million for compensation, increased expenses of $0.7 million for development materials related to projects in process, and $0.5 million of other research and development costs associated with the Shamrock business acquired in the first quarter of 2000.

Selling, General and Administrative. Selling, general and administrative expenses increased 25.2% to $19.1 million or 17.2% of net sales for the three months ended March 31, 2001 from $15.2 million or 15.9% of net sales for the three months ended March 31, 2000. The increase was due primarily to increased compensation expense of $1.2 million, increased professional fees of $0.7 million, earnout expense of $0.3 million, and other expenses associated with companies acquired in 2000.

Amortization of Goodwill and Acquired Intangible Assets. Amortization of goodwill and acquired intangible assets increased $1.9 million to $2.2 million for the three months ended March 31, 2001 from $0.4 million for the same period of 2000. The increase is due to the amortization of goodwill and other intangibles resulting from the acquisitions completed by the Company during 2000.

Goodwill Impairment Charge. In August 1999, ASTeX purchased the Shamrock product group for approximately $6.4 million in cash. The costs of the acquisition were allocated on the basis of the estimated fair market value of the assets acquired at that time, and resulted in an allocation of $4,463,000 to goodwill.

When the Company acquired the Shamrock product line, it was expected that sales of the existing system design and development of new system designs would generate future revenues. Since the acquisition, the Company has provided potential customers with purchase quotations for Shamrock systems, including a quotation to a potential customer in January 2001 for the sale of several systems. The customer did not purchase the systems, and the quotation expired in March 2001. The Company has been unsuccessful in selling any systems of the product line since the acquisition and, with the expiration of the significant quote in March 2001, believes that future Shamrock system sales are not probable. Additionally, the Company has no plans for future development of new system designs. Consequently, the Company believed that the carrying amount of the Shamrock related goodwill was impaired. To measure the impairment, the Company performed a cash flow analysis for the product group and determined that the estimated future cash flows of the group would be insignificant. As a result, the Company has written off the carrying value of the related goodwill of approximately $3,720,000.

Merger Costs. On January 26, 2001 MKS completed its acquisition of ASTeX in a transaction accounted for under the pooling of interest method of accounting. Under the pooling of interests method of accounting, fees and expenses related to the merger are expensed in the period of the merger. During the three months ended March 31, 2001, MKS expensed approximately $7.7 million of merger related expenses, consisting of $6.9 million of investment banking, legal, accounting, printing and other professional fees, $0.6 million of employee related costs, and $0.2 million of regulatory and other fees. Approximately $0.7 million of the merger costs were accrued and unpaid at March 31, 2001.

Interest Income (Expense), Net. During the three months ended March 31, 2001 and 2000, the Company generated net interest income of $1.4 million and $0.8 million, respectively, primarily from the invested net proceeds of its common stock offerings, offset by interest expense on outstanding debt.

Provision for Income Taxes. During the three months ended March 31, 2001, the Company's effective tax rate was 396%. The effective tax rate differed from the federal statutory tax rate due primarily to the effect of non-deductible merger costs. Exclusive of the effect of the non-deductible merger costs, the Company's effective tax rate was 37.5% as compared to the effective tax rate of 38.0% for the three months ended March 31, 2000. The change in the effective rate, exclusive of the non-deductible merger costs, was primarily due to tax credits increasing as a percent of taxable income.

LIQUIDITY AND CAPITAL RESOURCES

The Company has financed its operations and capital requirements through a combination of cash provided by operations, long-term real estate financing, capital lease financing and short-term lines of credit. On April 5, 1999, MKS completed the initial public offering of its Common Stock. In connection with this offering and the exercise of an over-allotment option by the underwriters, MKS sold 6,375,000 shares of Common Stock at a price of $14.00 per share. The net proceeds to MKS were approximately $82,000,000 and were received in the second quarter of 1999. Underwriting discounts and commissions were approximately $6,200,000, and other offering costs were approximately $1,000,000. On April 5, 1999, MKS distributed $40,000,000, which was the estimated amount of its undistributed S Corporation earnings as of the day prior to the closing of the offering.

On March 30, 2000, ASTeX completed the registration and sale of 1,917,250 shares of common stock at $40.42 per share. The net proceeds from the offering were approximately $73.2 million.

On March 5, 1999, ASTeX completed the registration and sale of 1,533,800 shares of common stock at $14.34 per share. On April 6, 1999, the underwriters exercised their over-allotment option to purchase an additional 230,070 shares of common stock. The net proceeds from the offering were approximately $23.8 million.

In 1998, ASTeX announced that it had met the requirements for the redemption of redeemable warrants issued in connection with the ASTeX initial public offering and called the warrants for redemption. 2,082,451 redeemable warrants and 133,088 underwriter warrants were converted into 1,297,147 shares of common stock. The net proceeds were $15,234,000.

Operations provided cash of $2.0 million for the three months ended March 31, 2001. This cash flow was impacted by depreciation and amortization, the goodwill impairment charge and changes in the levels of accounts payable and accrued expenses, and accounts receivable. Investing activities utilized cash of $10.7 million for the three months ended March 31, 2001 primarily from purchasing investments and property, plant, and equipment. Financing activities provided cash of $0.7 million, primarily from short-term borrowings and employees exercising stock options.

Working capital was $234.5 million as of March 31, 2001, a decrease of $2.8 million from December 31, 2000. The Company has a combined $40.0 million line of credit with two banks, expiring July 31, 2001. At March 31, 2001, the Company had no borrowings under the line of credit.

The Company believes that its working capital, together with the cash anticipated to be generated from operations and funds available from existing credit facilities, will be sufficient to satisfy its estimated working capital and planned capital expenditure requirements through at least the next 24 months.

FACTORS THAT MAY AFFECT FUTURE RESULTS

MKS believes that this document contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are subject to risks and uncertainties and are based on the beliefs and assumptions of management of MKS, based on information currently available to MKS's management. Use of words such as "believes," "expects," "anticipates," "intends," "plans," "estimates," "should," "likely" or similar expressions, indicate a forward-looking statement. Forward-looking statements involve risks, uncertainties and assumptions. Certain of the information contained in this Quarterly Report on Form 10-Q consists of forward-looking statements. Important factors that could cause actual results to differ materially from the forward-looking statements include the following:

MKS' BUSINESS DEPENDS SUBSTANTIALLY ON CAPITAL SPENDING IN THE SEMICONDUCTOR INDUSTRY WHICH IS CHARACTERIZED BY PERIODIC FLUCTUATIONS THAT MAY CAUSE A REDUCTION IN DEMAND FOR MKS' PRODUCTS.

MKS estimates that approximately 76% of its sales in 2000 were to semiconductor capital equipment manufacturers and semiconductor device manufacturers, and it expects that sales to such customers will continue to account for a substantial majority of its sales. MKS' business depends upon the capital expenditures of semiconductor device manufacturers, which in turn depend upon the demand for semiconductors. Periodic reductions in demand for the products manufactured by semiconductor capital equipment manufacturers and semiconductor device manufacturers may adversely affect MKS' business, financial condition and results of operations. Historically, the semiconductor market has been highly cyclical and has experienced periods of overcapacity, resulting in significantly reduced demand for capital equipment. For example, in 1996 and 1998, the semiconductor capital equipment industry experienced significant declines, which caused a number of MKS customers to reduce their orders. More recently, in the first quarter of 2001, MKS experienced a reduction in demand from OEM customers, and lower gross margins due to reduced absorption of manufacturing overhead at the lower revenue levels. In addition, many semiconductor manufacturers have operations and customers in Asia, a region which in recent years has experienced serious economic problems including currency devaluations, debt defaults, lack of liquidity and recessions. MKS cannot be certain that semiconductor downturns will not recur. A decline in the level of orders as a result of any future downturn or slowdown in the semiconductor capital equipment industry could have a material adverse effect on MKS' business, financial condition and results of operations.

MKS' QUARTERLY OPERATING RESULTS HAVE VARIED, AND ARE LIKELY TO CONTINUE TO VARY SIGNIFICANTLY. THIS MAY RESULT IN VOLATILITY IN THE MARKET PRICE FOR MKS' SHARES.

A substantial portion of MKS' shipments occur shortly after an order is received and therefore MKS operates with a low level of backlog. As a result, a decrease in demand for MKS' products from one or more customers could occur with limited advance notice and could have a material adverse effect on MKS' results of operations in any particular period. A significant percentage of MKS' expenses are relatively fixed and based in part on expectations of future net sales. The inability to adjust spending quickly enough to compensate for any shortfall would magnify the adverse impact of a shortfall in net sales on MKS' results of operations. Factors that could cause fluctuations in MKS' net sales include:

- the timing of the receipt of orders from major customers;
- shipment delays;
- disruption in sources of supply;
- seasonal variations of capital spending by customers;
- production capacity constraints; and
- specific features requested by customers.

For example, MKS was in the process of increasing its production capacity when the semiconductor capital equipment market began to experience a significant downturn in 1996. This downturn had a material adverse effect on MKS' operating results in the second half of 1996 and the first half of 1997. After an increase in business in the latter half of 1997, the market experienced another downturn in 1998, which had a material adverse effect on MKS' 1998 and first quarter 1999 operating results. More recently, the semiconductor capital equipment market has experienced a significant downturn at the beginning of 2001. As a result, MKS experienced a reduction in demand from OEM customers in the first quarter of 2001, which had a material adverse effect on MKS' operating results. As a result of the factors discussed above, it is likely that MKS will in the future experience quarterly or annual fluctuations and that, in one or more future quarters, its operating results will fall below the expectations of public market analysts or investors. In any such event, the price of MKS' common stock could decline significantly.

THE LOSS OF NET SALES TO ANY ONE OF MKS' MAJOR CUSTOMERS WOULD LIKELY HAVE A MATERIAL ADVERSE EFFECT ON MKS.

MKS' five largest customers accounted for approximately 45% of its net sales in 2000, 39% of its net sales in 1999 and 34% of its net sales in 1998. The loss of a major customer or any reduction in orders by these customers, including reductions due to market or competitive conditions, would likely have a material adverse effect on MKS' business, financial condition and results of operations. During 2000 and 1999, one customer, Applied Materials, accounted for approximately 30% and 29%, respectively, of MKS' net sales. MKS' purchase contract with Applied Materials expires in May 2001. While MKS and Applied Materials are currently negotiating a new agreement, there can be no assurance that negotiations will be successful. None of MKS' significant customers, including Applied Materials, has entered into an agreement requiring it to purchase any minimum quantity of MKS' products. The demand for MKS' products from its semiconductor capital equipment customers depends in part on orders received by them from their semiconductor device manufacturer customers.

Attempts to lessen the adverse effect of any loss or reduction through the rapid addition of new customers could be difficult because prospective customers typically require lengthy qualification periods prior to placing volume orders with a new supplier. MKS' future success will continue to depend upon:

- its ability to maintain relationships with existing key customers;
- its ability to attract new customers; and
- the success of its customers in creating demand for their capital equipment products which incorporate MKS's products.

AS PART OF MKS' BUSINESS STRATEGY, MKS HAS ENTERED INTO AND MAY ENTER INTO OR SEEK TO ENTER INTO BUSINESS COMBINATIONS AND ACQUISITIONS THAT MAY BE DIFFICULT TO INTEGRATE, DISRUPT ITS BUSINESS, DILUTE STOCKHOLDER VALUE OR DIVERT MANAGEMENT ATTENTION.

MKS acquired Compact Instrument Technology ("Compact Instrument") in March 2000, Telvac Engineering, Ltd. ("Telvac") in May 2000, Spectra Instruments, Inc. ("Spectra") in July 2000, D.I.P., Inc. ("D.I.P.") in September 2000, ASTeX in January 2001 and On-Line in April 2001. As a part of its business strategy, MKS may enter into additional business combinations and acquisitions. Acquisitions are typically accompanied by a number of risks, including the difficulty of integrating the operations and personnel of the acquired companies, the potential disruption of MKS' ongoing business and distraction of management, expenses related to the acquisition and potential unknown liabilities associated with acquired businesses.

If MKS is not successful in completing acquisitions that it may pursue in the future, it may be required to reevaluate its growth strategy and MKS may have incurred substantial expenses and devoted significant management time and resources in seeking to complete proposed acquisitions that will not generate benefits for it.

In addition, with future acquisitions, MKS could use substantial portions of its available cash as all or a portion of the purchase price. MKS could also issue additional securities as consideration for these acquisitions, which could cause significant stockholder dilution. MKS' acquisitions of Compact Instrument, Telvac, Spectra, D.I.P., ASTeX and On-Line and any future acquisitions may not ultimately help MKS achieve its strategic goals and may pose other risks to MKS.

AN INABILITY TO CONVINCE SEMICONDUCTOR DEVICE MANUFACTURERS TO SPECIFY THE USE OF MKS' PRODUCTS TO MKS' CUSTOMERS, WHO ARE SEMICONDUCTOR CAPITAL EQUIPMENT MANUFACTURERS, WOULD WEAKEN MKS' COMPETITIVE POSITION.

The markets for MKS' products are highly competitive. Its competitive success often depends upon factors outside of its control. For example, in some cases, particularly with respect to mass flow controllers, semiconductor device manufacturers may direct semiconductor capital equipment manufacturers to use a specified supplier's product in their equipment. Accordingly, for such products, MKS' success will depend in part on its ability to have semiconductor device manufacturers specify that MKS' products be used at their semiconductor fabrication facilities. In addition, MKS may encounter difficulties in changing established relationships of competitors that already have a large installed base of products within such semiconductor fabrication facilities.

IF MKS' PRODUCTS ARE NOT DESIGNED INTO SUCCESSIVE NEW GENERATIONS OF ITS CUSTOMERS' PRODUCTS, MKS WILL LOSE SIGNIFICANT NET SALES DURING THE LIFESPAN OF THOSE PRODUCTS.

New products designed by semiconductor capital equipment manufacturers typically have a lifespan of five to ten years. MKS' success depends on its products being designed into new generations of equipment for the semiconductor industry. MKS must develop products that are technologically current so that they are positioned to be chosen for use in each successive new generation of semiconductor capital equipment. If MKS products are not chosen by its customers, MKS' net sales may be reduced during the lifespan of its customers' products. In addition, MKS must make a significant capital investment to develop products for its customers well before its products are introduced and before it can be sure that it will recover its capital investment through sales to the customers in significant volume. MKS is thus also at risk during the development phase that its product may fail to meet its customers' technical or cost requirements and may be replaced by a competitive product or alternative technology solution. If that happens, MKS may be unable to recover MKS' development costs.

THE SEMICONDUCTOR INDUSTRY IS SUBJECT TO RAPID DEMAND SHIFTS WHICH ARE DIFFICULT TO PREDICT. AS A RESULT, MKS' INABILITY TO EXPAND ITS MANUFACTURING CAPACITY IN RESPONSE TO THESE RAPID SHIFTS MAY CAUSE A REDUCTION IN ITS MARKET SHARE.

MKS' ability to increase sales of certain products depends in part upon its ability to expand its manufacturing capacity for such products in a timely manner. If MKS is unable to expand its manufacturing capacity on a timely basis or to manage such expansion effectively, its customers could implement its competitors' products and, as a result, its market share could be reduced. Because the semiconductor industry is subject to rapid demand shifts which are difficult to foresee, MKS may not be able to increase capacity quickly enough to respond to a rapid increase in demand in the semiconductor industry. Additionally, capacity expansion could increase MKS' fixed operating expenses and if sales levels do not increase to offset the additional expense levels associated with any such expansion, its business, financial condition and results of operations could be materially adversely affected.

SALES TO FOREIGN MARKETS CONSTITUTE A SUBSTANTIAL PORTION OF MKS' NET SALES; THEREFORE, MKS NET SALES AND RESULTS OF OPERATIONS COULD BE ADVERSELY AFFECTED BY DOWNTURNS IN ECONOMIC CONDITIONS IN COUNTRIES OUTSIDE OF THE UNITED STATES.

International sales, which include sales by MKS' foreign subsidiaries, but exclude direct export sales (which were less than 10% of MKS' total net sales), accounted for approximately 23% of net sales in 2000, 25% of net sales in 1999 and 21% of net sales in 1998.

MKS anticipates that international sales will continue to account for a significant portion of MKS' net sales. In addition, certain of MKS' key domestic customers derive a significant portion of their revenues from sales in international markets. Therefore, MKS' sales and results of operations could be adversely affected by economic slowdowns and other risks associated with international sales.

UNFAVORABLE CURRENCY EXCHANGE RATE FLUCTUATIONS MAY LEAD TO LOWER GROSS MARGINS, OR MAY CAUSE MKS TO RAISE PRICES WHICH COULD RESULT IN REDUCED SALES.

Currency exchange rate fluctuations could have an adverse effect on MKS' net sales and results of operations and MKS could experience losses with respect to its hedging activities. Unfavorable currency fluctuations could require MKS to increase prices to foreign customers which could result in lower net sales by MKS to such customers. Alternatively, if MKS does not adjust the prices for its products in response to unfavorable currency fluctuations, its results of operations could be adversely affected. In addition, sales made by MKS' foreign subsidiaries are denominated in the currency of the country in which these products are sold and the currency it receives in payment for such sales could be less valuable at the time of receipt as a result of exchange rate fluctuations. MKS enters into forward exchange contracts and local currency purchased options to reduce currency exposure arising from intercompany sales of inventory. However, MKS cannot be certain that its efforts will be adequate to protect it against significant currency fluctuations or that such efforts will not expose it to additional exchange rate risks.

COMPETITION FOR PERSONNEL IN THE SEMICONDUCTOR AND INDUSTRIAL MANUFACTURING INDUSTRIES IS INTENSE.

MKS' success depends to a large extent upon the efforts and abilities of a number of key employees and officers, particularly those with expertise in the semiconductor manufacturing and similar industrial manufacturing industries. The loss of key employees or officers could have a material adverse effect on MKS' business, financial condition and results of operations. MKS believes that its future success will depend in part on its ability to attract and retain highly skilled technical, financial, managerial and marketing personnel. Competition for such personnel is intense, and MKS cannot be certain that it will be successful in attracting and retaining such personnel.

MKS' PROPRIETARY TECHNOLOGY IS IMPORTANT TO THE CONTINUED SUCCESS OF ITS BUSINESS. MKS' FAILURE TO PROTECT THIS PROPRIETARY TECHNOLOGY MAY SIGNIFICANTLY IMPAIR MKS' COMPETITIVE POSITION.

As of March 31, 2001, MKS owned 97 U.S. patents and 60 foreign patents and had 50 pending U.S. patent applications and 120 pending foreign patent applications. Although MKS seeks to protect its intellectual property rights through patents, copyrights, trade secrets and other measures, it cannot be certain that:

- MKS will be able to protect its technology adequately;
- competitors will not be able to develop similar technology independently;
- any of MKS' pending patent applications will be issued;
- intellectual property laws will protect MKS' intellectual property rights; or
- third parties will not assert that MKS' products infringe patent, copyright or trade secrets of such parties.

PROTECTION OF MKS' INTELLECTUAL PROPERTY RIGHTS MAY RESULT IN COSTLY LITIGATION.

Litigation may be necessary in order to enforce MKS' patents, copyrights or other intellectual property rights, to protect its trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. For example, on November 30, 2000, ASTeX brought suit in federal district court in Delaware against Advanced Energy Industries, Inc. for infringement of ASTeX's patent related to its Astron product. Such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on MKS' business, financial condition and results of operations.

THE MARKET PRICE OF MKS' COMMON STOCK HAS FLUCTUATED AND MAY CONTINUE TO FLUCTUATE FOR REASONS OVER WHICH MKS HAS NO CONTROL.

The stock market has from time to time experienced, and is likely to continue to experience, extreme price and volume fluctuations. Recently, prices of securities of technology companies have been especially volatile and have often fluctuated for reasons that are unrelated to the operating performance of the companies. The market price of shares of MKS' common stock has fluctuated greatly since its initial public offering and could continue to fluctuate due to a variety of factors. In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If MKS were the object of securities class action litigation, it could result in substantial costs and a diversion of MKS' management's attention and resources.

MKS'S DEPENDENCE ON SOLE AND LIMITED SOURCE SUPPLIERS COULD AFFECT ITS ABILITY TO MANUFACTURE PRODUCTS AND SYSTEMS.

MKS relies on sole and limited source suppliers for a few of its components and subassemblies that are critical to the manufacturing of MKS's products. This reliance involves several risks, including the following:

- the potential inability to obtain an adequate supply of required components;
- reduced control over pricing and timing of delivery of components; and
- the potential inability of its suppliers to develop technologically advanced products to support MKS's growth and development of new systems.

MKS believes that in time MKS could obtain and qualify alternative sources for most sole and limited source parts. Seeking alternative sources of the parts could require MKS to redesign its systems, resulting in increased costs and likely shipping delays. MKS may be unable to redesign its systems, which could result in further costs and shipping delays. These increased costs would decrease MKS' profit margins if it could not pass the costs to its customers. Further, shipping delays could damage MKS' relationships with current and potential customers and have a material adverse effect on MKS' business and results of operations.

MKS IS SUBJECT TO GOVERNMENTAL REGULATIONS.

MKS is subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of MKS' power supply products. MKS must ensure that these systems meet certain safety standards, many of which vary across the countries in which MKS' systems are used.

For example, the European Union has published directives specifically relating to power supplies. MKS must comply with these directives in order to ship MKS' systems into countries that are members of the European Union. MKS believes it is in compliance with current applicable regulations, directives and standards and has obtained all necessary permits, approvals, and authorizations to conduct MKS' business. However, compliance with future regulations, directives and standards could require it to modify or redesign certain systems, make capital expenditures or incur substantial costs. If MKS does not comply with current or future regulations, directives and standards:

- MKS could be subject to fines;
- MKS' production could be suspended; or
- MKS could be prohibited from offering particular systems in specified markets.

ONE STOCKHOLDER, ALONG WITH MEMBERS OF HIS FAMILY, CONTINUES TO HAVE A SUBSTANTIAL INTEREST IN MKS.

As of January 31, 2001, John R. Bertucci, chairman and chief executive officer of MKS, and members of his family, in the aggregate, beneficially owned approximately 41.4% of MKS' outstanding common stock. As a result, these stockholders, acting together, are able to exert substantial influence over actions of MKS.

SOME PROVISIONS OF MKS' RESTATED ARTICLES OF ORGANIZATION, MKS' BY-LAWS AND MASSACHUSETTS LAW COULD DISCOURAGE POTENTIAL ACQUISITION PROPOSALS AND COULD DELAY OR PREVENT A CHANGE IN CONTROL OF MKS.

Anti-takeover provisions could diminish the opportunities for stockholders to participate in tender offers, including tender offers at a price above the then current market value of the common stock. Such provisions may also inhibit increases in the market price of the common stock that could result from takeover attempts. For example, while MKS has no present plans to issue any preferred stock, MKS' board of directors, without further stockholder approval, may issue preferred stock that could have the effect of delaying, deterring or preventing a change in control of MKS. The issuance of preferred stock could adversely affect the voting power of the holders of MKS' common stock, including the loss of voting control to others. In addition, MKS' By-Laws provide for a classified board of directors consisting of three classes. The classified board could also have the effect of delaying, deterring or preventing a change in control of MKS.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information concerning market risk is contained in the annual Management's Discussion and Analysis of Financial Condition and Results of Operations reflecting the merger of MKS Instruments, Inc. and Applied Science and Technology, Inc. for the year ended December 31, 2000, which was filed with the Securities and Exchange Commission in MKS's Current Report on Form 8-K on April 20, 2001. MKS enters into forward exchange contracts and local currency purchased options to reduce currency exposure arising from intercompany sales of inventory. The potential fair value loss for a hypothetical 10% adverse change in currency exchange rates on MKS's local currency purchased options at March 31, 2001 would be approximately $1,900,000. The potential loss was estimated by calculating the fair value of the local currency purchased options at March 31, 2001 and comparing that with those calculated using the hypothetical currency exchange rates. There were no material changes in MKS's exposure to market risk from December 31, 2000.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

MKS is not aware of any material legal proceedings to which it or any of its subsidiaries is a party.

ITEM 2. CHANGES IN SECURITIES AND USE OF PROCEEDS

(d) Use of Proceeds from Sales of Registered Securities. There has been no change to the information previously provided by the Company on Form 10-Q for the period ended September 30, 2000 relating to the securities sold by the Company pursuant to the Registration Statement on Form S-1 (Reg. No. 333-71363) that was declared effective by the Securities and Exchange Commission on March 29, 1999.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

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

A special meeting of the stockholders of MKS was held on January 26, 2001 to vote on a proposal to approve the issuance of approximately 11,200,000 shares of MKS common stock to the stockholders of Applied Science and Technology, Inc. ("ASTeX") in a merger with ASTeX. The proposal was approved with 21,715,636 shares voting for the proposal, 11,984 shares voting against, and 18,390 abstaining.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits

None.

(b) Reports on Form 8-K

The Company filed a Current Report on Form 8-K with the Securities and Exchange Commission on February 1, 2001 relating to the completion of its acquisition of ASTeX.

SIGNATURE

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 thereunto duly authorized.

MKS INSTRUMENTS, INC.

May 14, 2001

By: /s/ Ronald C. Weigner

Ronald C. Weigner
Vice President and Chief Financial Officer
(Principal Financial Officer)