UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 8-K

Current Report
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 27, 2006

KLA-Tencor Corporation

(Exact name of registrant as specified in its charter)

000-09992 (Commission File Number)

Delaware (State or other jurisdiction of incorporation) 04-2564110 (I.R.S. Employer Identification No.)

160 Rio Robles San Jose, California 95134 (Address of principal executive offices, with zip code)

(408) 875-3000 (Registrant's telephone number, including area code)

N/A

(Former name or former address, if changed since last report)

Checl	Eheck the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:					
	Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)					
	Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)					
	Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))					
	Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))					

Item 2.02 Results of Operations and Financial Condition

On April 27, 2006, KLA-Tencor Corporation issued a press release regarding its financial results for the quarter ended March 31, 2006. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K.

Use of Non-GAAP Financial Information

To supplement KLA-Tencor Corporation's consolidated financial statements presented in accordance with GAAP, KLA-Tencor Corporation uses non-GAAP measures of certain components of financial performance, including net income and earnings per diluted share, which are adjusted from results based on GAAP to exclude certain expenses and charges. The presentation of non-GAAP financial results is not meant to be considered in isolation or as a substitute for, or superior to, GAAP results. Investors should be aware that non-GAAP measures have inherent material limitations as an analytical tool and should be read only in conjunction with the Company's consolidated financial statements prepared in accordance with GAAP. These non-GAAP financial measures may also be different from non-GAAP financial measures used by other companies. These non-GAAP adjustments are provided to enhance the user's overall understanding of KLA-Tencor Corporation's current financial performance and its prospects for the future. Further, these non-GAAP results are one of the primary indicators management uses for planning and forecasting in future periods. The presentation of this additional information is not meant to be considered in isolation or as a substitute for results prepared in accordance with accounting principles generally accepted in the United States.

The information in this Form 8-K and the exhibit attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities under that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits.

(c) Exhibits.

Exhibit	Description
99.1	Press Release issued by KLA-Tencor Corporation dated April 27, 2006.

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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.

KLA-TENCOR CORPORATION

By: /s/ John H. Kispert John H. Kispert Date: April 27, 2006

President and Chief Operating Officer

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INDEX TO EXHIBITS

Exhibit 99.1 Description
Press Release issued by KLA-Tencor Corporation dated April 27 2006.

News Release

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FOR IMMEDIATE RELEASE

KLA-TENCOR REPORTS THIRD QUARTER OF FISCAL 2006 EARNINGS PER SHARE OF \$0.48 (\$0.63 EXCLUDING EQUITY BASED COMPENSATION) ON REVENUE OF \$518 MILLION

SAN JOSE, Calif., April 27, 2006—KLA-Tencor Corporation (NASDAQ: KLAC) today announced operating results for its third quarter of fiscal 2006, ended March 31, 2006. The company reported net income of \$98 million and earnings per diluted share of \$0.48 on revenues of \$518 million compared to net income of \$77 million or \$0.38 per diluted share on revenue of \$488 million in the second quarter of fiscal 2006, and net income of \$123 million or \$0.61 per diluted share on revenue of \$542 million in the third quarter of fiscal 2005. The results for the fiscal 2006 quarters include the impact from adoption of SFAS 123 (R) "Stock Based Compensation". The company recorded after tax equity based compensation expenses of \$31 million during the third quarter of fiscal 2006 and \$25 million during the second quarter of fiscal 2006, in its costs and operating expenses. Excluding the impact of equity based compensation, net income would have been \$129 million or \$0.63 per diluted share for the third quarter of fiscal 2006 and \$102 million or \$0.50 per diluted share in the second quarter of fiscal 2006.

"We had a quarter of strong financial results, as semiconductor manufacturers continue to make investments in our leading-edge process control solutions in order to reduce the time and costs associated with producing next-generation devices," stated Rick Wallace, chief executive officer of KLA-Tencor. "We remain focused on investing in the solutions our customers will need in order to remain competitive as next-generation applications enter production."

KLA-Tencor reported ending the quarter with approximately nine months of product-related shipment and revenue backlog. On a geographic basis, U.S. was 33 percent of orders, higher than its historical average of 25 percent; Japan was 26 percent of orders, higher than its historical average of 20 percent; Taiwan was 14 percent of orders, lower than its historical average of 20 percent; Korea, China and Singapore were 16 percent of orders, below their combined historical average of 20 percent; and Europe was 11 percent of orders, lower than its historical average of 15 percent.

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KLA-Tencor's financial position remained strong with cash, cash equivalents and marketable securities of \$2.3 billion and no long term debt. Inventory increased by \$27 million compared to the prior quarter to \$438 million as build plans ramp to meet increased customer demand. Accounts receivable increased by \$84 million compared to the prior quarter to \$456 million on higher shipments.

Forward Looking Statements: Statements in this press release regarding the benefit to customers of KLA-Tencor's products, demand for KLA-Tencor's products and its future financial performance are forward-looking statements, and are subject to the Safe Harbor provisions created by the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current information and expectations, and involve a number of risks and uncertainties. Actual results may differ materially from those projected in such statements due to various factors, including but not limited to: the demand for semiconductors and new and enhanced product offerings by competitors, cancellation of orders by customers and changing customer demands. For other factors that may cause actual results to differ materially from those projected, please refer to the company's Form 10-K, Forms 10-Q and other filings with the Securities and Exchange Commission. Actual results could differ materially from those anticipated in forward-looking statements in this release as a result of certain factors, including those set forth in the risk factors described in the company's SEC filings.

For comparison purposes, the company makes reference to certain net income and earnings per share results that were consistent with GAAP when presented in prior quarters, but are now inconsistent with GAAP due to changes in accounting standards. These results were reached by excluding non-cash, equity-based compensation expenses. We reference those results to allow a better comparison of results in the current period to those in prior periods. Our reference to these results from prior periods should be considered in addition to results that are prepared under current accounting standards but should not be considered a substitute for results that are presented as consistent with GAAP.

About KLA-Tencor: KLA-Tencor is the world leader in yield management and process control solutions for semiconductor manufacturing and related industries. Headquartered in San Jose, Calif., the company has sales and service offices around the world. An S&P 500 company, KLA-Tencor was named one of the Best Managed Companies in America for 2005 by Forbes Magazine and is the only company in the semiconductor industry to receive the accolade for this year. KLA-Tencor is traded on the Nasdaq National Market under the symbol KLAC. Additional information about the company is available on the Internet at http://www.kla-tencor.com

KLA-Tencor Corporation CONDENSED CONSOLIDATED UNAUDITED BALANCE SHEETS

(in thousands)	March 31, 2006	June 30, 2005
ASSETS		
Cash and marketable securities	\$ 2,285,295	\$ 2,195,186
Accounts receivable, net	456,288	333,218
Inventories	438,443	358,339
Land, property and equipment, net	395,123	385,222
Other assets	786,169	714,407
Total assets	\$ 4,361,318	\$ 3,986,372
LIABILITIES, MINORITY INTEREST AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 97,709	\$ 67,717
Deferred system profit	219,868	209,899
Unearned revenue	73,924	80,122
Other current liabilities	545,601	574,124
Total current liabilities	937,102	931,862
Minority interest in subsidiary	\$ 11,069	\$ 9,253
Stockholders' equity:		943,322
	1.142.015	940.044
Stockholders' equity: Common stock and capital in excess of par value Retained earnings	1,142,015 2,263,647	,
	1,142,015 2,263,647 7,485	2,083,638 18,297
Common stock and capital in excess of par value Retained earnings	2,263,647	2,083,638

KLA-Tencor Corporation CONDENSED CONSOLIDATED UNAUDITED STATEMENTS OF OPERATIONS

		Three months ended March 31,		Nine months ended March 31,	
(in thousands except per share data)	2006	2005	2006	2005	
Revenues:					
Product	\$ 427,676	\$ 463,171	\$ 1,229,346	\$ 1,360,412	
Service	90,580	78,440	260,740	232,825	
Total revenues	518,256	541,611	1,490,086	1,593,237	
Costs and operating expenses:					
Costs of revenues*	226,620	221,838	657,943	655,042	
Engineering, research and development* development	95,927	88,812	291,005	253,120	
Selling, general and administrative*	108,364	76,114	296,440	217,753	
Total costs and operating expenses	430,911	386,764	1,245,388	1,125,915	
Income from operations	87,345	154,847	244,698	467,322	
Interest income and other, net	17,225	7,292	48,686	22,054	
Income before income taxes and minority interest	104,570	162,139	293,384	489,376	
Provision for income taxes*	7,347	40,065	44,834	130,055	
Income before minority interest	97,223	122,074	248,550	359,321	
Minority interest	920	1,089	2,920	2,324	
Net income	\$ 98,143	\$ 123,163	\$ 251,470	\$ 361,645	
Net income per share:					
Basic	\$ 0.49	\$ 0.63	\$ 1.27	1.84	
Diluted	\$ 0.48	\$ 0.61	\$ 1.23	1.80	
Weighted average number of shares:					
Basic	199,876	196,883	198,498	196,244	
Diluted	204,818	202,329	203,696	201,058	
*includes the following amounts related to equity awards					
	0 (2/2	Ф	10.665	Φ.	
Costs of revenues	\$ 6,243	\$ —	\$ 19,666	\$ —	
Engineering, research and development	10,782	25	33,815	523	
Selling, general and administrative Provision for income taxes	27,526	773	62,152	1,394	
	(13,763)	(295)	(34,861)	(709)	
Total	\$ 30,788	503	\$ 80,772	\$ 1,208	