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 28, 2005

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)

Check 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 (see General Instruction A.2. below):

□ 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))

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Item 2.02 Results of Operations and Financial Condition

On April 28, 2005, KLA-Tencor Corporation issued a press release regarding its financial results for the quarter ended March 31, 2005. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K.

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.

Press Release issued by KLA-Tencor Corporation dated April 28, 2005.

(c) Exhibits.

Exhibit No. 99.1

Description

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

Date: April 28, 2005

By: /s/ John H. Kispert John H. Kispert Executive Vice President and Chief Financial Officer

INDEX TO EXHIBITS

Exhibit <u>No.</u> 99.1

Description
Press Release issued by KLA-Tencor Corporation dated April 28, 2005.

News Release

Company Contacts:

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FOR IMMEDIATE RELEASE

KLA-TENCOR POSTS THIRD QUARTER FISCAL YEAR 2005 EARNINGS OF \$123 MILLION ON REVENUES OF \$542 MILLION

SAN JOSE, Calif, April 28, 2005 — KLA-Tencor Corporation (NASDAQ: KLAC) today announced operating results for its third quarter of fiscal 2005, ended March 31, 2005. Revenues for the quarter were \$542 million, up 2% from \$533 million in the previous quarter and up 39% from \$390 million in the third quarter of fiscal 2004. The net income for the quarter was \$123 million or \$0.61 per diluted share, compared with net income of \$122 million or \$0.61 per diluted share in the prior quarter and \$66 million or \$0.33 per diluted share in the third quarter of fiscal 2004.

"Our strong financial performance reflects our ability to deliver solutions that our customers need to accelerate their development and production ramps," stated Ken Schroeder, President and Chief Executive Officer of KLA-Tencor. "Our focus on operational execution has resulted in significant increase in our cash levels which we intend to use for various internal and external growth initiatives, and dividend for our shareholders. With process control playing a vital role in bringing advance technologies to market profitably, we continue to invest in the solutions that will enable our customers to achieve manufacturing success in their current production lines as well as their nextgeneration pilot lines."

KLA-Tencor reported ending the quarter with approximately 9 months of product related shipment and revenue backlog. On a geographic basis, Japan continued to post strong bookings. Japan was 31 percent of orders, higher than its historical average of 20 percent; Taiwan was 27 percent, above its historical average of 20 percent; Korea, China and Singapore combined were 18 percent of orders, below their combined

historical average of 20 percent; U.S. was 17 percent of orders, below its historical average of 25 percent; and Europe was 7 percent, lower than its historical average of 15 percent.

We continued to have strong gross margins as we benefit from cost reductions initiatives and high manufacturing utilization. Operating expenses increased from \$160 million in the prior quarter to \$165 million in the current quarter as a result of investment in research and development for new process control technology solutions and systems to drive business efficiencies.

Cash, cash equivalents and marketable securities increased by \$183 million to \$2.11 billion compared to the end of the prior quarter, while the balance sheet remained free of long-term debt. Inventory increased by \$3 million to \$354 million, as we schedule our shipments to meet customer requirements. Accounts receivable decreased by \$1 million to \$445 million on lower product shipments.

Forward Looking Statements: Statements in this press release regarding the Company's development efforts and investments and customer achievement of manufacturing success, total shipment and revenue backlog at current operating levels, 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: delays or cancellations of orders by customers; shipments or acceptances; inability by the company to meet its production and/or product development schedules; the demand for semiconductors; and new and enhanced product offerings by competitors. For a description of other factors that may cause actual results to differ 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 as a result of certain factors, including those set forth in the risk factors described in the company's SEC filings. All forward-looking statements are based on management's estimates, projections and assumptions as of the date hereof. The Company undertakes no obligation to update these forward-looking statements.

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*. 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

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KLA-Tencor Corporation CONDENSED CONSOLIDATED UNAUDITED BALANCE SHEETS

	March 31, 2005	June 30, 2004
(In thousands)		
ASSETS		
Cash, short-term investments and marketable securities	\$ 2,108,344	\$1,876,356
Accounts receivable, net	445,227	372,773
Inventories	353,546	337,414
Land, property and equipment, net	392,773	376,052
Other assets	659,747	576,584
Total assets	\$ 3,959,637	\$3,539,179
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 65,389	\$ 63,991
Deferred system profit	272,207	284,813
Unearned revenue	65,563	57,318
Other current liabilities	573,924	505,507
Total current liabilities	977,083	911,629
Minority interest in subsidiary	7,676	_
Stockholders' equity:		
Common stock and capital in excess of par value	954,394	984,804
Retained earnings	2,002,232	1,640,587
Accumulated other comprehensive income	18,252	2,159
Total stockholders' equity	2,974,878	2,627,550
Total liabilities and stockholders' equity	\$ 3,959,637	\$3,539,179

KLA-Tencor Corporation CONDENSED CONSOLIDATED UNAUDITED STATEMENTS OF OPERATIONS

		Three months ended March 31,		Nine months ended March 31,	
	2005	2004	2005	2004	
(In thousands, except per share data)					
Revenues:					
Product	\$ 463,171	\$ 312,645	\$1,360,412	\$ 827,614	
Service		77,127	232,825	218,666	
Total revenues	541,611	389,772	1,593,237	1,046,280	
Costs and operating expenses:					
Costs of revenues	221,838	170,605	655,042	482,515	
Engineering, research and development	88,812	69,149	253,120	203,531	
Selling, general and administrative	76,114	62,265	217,753	184,451	
Total costs and operating expenses	386,764	302,019	1,125,915	870,497	
Income from operations	154,847	87,753	467,322	175,783	
Interest income and other, net	7,292	4,909	22,054	20,642	
Income before income taxes and minority interest	162,139	92,662	489,376	196,425	
Provision for income taxes	40,065	26,480	130,055	48,891	
Income before minority interest	122,074	66,182	359,321	147,534	
Minority interest	1,089		2,324		
Net income	\$ 123,163	\$ 66,182	\$ 361,645	\$ 147,534	
Net income per share:					
Basic	\$ 0.63	\$ 0.34	\$ 1.84	\$ 0.76	
Diluted	\$ 0.61	\$ 0.33	\$ 1.80	\$ 0.73	
Weighted average number of shares:					
Basic	196,883	196,159	196,244	194,519	
Diluted	202,239	203,150	200,977	201,952	