FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

OMB APPROVAL
OMB Number: 3235-0287
Estimated average burden
hours per response... 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| (Print or Type Responses) 1. Name and Address of Reporting Person * | | | | 2 Issuer Name and Ticker or Trading Symbol | | | | | | 5. Relationship of Reporting Person(s) to Issuer | | | | | |
|--|---|--|--|--|---|--|---|----------------------|--|--|---------|---|---|------------------------------------|--|
| Trafas Brian M. | | | | 2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] | | | | | | (Check all applicable) Director 10% Owner | | | | | |
| (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE | | | | 3. Date of Earliest Transaction (Month/Day/Year) 07/02/2018 | | | | | | X Officer (give title below) Other (specify below) Executive Vice President | | | | | |
| (Street) MILPITAS, CA 95035 | | | | 4. If Amendment, Date Original Filed(Month/Day/Year) | | | | | | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person lired, Disposed of, or Beneficially Owned | | | | | |
| (City) (State) (Zip) | | | | Table I - Non-Derivative Securities Acou | | | | | | | | | | | |
| 1.Title of Security (Instr. 3) | | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, i | f Code (Instr. 8) | | on 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | quired of (D) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) | | | 6. Ownership Form: | Beneficial | | |
| | | | (Month/Day/Year | Code | V | Amount | (A) or (D) | Price | (Instr. 3 | and 4) | | Direct (D) or Indirect (I) (Instr. 4) | Ownership (Instr. 4) | | |
| Common Stock | | 07/02/2018 | | J | V | 235 (1) | A | \$ 87.151 | 235 | | D | | | | |
| Common Stock | | 07/02/2018 | | S | | 235 (2) | 11) | \$ 103.86 | 0 | | D | | | | |
| Common Stock - Restricted Stock Units (3) | | | | | | | | | 42,258 | 42,258 ⁽⁴⁾ | | D | | | |
| Reminder: | Report on a s | separate line f | or each class of secu | | | Per cor the | sons wh ntained i form dis | no resp n this fo | orm are a currei | not requestly valid | OMB con | formation spond unlo trol numbe | ess | 1474 (9-02) | |
| | | | | Derivative Securi (e.g., puts, calls, w | | | | | | ly Owned | | | | | |
| Security | 2. Conversion or Exercise Price of Derivative Security | | saction A. Deemed Execution Date, if any (Month/Day/Year) A. Trans. Code (Instr. | | 5. Number of Derivativ Securitie Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | and (M | Date Exercisable I Expiration Date onth/Day/Year) | | Amo Und Secu | ttle and ount of erlying crities r. 3 and | | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s (Instr. 4) | Owners Form o Derivat Securit Direct (or India | Beneficia Ownersh (Instr. 4) | |
| | | | | Code V | (A) (D | | te ercisable | Expirati Date | Title | Amount or Number of Shares | | | | | |

Reporting Owners

| | Relationships | | | | | | |
|---|---------------|--------------|--------------------------|-------|--|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | | |
| Trafas Brian M. C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035 | | | Executive Vice President | | | | |

Signatures

| /s/ Teri Little as Attorney-in-Fact for Brian M. Trafas | 07/05/2018 | 3 | | | |
|---|------------|---|--|--|--|
| **Signature of Reporting Person | Date | | | | |

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Represents shares acquired under the KLA-Tencor Corporation Amended and Restated 1997 Employee Stock Purchase Plan.
- (2) This sale was effected pursuant to the terms of a Rule 10b5-1 trading plan adopted by the Reporting Person on November 9, 2017.
- (3) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.
- (4) Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made regarding the achievement of the applicable performance goals. Any such holdings will be reported on a Form 4 within two business days of the date such assessment is made.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.