

FORM 4

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

| OMB APPROVAL | |
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| 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 * MARXE AUSTIN W & GREENHOUSE DAVID M | | 2. Issuer Name and Ticker or Trading Symbol TEGAL CORP /DE/ [TGAL] | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) ____ Director ____ Officer (give title below) | |
| (Last) (First) (Middle) C/O SPECIAL SITUATIONS FUNDS, 527 MADISON AVENUE, SUITE 2600 | | 3. Date of Earliest Transaction (Month/Day/Year) 05/19/2010 | | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person ____ Form filed by More than One Reporting Person | |
| (Street) NEW YORK, NY 10022 | | 4. If Amendment, Date Original Filed (Month/Day/Year) | | | |
| (City) (State) (Zip) | | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | |

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|-------|---|--|---|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock | 05/19/2010 | | S | | 1,142,015 | | D | \$ 0.9003 | 0 (2) | I (2) By Limited Partnerships (2) |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|---|-----|--|-----------------|---|--|--|--|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| MARXE AUSTIN W & GREENHOUSE DAVID M C/O SPECIAL SITUATIONS FUNDS 527 MADISON AVENUE, SUITE 2600 NEW YORK, NY 10022 | | X | | |

Signatures

| | | |
|--|--|------------|
| Austin W. Marxe | | 05/19/2010 |
| <small>**Signature of Reporting Person</small> | | Date |
| David M. Greenhouse | | 05/19/2010 |
| <small>**Signature of Reporting Person</small> | | 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) This is a weighted average price.

This is a joint filing by Austin W. Marx (Marx) & David M. Greenhouse (Greenhouse). They share voting and investment control over all securities owned by Special Situations Fund III QP, L.P. (QP), Special Situations Cayman Fund, L.P. (Cay), Special Situations Private Equity Fund, L.P. (PE), Special Situations Technology Fund,

(2) LP (Tech) & Special Situations Technology II, Fund, L.P. (Tech II), respectively. 0 shares of CS are held by QP, 0 shares of CS are held by Cay, 0 shares of CS are held by PE, 0 shares of CS are held by Tech & 0 shares of CS are held by Tech II. The interest of Marx and Greenhouse in the shares of Common Stock owned by QP, Cay, PE, Tech, and Tech II is limited to the extent of his pecuniary interest.

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

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