

Coates Norman V
 Form 4
 September 22, 2010

FORM 4

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

OMB APPROVAL

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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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Coates Norman V

2. Issuer Name and Ticker or Trading Symbol
 NANOMETRICS INC [NANO]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)

C/O NANOMETRICS, INC., 1550
 BUCKEYE DRIVE

3. Date of Earliest Transaction
 (Month/Day/Year)
 09/20/2010

Director 10% Owner
 Officer (give title below) Other (specify below)

(Street)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

MILPITAS, CA 95035

(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 | 09/20/2010 | | S | 50,000 (1) | \$ 13.1415 (2) | 2,082,460 | I | See footnote (3) |
| Common Stock | | | | | 4,052 | D | | |

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

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SEC 1474
 (9-02)

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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. Nu... |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|----------|
| | | | | Code V (A) (D) | | Date Exercisable Expiration Date | Title Amount or Number of Shares | | |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| Coates Norman V C/O NANOMETRICS, INC. 1550 BUCKEYE DRIVE MILPITAS, CA 95035 | | X | | |

Signatures

/s/ James P. Moniz, Attorney-in-Fact for Norman Coates
 Signature: _____ Date: 09/21/2010

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) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the Vincent J. Coates Separate Property Trust on February 23, 2010.
 The price in Column 4 is a weighted average sale price. The prices actually received ranged from \$12.85 to \$13.38. The reporting person
- (2) will provide to the issuer, any security holder of the issuer, or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.
- (3) Shares held of record by the Vincent J. Coates Separate Property Trust, U/D/T dated August 7, 1981, for which Norman Coates and Stella Coates act as co-trustees.

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.