Crawford Bruce A Form 4 January 27, 2011

FORM 4

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

Check this box if no longer subject to

Section 16. Form 4 or Form 5 obligations may continue. See Instruction 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

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading Crawford Bruce A Issuer Symbol NANOMETRICS INC [NANO] (Check all applicable) (Last) (First) (Middle) 3. Date of Earliest Transaction (Month/Day/Year) Director 10% Owner _X__ Officer (give title _ Other (specify C/O NANOMETRICS, INC., 1550 01/25/2011 below) **BUCKEYE DRIVE** Chief Operating Officer (Street) 6. Individual or Joint/Group Filing(Check 4. If Amendment, Date Original Filed(Month/Day/Year) Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting MILPITAS, CA 95035 Person

(City)	(State) (Zip) Table	e I - Non-D	erivative	Secur	ities Acqı	uired, Disposed o	f, or Beneficial	y 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 on(A) or Disposed of (D) (Instr. 3, 4 and 5)		5. Amount of Securities Form: Direct Beneficially (D) or Owned Indirect (I) Following (Instr. 4)		7. Nature of Indirect Beneficial Ownership (Instr. 4)	
			Code V	Amount	(A) or (D)	Price	Transaction(s) (Instr. 3 and 4)		
Common Stock	01/25/2011		M	1,389	A	\$ 0.98	51,954	D	
Common Stock	01/25/2011		M	1,111	A	\$ 1.17	53,065	D	
Common Stock	01/25/2011		M	230	A	\$ 7.5	53,295	D	
Common Stock	01/25/2011		S	2,730 (1)	D	\$ 16.38	50,565	D	
Common Stock	01/26/2011		S	5,000 (1)	D	\$ 18	45,565	D	

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

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SEC 1474 (9-02)

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 proof 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 Underlying Securitie (Instr. 3 and 4)	
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amour or Number of Shares
Non-Qualified Stock Option (right to buy)	\$ 0.98	01/25/2011		M	1,389	(2)	11/19/2015	Common Stock	1,38
Non-Qualified Stock Option (right to buy)	\$ 1.17	01/25/2011		M	1,111	(3)	02/25/2016	Common Stock	1,11
Non-Qualified Stock Option (right to buy)	\$ 7.5	01/25/2011		M	230	<u>(4)</u>	09/03/2016	Common Stock	230

Reporting Owners

Reporting Owner Name / Address		Relationships		
	Director	10% Owner	Officer	Other

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Crawford Bruce A C/O NANOMETRICS, INC. 1550 BUCKEYE DRIVE MILPITAS, CA 95035

Chief Operating Officer

Signatures

/s/ James P. Moniz, 01/26/2011 Attorney-in-Fact

**Signature of Reporting Person Date

2 Reporting Owners

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 Rule 10b5-1 trading plans adopted by the reporting person on August 30, 2010.
- One thirty-sixth (1/36th) of the shares shall vest and become exercisable in equal monthly installments starting on the monthly anniversary of the date of grant (November 19, 2008).
- (3) One thirty-sixth (1/36th) of the shares shall vest and become exercisable in equal monthly installments starting on the monthly anniversary of the date of grant (February 25, 2009).
- One third (1/3rd) of the shares are fully vested on the date of grant, with the remaining shares vesting (starting on the one year anniversary of the date of grant) at a rate of one twenty-fourth (1/24th) per month until fully vested on September 3, 2012.

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.