FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL             |           |  |  |  |  |  |  |
|--------------------------|-----------|--|--|--|--|--|--|
| OMB Number:              | 3235-0287 |  |  |  |  |  |  |
| Estimated average burden |           |  |  |  |  |  |  |

0.5

hours per response:

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

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

| 1. Name and Address of Reporting Person <sup>*</sup> BERTUCCI JOHN R |  |      |               |                             |   | 2. Issuer Name and Ticker or Trading Symbol  MKS INSTRUMENTS INC [ MKSI ] |  |   |                 |   |                      |                   |          |        |   |   | p of Reportin<br>plicable)   |  |   | ssuer    |  |
|--|--|------|---------------|-----------------------------|---|---|--|---|-----------------|---|----------------------|-------------------|----------|--------|---|---|--|--|---|----------|--|
| (Last) (First) (Middle) 2 TECH DRIVE                                 |  |      |               |                             | 3. Date of Earliest Transaction (Month/Day/Year) 08/17/2009 |   |  |   |                 |   |                      |                   |          |        |   | er (give title                                  |  |  | (specify  |          |  |
| (Street) ANDOV   |  |      | )1810<br>Zip) |                             | 4. If   |   |  |   |                 |   |                      |                   |          |        | Indiv<br>ne)<br>X   | Form  | or Joint/Group Filing (Check Applicable<br>m filed by One Reporting Person<br>m filed by More than One Reporting<br>cson |  |   |          |  |
|  |  | Tabl | e I - No      | n-Deriv                     | ative   | Sec   | curitie  | es Ac                                   | quired          | , Dis   | posed o              | f, or             | Ben      | eficia | ally (  | Owne  | ed   |  |   |          |  |
| Date   |  |      | Date          | Date I<br>Month/Day/Year) i |   | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year)               |  | 3.<br>Transaction<br>Code (Instr.<br>8) |                 | 4. Securities Acquired (A)<br>Disposed Of (D) (Instr. 3, 4  |                      |                   |          | d 5)   | 5. Amount of<br>Securities<br>Beneficially<br>Owned Following<br>Reported                       |   | 6. Ownership<br>Form: Direct<br>(D) or Indirect<br>(I) (Instr. 4)  |  | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |          |  |
|  |  |      |               |                             |   |   |  |   | Code            | v   | Amount               | (A) or<br>(D) Pri |          | Price  |   | Transaction(s)<br>(Instr. 3 and 4)              |  |  |   | (msu. 4) |  |
| Common Stock   |  |      | 08/17         | 08/17/2009                  |   |   |  | S <sup>(1)</sup>                        |                 | 25,000  |                      | D                 | \$17.52  |        | 1,774,761   |   | I  |  | By<br>Spouse  |          |  |
| Common Stock   |  |      | 08/18         | 18/2009                     |   |   |  | S <sup>(1)</sup>                        |                 | 25,000  |                      | D                 | \$17.652 |        | 863,074   |   | D  |  |   |          |  |
|  |  | Та   |               |                             |   |   |  |   |                 |   | osed of,<br>onvertib |                   |          |        | y Ov  | vned  |  |  |   |          |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)                  | 2. Conversion or Exercise Price of Derivative Security  3. Transaction Date (Month/Day/Year)  33. Deemed Execution Date, if any (Month/Day/Year) |      | n Date,       | Code ((8)                   | ransaction of ode (Instr. Derivativ                         |   | vative<br>urities<br>uired<br>or<br>oosed<br>))<br>r. 3, 4<br>5) | 6. Date  <br>Expirati<br>(Month/I       | on Da<br>Day/Ye | Securities Underlying Derivative Security (Ir and 4)  Am or |                      | ount              |          |        | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | Owner<br>Form:<br>Direct<br>or Indi<br>(I) (Ins | (D)<br>rect  | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |   |          |  |

## Explanation of Responses:

1. Transaction effected pursuant to a Rule 10b5-1 trading plan.

/s/Renee M. Donlan POA 08/19/2009

\*\* Signature of Reporting Person Da

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

- \* 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).

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

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