FORM 4

obligations may continue. See Instruction 1(b).

Check this box if no longer subject to Section 16. Form 4 or Form 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| Washington, | D.C. | 20549 |
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| STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP |
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OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

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

| Name and Address of Reporting Person* Lucky James L | | | | | | 2. Issuer Name and Ticker or Trading Symbol AtriCure, Inc. [ATRC] | | | | | | | | | heck all a Dir | hip of Reportir pplicable) ector icer (give title | | to Issuer % Owner her (specify |
|---|---|--|---|---------------------|---|---|---|--------------------------------------|--|---|---------------------|---|-------------------------------|--|---|--|---|--|
| (Last) (First) (Middle) 6033 SCHUMACHER PARK DRIVE | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/10/2009 | | | | | | | | | ^ be | ow) below P, Regulatory Affairs and | | - / |
| (Street) WEST CHESTER OH 45069 | | | | | 4. If | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | 6. Lir | ie) <mark>X</mark> Fo | , | | | |
| (City) | (St | | Zip) | | | | | | | | | | | | | | | |
| 1. Title of Security (Instr. 3) | | | 2. Transaction Date (Month/Day/Year) | | ar) i | 2A. Deemed Execution Date, | | Transaction Disposed Code (Instr. 5) | | ities Acquired (A) d Of (D) (Instr. 3, | | (A) or | 5. Al Seci Ben Owr | mount of urities eficially led Following orted | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | of Indirect | | |
| Common Stock | | | | | 02/10/2009 | | | | Code | | | Amount (A) (D) 27,701 | | Price | | (Inst | saction(s) r. 3 and 4) | <u> </u> ` |
| | otock | Та | | <u> </u> Derivat | tive S | ecu | | | ired, Di | | sed of, onvertib | or Be | enefic | cially | | | | |
| 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 Securities Underlying Derivative Security (Instr. and 4) | | | 8. Price o Derivative Security (Instr. 5) | vative derivative urity Securities | Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership ct (Instr. 4) |
| | | | | | Code | v | (A) | (D) | Date Exercisal | | Expiration Date | Title | Amo or Num of Sha | nber | | | | |

Explanation of Responses:

- 1. Mr. Lucky acquired these shares pursuant to a Restricted Stock Award under the AtriCure, Inc. 2005 Equity Incentive Plan. The shares will cliff vest and will be released on May 10, 2009.
- 2. This figure includes 1,134 shares acquired pursuant to the AtriCure, Inc. 2008 Employee Stock Purchase Plan for the period ending December 31, 2008.

/s/ James L. Lucky

02/12/2009

** Signature of Reporting Person

Date

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.