SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(d) of the

SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): February 6, 2008

AtriCure, Inc.

(Exact name of registrant as specified in charter)

Delaware (State or other jurisdiction of incorporation)

000-51470 (Commission File Number) 34-1940305 (IRS Employer Identification No.)

6033 Schumacher Park Drive West Chester, OH (Address of principal executive offices)

45069 (Zip Code)

Registrant's telephone number, including area code: (513) 755-4100

Not Applicable (Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02. Departure of Directors or Principal Officers: Election of Directors; Appointment of Principal Officers.

On February 6, 2008, Ms. Elsa Chi Abruzzo, Vice President, Regulatory and Clinical Affairs of AtriCure, Inc. (the "Company") tendered her resignation to the Board of Directors of the Company, effective February 18, 2008. Concurrently with Ms. Abruzzo's departure, Mr. James L. Lucky, the Company's Vice President of Quality Assurance and Healthcare Compliance, assumed Ms. Abruzzo's duties and was appointed AtriCure's Vice President of Regulatory Affairs and Quality Assurance. Prior to joining the Company, Mr. Lucky held that position with the medical segment of Teleflex, Inc., a publicly-held designer and manufacturer of specialty engineered devices for various industries.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ATRICURE, INC.

By: /s/ Julie A. Piton

Julie A. Piton

Vice President and Chief Financial Officer

Dated: February 8, 2008