

**UNITED STATES  
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): March 17, 2005**

**Axcelis Technologies, Inc.**  
(Exact name of registrant as specified in charter)

**Delaware**  
(State or other jurisdiction of  
incorporation)

**000-30941**  
(Commission File Number)

**34-1818596**  
(IRS Employer Identification No.)

**108 Cherry Hill Drive, Beverly, Massachusetts**  
(Address of principal executive offices)

**01915**  
(Zip Code)

Registrant's telephone number, including area code: **(978) 787-4000**

(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:

- 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 March 17, 2005, the Company received notice that one of the Company's Directors, Gary L. Tooker, will resign from the Board of Directors effective May 12, 2005.

**SIGNATURE**

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.

Date: March 21, 2005

Axcelis Technologies, Inc.

By: /S/ STEPHEN G. BASSETT  
Stephen G. Bassett  
Chief Financial Officer