

**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): **August 8, 2006**

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 1.01 Entry into a Material Definitive Agreement

Modification of Executive Officer Base Compensation and Incentive Targets.

On August 8, 2006, the Compensation Committee of the Company's Board of Directors modified the base compensation payable to three executive officers and the percentage of base salary designated for one executive officer as target cash bonus amount under the Company's annual bonus plan, the Axcelis Team Incentive Plan (the "ATI"). In making these changes to executive compensation, the Committee applied its compensation philosophy to provide base salaries and target bonus compensation within the 50th percentile of such categories of compensation paid by similar companies for comparable positions, based on market benchmarking data compiled by external consulting firms.

The August 8, 2006 Compensation Committee actions adjusted the base salaries of three executives to the amounts set forth below and the ATI target for Mr. Flynn. The ATI targets for Messrs. Levine and Palette are unchanged. These changes will be effective from August 19, 2006.

Executive Officer	Title	Base Salary	ATI Target as a % of Base Salary
Matthew Flynn	Senior VP, Global Customer Operations	\$315,000	60%
Marc Levine	Senior VP, Product Development	\$275,000	50%
Donald Palette	Senior VP, Finance	\$235,000	40%

The Axcelis Team Incentive Plan for Executive Officers adopted by the Compensation Committee of the Board of Directors on January 26, 2005 is filed as Exhibit 10.12 to the Company's Form 10-K for the year ended December 31, 2004. A description of the implementation of such plan for the fiscal year ending December 31, 2006 is described in the Company's Report on Form 8-K filed with the Commission on February 6, 2006.

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: August 10, 2006

Axcelis Technologies, Inc.

By: /S/ STEPHEN G. BASSETT
Stephen G. Bassett
Executive Vice President and Chief Financial Officer