

**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): **February 2, 2012**

Axcelis Technologies, Inc.

(Exact name of registrant as specified in its 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 2.05 Costs Associated with Exit or Disposal Activities.

On February 2, 2012, Axcelis Technologies, Inc. ("Axcelis") communicated a plan of termination to employees under which material charges will be incurred under generally accepted accounting principles applicable to Axcelis. These reductions are designed to lower expense levels so that Axcelis can be more profitable over the course of the industry ups and downs, while at the same time implementing a focused product strategy based on our competitive position. The reductions are estimated to yield savings of \$8 million to \$12 million annually.

Axcelis anticipates recording restructuring charges in connection with employee termination benefits in the range of \$2.5 million to \$3.5 million during the first and second quarters of 2012. These benefits will be paid in cash to employees, over their severance periods. No other type of costs are expected to be incurred in connection with this action

2

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: February 8, 2012

Axcelis Technologies, Inc.

By: /s/ JAY ZAGER

Jay Zager
Executive Vice President
and Chief Financial Officer

