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 20, 2014

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.)

01915

(Zip Code)

108 Cherry Hill Drive, Beverly, Massachusetts

(Address of principal executive offices)

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:

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

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

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

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

Item 1.01 Amendment of a Material Definitive Agreement.

The Company has a Business Loan Agreement dated July 5, 2013, as amended, with Northern Bank & Trust Company (the "Bank") pursuant to which Axcelis Technologies, Inc. (the "Company") borrowed \$15.0 million secured by the Company's real estate in Beverly, Massachusetts. All outstanding principal and interest on the term loan is due and payable on July 5, 2016. The Company and the Bank have further amended the Business Loan Agreement pursuant to a letter agreement dated August 18, 2014 (and signed by the Company on August 20, 2014) to defer the effectiveness of a debt service ratio covenant until December 31, 2014. Accordingly, commencing with the quarter ending December 31, 2014, the Company's quarterly net operating income multiplied by 4 must be not less than the actual annual debt service over the twelve months following the start of such quarter, multiplied by 1.45. All other terms of the Business Loan Agreement remain in effect.

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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 21, 2014

Axcelis Technologies, Inc.

By: /s/ KEVIN J. BREWER

Kevin J. Brewer Executive Vice President and Chief Financial Officer

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