

**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): **September 15, 2009**

**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 3.01 Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing.**

On September 15, 2009, Axcelis Technologies, Inc. (the "Company") received notice from the Nasdaq Global Select Market (which maintains the principal listing for the Company's common stock) that the Company's common stock has failed to comply with the minimum bid price requirement for continued listing set forth in Marketplace Rule 5450(a)(1). The letter gives Axcelis notice that the Company's bid price of its common stock has closed under \$1.00 for the 30 business days preceding the date of the letter. Pursuant to Nasdaq Marketplace Rule 5810(c)(3)(A), the Company has an initial period of 180 calendar days, or until March 15, 2010, to regain compliance.

The Nasdaq notice has no effect on the listing of the Company's common stock at this time.

**Item 9.01 Financial Statements and Exhibits.**

(c) Exhibits

99.1 Press Release dated September 17, 2009. Filed herewith.

**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: September 17, 2009

Axcelis Technologies, Inc.

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

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**AXCELIS RECEIVES DEFICIENCY NOTICE  
FROM NASDAQ GLOBAL SELECT MARKET**

**BEVERLY, Mass., September 17, 2009** — Axcelis Technologies, Inc. (NASDAQ: ACLS), a leading supplier of innovative, high-productivity solutions for the semiconductor industry, announced today that it received a Nasdaq Staff Deficiency Letter on September 15, 2009 indicating that the Company fails to comply with the minimum bid price requirement for continued listing set forth in Marketplace Rule 5450(a)(1). The letter gives Axcelis notice that the Company's bid price of its common stock has closed under \$1.00 for the last 30 business days. On September 15, 2009, Axcelis' common stock closed at \$0.83, up 57% from the \$0.53 close on August 3, 2009, the first day in the 30 business day period used by Nasdaq, reflecting improving industry fundamentals that are increasing service revenues and leading to new systems orders.

The Nasdaq notice has no effect on the listing of the Company's common stock at this time. Pursuant to Nasdaq Marketplace Rule 5810(c)(3)(A), the Company has an initial period of 180 calendar days, or until March 15, 2010, to regain compliance. The letter states the Nasdaq staff will provide written notification that the Company has achieved compliance with Rule 5450(a)(1) if at any time before March 15, 2010, the bid price of the Company's common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days.

If the Company cannot demonstrate compliance with Rule 5450(a)(1) by March 15, 2010, it may transfer its listing to The Nasdaq Capital Market if it meets the initial listing criteria set forth in Nasdaq Marketplace Rule 5505, except for the bid price requirement. In that case, it

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may have an additional 180 calendar day compliance period in which to comply with the minimum bid price requirement. The Company currently meets these initial listing criteria. Otherwise, the Nasdaq staff may begin the process to have the Company's securities delisted. At that time, the Company may appeal the Nasdaq staff's determination to delist its securities to a Listing Qualifications Panel.

**Axcelis Technologies, Inc.** (NASDAQ: ACLS) headquartered in Beverly, Massachusetts, provides innovative, high-productivity solutions for the semiconductor industry. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation and cleaning systems. The company's Internet address is: [www.axcelis.com](http://www.axcelis.com).

**CONTACTS:**

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