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): June 20, 2013

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)
- 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 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

Departure of Chief Financial Officer

On June 20, 2013, the Company announced that Jay Zager, the Company's Executive Vice President and Chief Financial Officer, will be retiring at the end of August 2013. The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

Appointment of Interim Chief Financial Officer

The Board of Directors of Axcelis Technologies, Inc. appointed Kevin J. Brewer, 54, currently serving as the Company's Executive Vice President, Operations, to also serve as the Company's Interim Chief Financial Officer beginning July 1, 2013. At that time, Mr. Zager will resign as Chief Financial Officer, continuing to hold the title of Executive Vice President, Finance until his retirement on August 23, 2013. The Company will undertake an external search for a Chief Financial Officer.

Item 9.01 Financial Statements and Exhibits

- (d) Exhibits
- 99.1 Press Release dated June 20, 2013. 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: June 20, 2013 Axcelis Technologies, Inc.

By: /s/ LYNNETTE C. FALLON

Lynnette C. Fallon, Executive Vice President HR/Legal and General Counsel

AXCELIS ANNOUNCES RETIREMENT OF CFO

Kevin Brewer to take Interim CFO Role during Search

BEVERLY, Mass., June 20, 2013 — Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced CFO Jay Zager will be retiring from the company at the end of August, 2013. Effective July 1, 2013 Kevin Brewer will become executive vice president and interim chief financial officer, continuing his role as executive vice president, global operations. Zager will retain the title of executive vice president, finance until his retirement to facilitate a transition as the company conducts an external search for a chief financial officer.

Brewer has over 30 years of experience with global high technology firms, and for the last decade has been leading Axcelis' worldwide manufacturing and supply chain operations. Brewer currently also manages the company's global facilities and information technology operations. Brewer joined Axcelis in 1999, initially as director of operations, becoming a vice president in 2002. Prior to joining Axcelis, Brewer was director of operations, Business Jets, at Raytheon Aircraft Company, a leading manufacturer of business and special mission aircraft. He also held various management positions in operations and strategic planning in Raytheon Company's Electronic Systems and Missile Systems groups. Brewer holds a BS degree in Mechanical Engineering Technology and a Master's degree in Business Administration.

"I want to thank Jay for his many contributions to Axcelis," commented Mary Puma, chairman and CEO of Axcelis. "During this last downturn he has worked with the management team to streamline the business and strengthen our financial model, including shoring up cash. His efforts have left the company well positioned to leverage the growth we anticipate as a result of our Purion products and improving market conditions. We wish him all the best in his future endeavors."

Puma added, "Kevin Brewer has been a valued member of the Axcelis team for many years. He has an in depth understanding of the company and will provide strong leadership in the interim. Our solid financial team, combined with investor relations assistance from Doug Lawson, our senior vice president of strategic initiatives, will allow for a smooth transition."

About Axcelis:

Axcelis (Nasdaq: ACLS), headquartered in Beverly, Mass., has been providing innovative, high-productivity solutions for the semiconductor industry for over 35 years. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation systems, one of the most critical and enabling steps in the IC manufacturing process. The Company's Internet address is: www.axcelis.com.

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