

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):
December 11, 2002

AXCELIS TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

000-30941
(Commission file number)

34-1818596
(IRS employer identification
number)

55 Cherry Hill Drive
Beverly, Massachusetts 01915
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code:
(978) 787-4000

Item 9. Regulation FD Disclosure

On December 11, 2002, the United States District Court for the District of Massachusetts issued on Memorandum Regarding Claims Construction in Axcelis' patent litigation against Applied Materials, Inc. (Civil Action No. 01-10029-DPW). This decision is publicly available from the court and can be accessed at <http://pacer.mad.uscourts.gov/dc/cgi-in/recentops.pl?filename=woodlock/pdf/axcelis.pdf>.

In addition, the Court has scheduled a conference with the parties in this case in mid January 2003 to discuss future proceedings.

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.

AXCELIS TECHNOLOGIES, INC.

Dated: December 12, 2002

By: /s/ Cornelius F. Moses, III

Cornelius F. Moses, III
Executive Vice President and
Chief Financial Officer