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 8, 2006

Axcelis Technologies, Inc.

(Exact name of registrant as specified in 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:

- 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 2.02 Results of Operations and Financial Condition

On February 8, 2006, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended December 31, 2005. The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

The information under this Item in this Current Report on Form 8-K and Exhibit 99.1 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits

(c) Exhibits

Exhibit No.

99.1 Press Release dated February 8, 2006

Description

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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: February 8, 2006 Axcelis Technologies, Inc.

/S/ STEPHEN G. BASSETT By:

Stephen G. Bassett Executive Vice President and Chief Financial Officer

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Exhibit No.	Exhibit Index	
99.1	Press Release dated February 8, 2006.	Press Release dated February 8, 2006.
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AXCELIS ANNOUNCES FINANCIAL RESULTS FOR THE FOURTH QUARTER AND FULL YEAR 2005

BEVERLY, Mass. — **February 8, 2006** — Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for its fourth quarter and full-year ended December 31, 2005. The Company reported revenues of \$92.9 million, compared to \$87.4 million for the third quarter of 2005. Worldwide revenues for the fourth quarter, which include revenues of SEN, the Company's 50% owned joint venture in Japan, were \$155.1 million, compared to \$126.3 million for the preceding quarter. Net loss for the fourth quarter was \$1.3 million, or \$0.01 per share, which included restructuring and related costs of \$1.7 million, or \$0.02 per share. The net loss for the third quarter of 2005 was \$5.2 million, or \$0.05 per share.

For the full year 2005, the Company reported revenues of \$372.5 million compared with \$508.0 million in 2004. Worldwide revenues, which include revenues of SEN, were \$627.4 million in 2005 compared to \$837.7 million in 2004. Net loss for the year was \$3.9 million, or \$0.04 per share, including the effect of relocation and restructuring charges of \$11.4 million, or \$0.11 per share, related to the consolidation of the Company's Rockville, MD and Beverly, MA operations. The Company reported net income of \$74.2 million, or \$0.73 per diluted share, in 2004.

Commenting on the Company's performance, Chairman and CEO Mary Puma said, "Our operating results exceeded our guidance for the fourth quarter reflecting continuing improvements to our cost structure and stronger gross margins. We achieved a 96% quarter-over-quarter increase in systems orders by successfully penetrating the market with our new Optima ion implant platform and capitalizing on the continued demand for our multiwafer implanters."

"Customers have been actively seeking alternative tools in the market, and they are responding very enthusiastically to the Optima platform. This is validated by the fact that we met our goal to achieve 10 design-in wins for tools based on Optima technology in 2005. Last month, we followed up the successful market penetration of the Optima MD mid dose implanter with the launch of the Optima HD high dose implanter. We expect to ship our first Optima HDs in the second quarter of this year and anticipate shipments of Optima products to exceed \$60 million for 2006. With improving market conditions, and the traction we are gaining with our new tools, we are confident about the year ahead."

Axcelis believes that reporting the combined revenues of SEN, a 50% owned unconsolidated subsidiary of Axcelis, with Axcelis' own revenues, is useful to investors. SEN's ion implant

products are covered by a license from Axcelis and therefore the combined revenue of the two companies indicates the full market penetration of Axcelis' technology.

Fourth Quarter Detail

Shipments and Margins

Shipments before provision for deferred revenue for the fourth quarter on a worldwide basis, including SEN, totaled \$144.8 million with shipments, excluding SEN, totaling \$85.6 million. Worldwide shipments, including SEN, were up 1.3% from the third quarter of 2005 and Axcelis shipments, excluding SEN, were down 3.7%.

Geographically, Axcelis systems shipments, excluding SEN, were to: Asia 71%, North America 22% and Europe 7%.

The ion implantation business (excluding SEN) accounted for 81% of total shipments in the fourth quarter while other products (RTP, Dry Strip and Curing) accounted for 19%.

Service revenue (service labor, spare parts and consumables), excluding SEN, was \$40.9 million for the quarter, up 4.1% from the third quarter of 2005.

Gross margin for the fourth quarter was 40.9%, at the same level reported for the preceding quarter.

Orders and Backlog

Orders (new systems bookings and service excluding SEN) received for the fourth quarter totaled \$98.8 million, compared to \$68.9 million for the third quarter of 2005. New system bookings, excluding service, amounted to \$57.9 million compared to \$29.6 million for the preceding quarter. Worldwide orders, including SEN, were \$151.0 million, compared to \$118.3 million for the third quarter of 2005.

Backlog plus deferred systems revenue at quarter end was \$88.3 million, an increase of 10.1% since the end of the third quarter of 2005. Backlog consists of systems only (i.e., excluding service contracts) that are generally scheduled to ship within six months.

Balance Sheet

Cash, cash equivalents and short-term investments decreased by \$7.8 million to \$176.4 million at December 31, 2005. The Company ended the year with working capital of \$301 million.

Business Outlook

Axcelis' financial outlook for the first quarter of 2006 assumes no material change in the semiconductor spending environment. Revenues in the first quarter are expected to be in a range of \$90 million to \$100 million. Worldwide revenues, including SEN, are expected to be \$160 million to \$175 million. The Company anticipates gross margins in the 40% range and results of operations to approximate breakeven for the quarter.

Axcelis assumes no responsibility to update guidance. Axcelis will only confirm or update guidance via a press release.

Fourth Quarter 2005 Conference Call

The Company will be hosting a conference call today, Wednesday, February 8, 2006, beginning at 5:00 pm ET. The purpose of the call is to discuss fourth quarter 2005 results and to provide guidance for the first quarter of 2006. The call will be available to interested listeners via an audio webcast that can be accessed through Axcelis' home page at www.axcelis.com, or by dialing 1-800-479-1628 (1-719-457-2729 outside North America). Participants calling into the conference call will be requested to provide the company name: Axcelis Technologies, the conference leader: James Kawski, and pass code: #3894917. A telephone replay will be available from 8:00 pm ET on February 8, 2006 until 11:59 pm ET on February 15, 2006. Dial 1-888-203-1112 (1-719-457-0820 outside North America), and enter conference ID code #3894917. A webcast replay will be available from 8:00 pm ET on February 8, 2006 until 5:00 pm ET March 8, 2006.

Safe Harbor Statement

This document contains forward-looking statements under the SEC safe harbor provisions. These statements, which include those relating to the company developing new products, building its position in the ion inplant market, and its guidance for the first quarter of 2006, are based on management's current expectations and should be viewed with caution. They are subject to various risks and uncertainties, many of which are outside the control of the Company, including the timing of orders and shipments, the conversion of orders to revenue in any particular quarter, or at all, our ability to implement successfully our profit plans, the continuing demand for semiconductor equipment, relative market growth, continuity of business relationships with and purchases by major customers, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions. These risks and other risk factors relating to Axcelis are described more fully in the most recent Form 10-K filed by Axcelis and in other documents filed from time to time with the Securities and Exchange Commission.

About Axcelis Technologies, Inc.

Axcelis Technologies, Inc., 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, rapid thermal processing, and cleaning and curing systems. Axcelis Technologies has key product development centers in Beverly, Massachusetts, as well as in Toyo, Japan through its joint venture, SEN. The company's Internet address is: www.axcelis.com.

Axcelis Technologies, Inc. Consolidated Statements of Operations In thousands, except per share amounts (Unaudited)

	Three months ended December 31.			Twelve mo		
	 2005	200)4	 2005		2004
Revenue						
Systems	\$ 50,364	\$	48,529	\$ 206,087	\$	326,521
Services	40,920		41,930	157,644		167,027
Royalties, primarily from Sumitomo Eaton Nova Corporation	 1,660		4,048	8,809		14,428
	92,944		94,507	372,540		507,976
Cost of Revenue	 54,953		55,634	 218,109		296,448
Gross profit	37,991		38,873	154,431		211,528
Operating expenses						
Research & development	19,743		15,200	70,908		63,209
Sales and marketing	10,261		10,910	44,826		47,593
General and administrative	10,635		11,504	45,631		46,149
Amortization of intangible assets	612		612	2,448		2,448
Restructuring charges	1,070		994	6,497		994
	 42,321		39,220	170,310		160,393
Income (loss) from operations	(4,330)		(347)	(15,879)		51,135
Other income (expense)						
Equity income of Sumitomo Eaton Nova Corporation	4,391		8,319	15,751		30,531
Interest income	1,660		827	5,459		2,032
Interest expense	(1,663)		(1,656)	(6,634)		(6,673)
Other-net	 (677)		(795)	(679)		(1,886)
	 3,711		6,695	 13,897		24,004
Income (loss) before income taxes	(619)		6,348	(1,982)		75,139

Income taxes (credit)		716		(693)		1,873		964
Net income (loss)	\$	(1,335)	\$	7,041	\$	(3,855)	\$	74,175
Net income (loss) per share		(0.04)				(0.0.1)	_	. ==
Basic Diluted	\$ \$	(0.01)		0.07 0.07	\$	(0.04)		0.75 0.73
Blutcu	Ψ	(0.01)	Ψ	0.07	Ψ	(0.01)	Ψ	0.75
Shares used in computing net income (loss) per share								
Basic		100,435		99,814		100,301		99,528
Diluted		100,435		100,620		100,301		101,205

Axcelis Technologies, Inc. Consolidated Balance Sheets In thousands (Unaudited)

	December 31, 2005	Dec	December 31, 2004		
Assets					
Current assets	T-1.4		100 005		
Cash and cash equivalents	\$ 71,4		108,295		
Short-term investments	93,79		78,703		
Restricted cash	8,00		3,498		
Accounts receivable, net	79,3		83,767		
Inventories	109,9		116,330		
Prepaid expenses and other current assets	32,70		14,986		
Total current assets	395,30	59	405,579		
Property, plant & equipment, net	71,4	13	75,275		
Investment in Sumitomo Eaton Nova Corporation	108,8	15	109,095		
Goodwill	46,7	73	46,773		
Intangible assets	16,10	00	17,671		
Restricted cash, long-term portion	3,1	95	2,841		
Other assets	19,74	18	31,628		
	\$ 661,4	1 3 \$	688,862		
Liabilities and stockholders' equity					
Current liabilities					
Accounts payable	\$ 25,5	56 \$	24,278		
Accrued compensation	18,43	37	27,030		
Warranty	5,7%		9,218		
Income taxes	3,02	21	4,530		
Deferred revenue	30,14	40	34,050		
Other current liabilities	11,33	33	8,289		
Total current liabilities	94,22	26	107,395		
Long-term debt	125,0	00	125,000		
Long-term deferred revenue	11.1'		7,697		
Other long-term liabilities	4,99		5,297		
Stockholdow' aguitty					
Stockholders' equity Preferred Stock					
Common stock	10	—)1	100		
Additional paid-in capital	466,4		457,335		
Deferred compensation	(5,3)		(566)		
Treasury stock	(1,2)		(1,218)		
Accumulated deficit	(31,1)		(27,332)		
Accumulated other comprehensive income (loss)	(21,11)		15,154		
recumulated other comprehensive income (1055)	426,04		443,473		
	\$ 661,4		688,862		
	\$ 001,1		555,532		