

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K/A

AMENDMENT NO. 1 TO FORM 10-K

(Mark one)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2005

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission file number 000-30941

AXCELIS TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

34-1818596

(IRS Employer Identification No.)

108 Cherry Hill Drive

Beverly, Massachusetts 01915

(Address of principal executive offices, including zip code)

(978) 787-4000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of class

None

Name of each exchange on which registered

None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, \$0.001 par value

Preferred Share Purchase Rights

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

Aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2005: \$511,052,925.

Number of shares outstanding of the registrant's Common Stock, \$0.001 par value, as of March 3, 2006: 100,985,641.

Documents incorporated by reference:

Portions of the definitive Proxy Statement for Axcelis Technologies, Inc.'s Annual Meeting of Stockholders to be held on May 3, 2006 are incorporated by reference into Part III of this Form 10-K.

AMENDMENT NO. 1

EXPLANATORY NOTE

We are filing this amendment to our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, originally filed with the Securities and Exchange Commission on March 14, 2006, solely for the purpose of complying with Regulation S-X, Rule 3-09. Rule 3-09 requires that Form 10-K, but not the annual shareholders' report, contain separate financial statements for unconsolidated subsidiaries and investees accounted for by the equity method when such entities are individually significant.

We have determined that our 50% owned joint venture with Sumitomo Heavy Industries, Ltd., known as SEN Corporation, an SHI and Axcelis Company (formerly known as Sumitomo Eaton Nova Corporation) ("SEN"), which is not consolidated in the Axcelis Technologies, Inc. financial statements (and is accounted for under the equity method) was significant under Rule 3-09 in relationship to the Axcelis Technologies, Inc. financial results for the year ended December 31, 2005. Since SEN's fiscal year ended after the date of the filing of our Form 10-K, Rule 3-09 provides that the SEN financial statements may be filed as an amendment to our Form 10-K within 90 days after the end of SEN's fiscal year ended March 31, 2006.

Therefore, this Form 10-K/A amends the following portions of the Axcelis Technologies Form 10-K filed on March 14, 2006:

- Item 8 is being amended by submitting the financial statements of SEN for the fiscal years ended March 31, 2006, 2005 and 2004 (the "SEN Financial Statements") as a separate section of this report immediately following Item 15;
- Item 15 is being amended to:
 - include the list of the SEN Financial statements being filed herewith as required by Item 15(a); and
 - add to the list of exhibits and exhibits filed in accordance with Item 601 of Regulation S-K an Exhibit 23.2, Consent of Ernst & Young - Independent Auditors relating to the SEN Financial Statements, as required by Item 15(c).

As required by Rule 3-09, we will determine with respect to each future fiscal year, whether SEN has been significant with respect to Axcelis' financial results for such year, and file SEN financial statements as necessary to comply with Rule 3-09.

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of the Company's Form 10-K, as originally filed on March 14, 2006, and as amended by this form 10-K/A:

(1)(A) Financial Statements of Axcelis Technologies, Inc.:

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Operations — For the years ended December 31, 2005, 2004 and 2003

Consolidated Balance Sheets — December 31, 2005 and 2004

Consolidated Statements of Stockholders' Equity — For the years ended December 31, 2005, 2004 and 2003

Consolidated Statements of Cash Flows — For the years ended December 31, 2005, 2004 and 2003

Notes to Consolidated Financial Statements

(1)(B) Financial Statements of SEN Corporation, an SHI and Axcelis Company:

Report of Independent Auditors

Consolidated Statements of Operations — For the years ended March 31, 2006, 2005 and 2004

Consolidated Balance Sheets — March 31, 2006 and 2005

Consolidated Statements of Stockholders' Equity — For the years ended March 31, 2006, 2005 and 2004

Consolidated Statements of Cash Flows — For the years ended March 31, 2006, 2005 and 2004

(2) Financial Statement Schedules:

Schedule II — Valuation and Qualifying Accounts for the years ended December 31, 2005, 2004 and 2003

All other schedules for which provision is made in the applicable regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

(b) Exhibits

The exhibits filed as part of this Form 10-K are listed on the Exhibit Index immediately preceding such Exhibits, which Exhibit Index is incorporated herein by reference.

The response to this portion of Item 15 is submitted as a separate section of this report.

Report of Independent Auditors

The Board of Directors
SEN Corporation, an SHI and Axcelis Company

We have audited the accompanying consolidated balance sheets of SEN Corporation, an SHI and Axcelis Company (the "Company") as of March 31, 2006 and 2005, and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ended March 31, 2006, all expressed in Japanese yen. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company at March 31, 2006 and 2005, and the consolidated results of its operations and its cash flows for each of the three years in the period ended March 31, 2006, in conformity with accounting principles generally accepted in the United States.

As discussed in Note 1 to the Consolidated Financial Statements, effective July 1, 2003, the Company adopted the provisions of Emerging Issues Task Force Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables."

/s/ Ernst & Young ShinNihon

Tokyo, Japan
June 26, 2006

SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Income

	Years ended March 31,			Year ended
	2004	2005	2006	March 31, 2006
	(Thousands of yen)			(U.S. dollars in thousands)
Net sales:				
Systems	¥ 17,838,626	¥ 28,457,929	¥ 20,026,152	\$ 176,722
Services	5,630,836	6,987,942	7,831,507	69,110
Net sales	23,469,462	35,445,871	27,857,659	245,832
Cost of sales	12,946,966	19,319,808	15,660,181	138,195
Gross profit	10,522,496	16,126,063	12,197,478	107,637
Operating expenses:				
Research and development	1,665,889	3,002,413	2,271,112	20,042
Selling, general and administrative expenses	3,400,114	3,810,538	3,851,467	33,987
	5,066,003	6,812,951	6,122,579	54,029
Income from operations	5,456,493	9,313,112	6,074,899	53,608

Other income (expense), net	(7,190)	10,444	(11,002)	(97)
Income before income taxes	5,449,303	9,323,556	6,063,897	53,511
Income taxes (benefit):				
Current	2,212,528	3,900,102	2,023,686	17,858
Deferred	(118,800)	(389,016)	184,847	1,631
	<u>2,093,728</u>	<u>3,511,086</u>	<u>2,208,533</u>	<u>19,489</u>
Net income	<u>¥ 3,355,575</u>	<u>¥ 5,812,470</u>	<u>¥ 3,855,364</u>	<u>\$ 34,022</u>

See accompanying notes to consolidated financial statements.

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SEN Corporation, an SHI and Axcelis Company

Consolidated Balance Sheets

	March 31,		March 31,
	2005	2006	2006
	(Thousands of yen)		(U.S dollars in thousands)
Assets			
Current assets:			
Cash and cash equivalents	¥ 9,345,190	¥ 8,836,834	\$ 75,226
Trade receivables, net	14,910,846	16,408,130	139,679
Due from affiliates — current	99,759	149,250	1,271
Inventories	6,050,698	7,014,229	59,711
Deferred income taxes and other current assets	437,435	448,529	3,818
Total current assets	<u>30,843,928</u>	<u>32,856,972</u>	<u>279,705</u>
Property, plant and equipment, net	2,787,756	2,776,813	23,639
Deferred income taxes and other assets	756,647	660,160	5,620
	<u>¥ 34,388,331</u>	<u>¥ 36,293,945</u>	<u>\$ 308,964</u>
Liabilities and Shareholders' equity			
Current liabilities:			
Trade payables:			
Notes	¥ 1,812,547	¥ 1,964,205	\$ 16,721
Accounts	2,962,956	3,087,637	26,284
	4,775,503	5,051,842	43,005
Due to affiliates	1,825,148	1,819,222	15,487
Income taxes payable	2,859,210	1,247,358	10,619
Other current liabilities	1,086,361	656,653	5,590
Total current liabilities	<u>10,546,222</u>	<u>8,775,075</u>	<u>74,701</u>
Accrued retirement benefits	74,957	16,354	139
Shareholders' equity:			
Capital stock:			
Authorized — 20,000 shares			
Issued and outstanding — 12,000 shares	600,000	600,000	2,511
Retained earnings	23,167,152	26,902,516	240,504
Accumulated other comprehensive income	—	—	(8,891)
Total Shareholders' equity	<u>23,767,152</u>	<u>27,502,516</u>	<u>234,124</u>
	<u>¥ 34,388,331</u>	<u>¥ 36,293,945</u>	<u>\$ 308,964</u>

See accompanying notes to consolidated financial statements.

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SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Shareholders' Equity

	Capital stock	Retained earnings	Accumulated other comprehensive income (loss)	Total
	(Thousands of yen)			
Balance at March 31, 2003	¥ 600,000	¥ 14,119,107	¥ (10,536)	¥ 14,708,751
Net income	—	3,355,575	—	3,355,575
Minimum pension liability adjustment	—	—	10,356	10,356
Total comprehensive income	—	—	—	3,365,931
Cash dividends	—	(120,000)	—	(120,000)
Balance at March 31, 2004	600,000	17,354,682	—	¥ 17,954,682
Net income and total comprehensive income	—	5,812,470	—	5,812,470
Balance at March 31, 2005	600,000	¥ 23,167,152	—	¥ 23,767,152
Net income and total comprehensive income	—	3,855,364	—	3,855,364
Cash dividends	—	(120,000)	—	(120,000)
Balance at March 31, 2006	¥ 600,000	¥ 26,902,516	¥ —	¥ 27,502,516

	Capital stock	Retained earnings	Accumulated other comprehensive income (loss)	Total
	(U.S. dollars in thousands)			
Balance at March 31, 2005	\$ 2,511	\$ 207,541	\$ 11,264	\$ 221,316
Net income	—	34,022	—	34,022
Foreign currency translation adjustment	—	—	(20,155)	(20,155)
Total comprehensive income	—	—	—	13,867
Cash dividends	—	(1,059)	—	(1,059)
Balance at March 31, 2006	\$ 2,511	\$ 240,504	\$ (8,891)	\$ 234,124

See accompanying notes to consolidated financial statements.

SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Cash Flows

	2004	Year ended March 31, 2005	2006	Year ended March 31, 2006
	(Thousands of yen)			(U.S. dollars in thousands)
Operating activities				
Net income	¥ 3,355,575	¥ 5,812,470	¥ 3,855,364	\$ 34,022
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation	592,877	428,129	402,684	3,553
Loss on fixed asset disposal	16,762	584,384	6,699	59
Deferred income taxes (benefit) provision	(118,800)	(389,016)	184,847	1,631
Changes in operating assets and liabilities:				
Trade receivables	(1,128,413)	(4,732,133)	(1,497,284)	(12,746)
Due from affiliates	(24,788)	(19,039)	(49,491)	(421)
Inventories	(3,580,547)	1,379,066	(963,531)	(8,202)
Trade payables	3,105,887	(1,212,661)	276,339	2,352
Due to affiliates	690,414	(133,814)	(5,926)	(50)
Income taxes payable	684,009	1,188,473	(1,611,852)	(13,721)
Other current liabilities	230,389	413,118	(429,708)	(3,658)
Other, net	267,344	(2,763)	(184,661)	(1,572)
Net cash provided by (used in) operating activities	4,090,709	3,316,214	(16,520)	1,247
Investing activities				
Purchases of property, plant and equipment, net of proceeds from sale	(474,019)	(508,557)	(398,440)	(3,392)
Other, net	31,959	(34,234)	26,604	226
Net cash used in investing activities	(442,060)	(542,791)	(371,836)	(3,166)
Financing activities				
Cash dividends paid	(120,000)	—	(120,000)	(1,059)
Net cash used in financing activities	(120,000)	—	(120,000)	(1,059)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(8,817)

Net increase in cash and cash equivalents	3,528,649	2,773,423	(508,356)	(11,795)
Cash and cash equivalents at beginning of the year	3,043,118	6,571,767	9,345,190	87,021
Cash and cash equivalents at end of the year	¥ 6,571,767	¥ 9,345,190	¥ 8,836,834	\$ 75,226
Supplementary information				
Income taxes paid during the year	¥ 1,528,519	¥ 2,768,804	¥ 3,676,965	\$ 32,448

See accompanying notes to consolidated financial statements.

SEN Corporation, an SHI and Axcelis Company

**Notes to Consolidated Financial Statements
March 31, 2006**

Note 1. Nature of Business and Significant Accounting Policies

General

SEN Corporation, an SHI and Axcelis Company (the “Company”) was established on April 1, 1983 under the Commercial Code of Japan. The Company is owned equally by Sumitomo Heavy Industries, Ltd. (“SHI”), a Japanese corporation, and Axcelis Technologies, Inc. (“Axcelis”), a U.S. corporation. The Company designs, manufactures, sells and repairs ion implantation equipment and semiconductor equipment primarily for Japanese semiconductor manufacturing customers under a license agreement with Axcelis.

The Company and its wholly-owned subsidiary maintain their records and prepare their financial statements in accordance with accounting principles generally accepted in Japan. Certain adjustments and reclassifications have been incorporated in the accompanying consolidated financial statements to conform to accounting principles generally accepted in the United States of America. These adjustments were not recorded in the statutory books of account.

The Company changed the corporate name from “Sumitomo Eaton Nova Corporation” to “SEN Corporation, an SHI and Axcelis Company” effective on April 1, 2006.

Basis of Financial Statements

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary. All significant intercompany balances and transactions are eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The actual results could differ from those estimates.

Foreign Currency

The Company’s functional currency is the Japanese yen. Transaction gains and losses, which arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency, are included in the results of operations as incurred. Transaction gains and losses in each of the years in the three year period ended March 31, 2006 were not material.

The accompanying consolidated financial statements expressed in U.S. dollars have been prepared for use in conjunction with the preparation of the consolidated financial statements of Axcelis and have been translated into U.S. dollars in accordance with Statement of Financial Accounting Standards No. 52, *Foreign Currency Translation*. Assets and liabilities are translated using the exchange rate in effect at year-end. Statement of income items are translated using the average rates for the year. The effects of these translation adjustments are accumulated and included in accumulated other comprehensive loss, a separate component of shareholders’ equity.

Cash Equivalents

All highly liquid investments with a maturity of three months or less when purchased are considered to be cash equivalents.

Inventories

Inventories are stated at the lower of cost or market, cost being determined by the average method.

Property, Plant and Equipments

Property, plant and equipment is stated on the basis of cost. Depreciation is computed by the declining-balance method over the estimated useful lives of the respective assets (buildings — 6 to 40 years; machinery — 5 to 13 years; and furniture, fixtures and automobiles — 2 to 20 years) except for buildings purchased after April 1, 1998, which are depreciated on the straight-line basis over 31 years.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment losses whenever events or changes in circumstances indicate the carrying amount may not be recoverable. The assets would be considered impaired when the net undiscounted future cash flows generated by the assets are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value of the asset exceeds its fair value.

Accumulated Other Comprehensive Income (Loss)

At March 31, 2005 and 2006, accumulated other comprehensive income (loss) on a U.S. dollar basis was comprised of an accumulated foreign currency translation adjustment of U.S.\$11,264 thousand and U.S.\$(8,891) thousand, respectively.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist primarily of trade notes and accounts receivable. These financial instruments are carried at cost less an allowance for doubtful accounts, which approximates fair value. Substantially all of the Company's notes and accounts receivable are due from companies in the semiconductor industry located in Japan. The Company performs ongoing credit evaluations of its customers' financial condition and provides an allowance for specific doubtful notes and accounts receivable and generally does not require collateral to secure the notes and accounts receivable.

For the year ended March 31, 2004, two customers accounted for net sales of 21% and 13%. Three customers accounted for net sales of 17%, 13% and 10% for the year ended March 31, 2005. For the year ended March 31, 2006, three customers accounted for net sales of 19 %, 14%, and 13%, respectively.

At March 31, 2005 and 2006 accounts receivable from one customer approximated 14% and 17% of consolidated trade receivables, respectively.

Revenue Recognition

For revenue arrangements prior to July 1, 2003, the Company recognized sales at the later of the time of shipment to the customer or the transfer of risk of ownership (which is generally upon customer inspection for machinery sales to domestic customers). The cost of system installation at the customer's site was accrued at the time of shipment for installation and acceptance testing performance obligations incurred at the time of sales. Management believes the customer's post delivery acceptance provisions

and the installation process have been established to be routine, commercially inconsequential and perfunctory because the process is a replication of the pre-shipment procedures. The majority of the Company's systems are designed and tailored to meet the customer's specifications as outlined in the contract between the customer and the Company. To ensure that the customer's specifications are satisfied, per contract terms, the systems are tested at the Company's facilities prior to shipment, normally with the customer present, under conditions that substantially replicate the customer's production environment and the customer's criteria are confirmed to have been met. The Company has never failed to successfully complete a system installation. The Company has a demonstrated history of customer acceptance subsequent to shipment and installation of these systems.

In November 2002, the Financial Accounting Standards Board's Emerging Issues Task Force reached a consensus on Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables" ("EITF 00-21"). This issue addresses the determination of whether an arrangement involving more than one deliverable contains more than one unit of accounting and how the arrangement consideration should be measured and allocated to the separate units of accounting. EITF 00-21 became effective for revenue arrangements entered into in periods beginning after June 15, 2003.

For revenue arrangements occurring on or after July 1, 2003, the Company has revised its revenue recognition policy to comply with the provisions of EITF 00-21. The Company's revenue transactions include sales of systems under multiple element arrangements. Revenue under these arrangements is allocated to all elements, except systems, based upon their estimated fair market value. The amount of revenue allocated to systems is calculated on a residual method. Under this method, the total value of the arrangement is allocated first to the undelivered elements based on the greater of the fair value of the undelivered elements or the portion of the sales price that will not be received until the elements are delivered, with the residual amount being allocated to systems revenue. The amount allocated to installation is based upon hourly rates and the estimated time to complete the service. The fair value of all other elements is based upon the price charged when these elements are sold separately. System revenue and installation revenue are generally recognized at the time of customer acceptance.

Service revenue includes revenue from spare parts, maintenance services and equipment overhaul services. Revenue related to maintenance service contracts is recognized ratably over the duration of the contracts. Revenue related to equipment overhauls is recognized upon completion of the service. Revenue related to spare parts is recognized upon the later of shipment or when title and risk of loss passes to the customer.

Under the provisions of EITF 00-21, the Company has accounted for this change in accounting principle on a prospective basis for revenue arrangements occurring on or after July 1, 2003. The impact of this change for the year ended March 31, 2004 was to decrease net income by \642,631. The pro-forma effect of this accounting change, had it been applied consistently for the year ended March 31, 2004 is as follows:

	2004 (Thousands of yen)	
Reported net income	¥	3,355,575
Pro-forma effect of EITF 00-21		642,631
Pro-forma net income	¥	<u>3,998,206</u>

Shipping and Handling Costs

Shipping and handling costs are included in cost of products sold.

Research and Development Costs

Research and development costs are expensed in the year in which such costs are incurred, except for costs relating to equipment

that is acquired or constructed for research and development activities and have alternative future uses.

Retirement Benefits

The cost of retirement benefits for seconded employees is incurred by and reimbursed to SHI (see Note 6). The provision for accrued employees' retirement benefits represents the cost for employees who have been employed directly by the Company (see Note 9).

Reclassifications

Certain amounts in prior years have been reclassified to conform to the current year presentation.

Recent Accounting Pronouncements

In November 2004 the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 151 ("SFAS 151") "Inventory Costs, an amendment of ARB 43, Chapter 4." SFAS 151 amends the guidance in ARB 43, Chapter 4, "Inventory Pricing" to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). SFAS 151 requires that idle facility expense, excessive spoilage, double freight, and rehandling costs be recognized as current period charges. In addition, SFAS 151 requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005, however early adoption is permitted for inventory costs incurred during fiscal years beginning after November 2004. The Company adopted SFAS 151 effective April 1, 2006. The adoption of SFAS 151 did not have a material impact on the Company's consolidated financial statements.

In May 2005, the FASB issued SFAS No. 154, "Accounting Changes and Error Corrections," which changes the requirements for the accounting and reporting of a change in accounting principle. SFAS No. 154 applies to all voluntary changes in accounting principle as well as to changes required by an accounting pronouncement that does not include specific transition provisions. SFAS No. 154 requires that changes in accounting principle be retrospectively applied. SFAS No. 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. The Company does not believe adoption of this statement will have a material impact on the Company's consolidated financial statements.

Note 2. Trade Receivable

The components of trade receivables, net follow:

	2005 (Thousands of yen)		2006 (Thousands of yen)		2006 (U.S. dollars in thousands)
Notes	¥	180,923	¥	10,842	\$ 92
Accounts		14,748,183		16,415,823	139,745
		<u>14,929,106</u>		<u>16,426,665</u>	<u>139,837</u>
Allowance for doubtful accounts		(18,260)		(18,535)	(158)
		<u>¥ 14,910,846</u>		<u>¥ 16,408,130</u>	<u>\$ 139,679</u>

Note 3. Inventories

The components of inventories follow:

	2005 (Thousands of yen)		2006 (Thousands of yen)		2006 (U.S. dollars in thousands)
Work in process	¥	4,188,363	¥	4,879,669	\$ 41,540
Raw materials and parts		1,862,335		2,134,560	18,171

Note 4. Property, Plant and Equipment, Net

The components of property, plant and equipment, net follow:

	2005 (Thousands of yen)	2006 (Thousands of yen)	2006 (U.S. dollars in thousands)
Land	¥ 299,485	¥ 299,485	\$ 2,549
Building and land improvements	4,434,825	4,551,082	38,743
Machinery	869,008	871,017	7,415
Furniture, fixtures and automobiles	1,944,412	1,974,027	16,805
Construction in process	70,988	173,472	1,477
	7,618,718	7,869,083	66,989
Accumulated depreciation	(4,830,962)	(5,092,270)	(43,350)
	<u>¥ 2,787,756</u>	<u>¥ 2,776,813</u>	<u>\$ 23,639</u>

In 2005, the Company determined that certain machinery used in its research and development activities had no current or future use and was disposed of. As a result, the Company recorded a loss on disposal of ¥584 million, which was included in selling, general and administrative expenses in the accompanying consolidated statements of income.

Note 5. Product Warranty

The Company offers a one year warranty for all of its products, the terms and conditions of which vary depending upon the product sold. The Company estimates the costs that may be incurred under its warranty and records a liability in the amount of such costs at the time product revenue is recognized. Factors that affect the Company's warranty include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded warranty and adjusts the amount as necessary.

Changes in the Company's product warranty (included in other current liabilities on the consolidated balance sheets) for the years ended March 31, 2004, 2005 and 2006 are as follows:

	2004	2005 (Thousands of yen)		2006	2006 (U.S. dollars in thousands)
Beginning balance	¥ 23,300	¥ 36,700	¥ 54,900	\$ 511	511
Warranties issued during the period	78,640	125,874	49,896	402	402
Settlements made during the period	(65,240)	(107,674)	(65,596)	(579)	(579)
Balance as of March 31	<u>¥ 36,700</u>	<u>¥ 54,900</u>	<u>¥ 39,200</u>	<u>\$ 334</u>	<u>334</u>

Note 6. Transactions with Affiliates

Transactions with affiliates for the years ended March 31, 2004, 2005 and 2006 were as follows:

	2004	2005 (Thousands of yen)		2006	2006 (U.S. dollars in thousands)
Revenues:					
Axcelis and affiliates	¥ 1,219,911	¥ 533,601	¥ 375,464	\$ 3,313	3,313
Inventories purchased:					
SHI and affiliates	¥ 1,877,370	¥ 1,655,123	¥ 1,923,477	\$ 16,974	16,974
Axcelis and affiliates	410,708	288,191	281,357	2,483	2,483
	<u>¥ 2,288,078</u>	<u>¥ 1,943,314</u>	<u>¥ 2,204,834</u>	<u>\$ 19,457</u>	<u>19,457</u>
Other income from affiliates :					
Territory commission and sales assistance fees from Axcelis	¥ —	¥ 25,253	¥ —	\$ —	—
	<u>¥ —</u>	<u>¥ 25,253</u>	<u>¥ —</u>	<u>\$ —</u>	<u>—</u>
Other expenses to affiliates:					
Royalties to Axcelis	¥ 682,681	¥ 1,025,965	¥ 706,531	\$ 6,235	6,235
Commissions to Axcelis and affiliates	263,183	315,584	218,390	1,927	1,927
Other expenses to Axcelis and affiliates	—	92	390	3	3
Management fees and royalties to SHI	149,297	226,059	164,301	1,450	1,450
Subcontract charges to SHI affiliates	316,826	291,618	3,594	32	32
Other expenses to SHI and affiliates	198,723	186,691	229,028	2,021	2,021
	<u>¥ 1,610,710</u>	<u>¥ 2,046,009</u>	<u>¥ 1,322,234</u>	<u>\$ 11,668</u>	<u>11,668</u>

Balances due from and to affiliates at March 31, 2005 and 2006 were as follows:

	2005 (Thousands of yen)	2006 (Thousands of yen)	2006 (U.S. dollars in thousands)
Due from affiliates:			
Axcelis and affiliates	¥ 99,759	¥ 149,250	\$ 1,271
Due to:			
SHI	¥ 1,096,284	¥ 1,186,174	\$ 10,098
Axcelis	623,150	487,271	4,148
SHI affiliates	77,064	121,076	1,031
Axcelis affiliates	28,650	24,701	210
	<u>¥ 1,825,148</u>	<u>¥ 1,819,222</u>	<u>\$ 15,487</u>

Pension funding for seconded employees (employees on temporary assignment) is provided through a plan administered by SHI. Under this arrangement, the Company is billed monthly for the pension costs attributable to those individuals. Under the terms of the pension agreement with SHI, no additional costs related to earned benefits are to be borne by the Company. Pension contributions paid to SHI for the years ended March 31, 2004, 2005 and 2006 were ¥158,155 thousand, ¥138,227 thousand and ¥126,977 thousand (U.S.\$1,121 thousand), respectively.

Note 7. Leases

Rental expenses for equipment, land and office space for the years ended March 31, 2004, 2005 and 2006 amounted to ¥278,315 thousand, ¥268,802 thousand and ¥266,976 thousand (U.S.\$2,356 thousand), respectively. Future minimum non-cancelable rental commitments at March 31, 2006 under operating leases are as follows:

Year ended March 31	(Thousands of yen)	(U.S. dollars in thousands)
2007	¥ 137,365	\$ 1,169
2008	59,754	509
2009	56,351	480
2010	47,773	407
2011	46,013	392
Later years	635,964	5,413
	<u>¥ 983,220</u>	<u>\$ 8,370</u>

Note 8. Income Taxes

Income taxes include corporation, enterprise, and inhabitants' taxes which, in the aggregate, resulted in a statutory tax rate of approximately 41.74% in 2004 and 40.44% in 2005 and 2006. The difference between income tax expense and the amount computed by applying the statutory income tax rate to income before income taxes is summarized as follows:

	2004	2005	2006	2006 (U.S. dollars in thousands)
	(Thousands of yen)			
Tax at statutory rate	¥ 2,279,147	¥ 3,766,717	¥ 2,452,240	\$ 21,640
Tax effect of:				
Non deductible expenses	12,757	12,675	125	1
Change in future statutory tax rate	—	—	—	—
Tax credit for costs of information technologies and research and development activities	(211,432)	(286,765)	(290,852)	(2,567)
Other items, net	13,256	18,459	47,020	415
Income tax expense	<u>¥ 2,093,728</u>	<u>¥ 3,511,086</u>	<u>¥ 2,208,533</u>	<u>\$ 19,489</u>

Deferred income taxes reflect the net tax effect of the temporary differences between the amounts of the assets and liabilities recorded for financial and income tax purposes. Significant components of the Company's deferred tax assets as of March 31, 2005 and 2006 were as follows:

	2005	2006	2006 (U.S. dollars in thousands)
	(Thousands of yen)		
Current assets:			
Accrued enterprise tax	¥ 205,468	¥ 94,166	\$ 802
Loss on disposal of inventory	2,105	2,026	17
Warranty reserve	22,202	15,852	135
Bonus payment reserve	187,201	186,600	1,588
Other	14,959	18,328	156
	<u>¥ 431,935</u>	<u>¥ 316,972</u>	<u>\$ 2,698</u>

Non current assets:

Accrued retirement benefits	¥	30,312	¥	6,705	\$	57
Depreciation		43,393		26,075		222
Research and development tax credit		286,581		260,241		2,215
Other		9,193		6,574		56
	¥	<u>369,479</u>	¥	<u>299,595</u>	\$	<u>2,550</u>

Note 9. Employees' and Directors' Retirement Benefits

The Company has a defined benefit pension plan that covers substantially all employees, except for the seconded employees described in Note 6. Benefits under the plan are based on the employees' compensation as of the date of retirement and years of

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service. The Company's policy is to fund amounts which are actuarially determined to provide the plan with sufficient assets to meet future benefit payment requirements. Assets of the plan are invested in equity securities, debt securities, money market instruments, and insured products.

The Company had provided certain defined benefits to its statutory auditors and directors who were not statutory auditors, directors or employees of SHI, Axcelis or one of their affiliates. Such benefits were based on years of service, compensation at retirement and position. This plan was unfunded. In July 2005, the company terminated this plan. The benefit relating to the service period through July 2005 will be paid when the director or statutory auditor terminate the employment.

The measurement date used to determine the pension obligation for the benefit plan is December 31.

The reconciliation of beginning and ending balances of the projected benefit obligation and plan assets, and the funded status of the Company's plans are as follows:

	2005	2006	2006
	(Thousands of yen)		(U.S. dollars in thousands)
Change in benefit obligation			
Benefit obligation at beginning of year	¥ 769,551	¥ 87,196	\$ 8,159
Service cost	64,331	66,015	583
Interest cost	10,842	16,425	145
Actuarial losses	33,460	80,371	709
Foreign currency exchange rate changes	—	—	(737)
Benefits paid	(1,988)	(45,046)	(398)
Benefit obligation at end of year	<u>876,196</u>	<u>993,961</u>	<u>8,461</u>
Change in plan assets			
Fair value of plan assets at beginning of year	484,651	591,265	5,506
Actual gain on plan assets	29,680	83,389	736
Foreign currency exchange rate changes	—	—	(527)
Contributions	78,922	94,815	837
Benefits paid	(1,988)	(8,319)	(73)
Fair value of plan assets at end of year	<u>591,265</u>	<u>761,150</u>	<u>6,479</u>
Funded status	(284,931)	(232,811)	(1,982)
Unrecognized transition obligation	53,851	43,080	367
Unrecognized net loss	156,123	173,377	1,476
Net amount recognized in the consolidated Balance sheets	<u>¥ (74,957)</u>	<u>¥ (16,354)</u>	<u>\$ (139)</u>

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The components of net pension expense of the Company's plans for the years ended March 31, 2004, 2005 and 2006 were as follows:

	2004	2005	2006	2006
	(Thousands of yen)			(U.S. dollars in thousands)
Service cost	¥ 59,578	¥ 64,331	¥ 66,015	\$ 583
Interest cost	11,847	10,842	16,425	145
Expected return on plan assets	(13,766)	(19,386)	(23,651)	(209)
Net amortization	14,555	14,927	14,151	125
Net pension expense	<u>¥ 72,214</u>	<u>¥ 70,714</u>	<u>¥ 72,940</u>	<u>\$ 644</u>

The aggregate accumulated benefit obligation of this plan was as follows:

2005	2006	2006
------	------	------

	(Thousands of yen)		(U.S. dollars in thousands)			
Aggregate accumulated benefit obligation	¥	601,983	¥	688,196	\$	5,858

The discount rates and weighted average rates of increases in future salary levels used in determining the actuarial present value of the projected benefit obligation as of March 31, 2004 and 2005 were as follows:

	2005	2006
Discount rate	1.5%	2.0%
Weighted average rates of increases in future salary levels	2.67%	3.43%

The discount rates, weighted average rates of increases in future salary levels and the expected long-term rates of return on plan assets used in determining net pension expense for the years ended March 31, 2004, 2005 and 2006 were as follows:

	2004	2005	2006
Discount rate	2.0%	1.5%	1.5%
Weighted average rates of increases in future salary levels	2.67%	2.67%	2.67%
Expected long-term rates of return on plan assets	4.0%	4.0%	4.0%

The expected long-term rate of return on plan assets assumption is determined from the plan's asset allocation using forward-looking assumptions in the context of historical returns.

The following benefit payments, which reflected expected future service, as appropriate, are expected to be paid:

Year ended March 31	(Thousands of yen)	(U.S. dollars in thousands)
2007	¥ 3,532	\$ 30
2008	4,110	35
2009	4,779	41
2010	5,424	46
2011	6,708	57
2012 — 2016	140,533	1,196

The Company's investment strategy is to manage the assets of the plan to meet its long-term obligations while maintaining sufficient liquidity to pay current benefits. This is primarily achieved by holding equity-like investments while investing a portion of the assets in long duration bonds in order to match the long-term nature of the liabilities. The Company will periodically undertake an asset and liability modeling study if a material shift in the plan's liability profile or changes in the capital markets call for such a study. The Company's weighted-average asset allocations for its defined benefit plan at March 31, 2005 and 2006, by asset category, are as follows:

Asset Category	2005	2006	Target
Equity securities	36.9%	38.2%	33%~47%
Debt securities	28.2	26.2	18~32
Foreign currency securities investment fund	30.4	30.5	20~44
Loan receivables	4.5	5.1	0~7
	<u>100.0%</u>	<u>100.0%</u>	

The Company expects to contribute approximately ¥182,502 thousand (U.S.\$1,554 thousand) to its defined benefit plan for the year ending March 31, 2007.

Note 10. Shareholders' Equity

The Commercial Code of Japan ("Code") provides that an amount equal to at least 10% of the amount to be disbursed as a distribution of earnings be appropriated to the legal reserve until the total of such reserve and the additional paid-in capital account equals 25% of the common stock account. The Code also provides to the extent that the sum of additional paid-in capital account and the legal reserve account exceed 25% of the common stock account then the amount of the excess (if any) is available for appropriations by resolution of the shareholders.

Retained earnings available for dividends under the Code are based on the amount presented in the Company's non-consolidated financial statements, which are prepared in accordance with accounting principles and practices generally accepted in Japan. Under the Code, the amount of retained earnings available for dividends as of March 31, 2006 amounted to ¥25,039,352 thousand (U.S.\$213 million).

Note 11. Financial Instruments

The total carrying amount reported in the balance sheets for financial instruments, cash and cash equivalents, notes and accounts receivables, notes and accounts payables approximates their respective fair value.

Note 12. Supplemental Balance Sheet Information

Changes in allowance for doubtful accounts:

	2004	2005	2006	2006
		(Thousands of yen)		(U.S. dollars in thousands)
Balance at beginning of year	¥ 9,632	¥ 11,352	¥ 18,260	\$ 170
Addition	1,720	6,908	275	2
Reversal	—	—	—	—
Foreign currency exchange rate changes	—	—	—	(14)
Balance at end of year	¥ 11,352	¥ 18,260	¥ 18,535	\$ 158

Note 13. Sales to Foreign Customers

The Company's sales to foreign customers amounted to ¥3,303,006 thousand, ¥4,802,513 thousand and ¥3,407,516 thousand (U.S.\$30,070 thousand) for the years ended March 31, 2004, 2005 and 2006, respectively.

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SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AXCELIS TECHNOLOGIES, INC.

By: /s/ Mary G. Puma

Mary G. Puma,
Chairman and Chief Executive Officer

DATED: June 29, 2006

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EXHIBIT INDEX

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
3.2	Bylaws of the registrant, as amended as of January 23, 2002. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-K for the year ended December 31, 2001, filed with the Commission on March 12, 2002.
3.3	Certificate of Designation of Series A Participating Preferred Stock, filed with the Secretary of State of Delaware on July 5, 2000. Incorporated by reference to Exhibit 3.3 of the Company's Form 10-K for the year ended December 31, 2000, filed with the Commission on March 30, 2001.
4.1	Specimen Stock Certificate. Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.2	Rights Agreement between the Company and EquiServe Trust Company, N.A. Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.3	Indenture between the Company and State Street Bank and Trust Company, as trustee, including the form of note, dated as of January 15, 2002. Incorporated by reference to Exhibit 4.1 of the Company's Report on Form 8-K filed with the Commission on January 15, 2002.
4.4	Registration Rights Agreement by and among the Company, Morgan Stanley & Co., Incorporated, Salomon Smith Barney Inc. and SG Cowen Securities Corporation, dated as of January 15, 2002. Incorporated by reference to Exhibit 4.2 of the Company's Report on Form 8-K filed with the Commission on January 15, 2002.
4.5	Revolving Credit Agreement dated as of October 3, 2003, among the Company, ABN Amro Bank N.V. and the other lenders named therein, as amended. Pursuant to Regulation S-K, Item 601(b)(4)(iii), this exhibit has not been filed, since the total amount of the facility does not

exceed 10% of the Company's total assets at this time. The Company will furnish a copy of the Credit Agreement to the Commission on request.

- 10.1* Axcelis Technologies, Inc. 2000 Stock Plan, as amended through June 23, 2005. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.
- 10.2* Axcelis Technologies, Inc. Employee Stock Purchase Plan, as amended through May 12, 2005, effective January 1, 2006. Incorporated by reference to Exhibit 10.1 of the Company's report on Form 10-Q for the quarter ended September 30, 2005 filed with the Commission on November 9, 2005.
- 10.3* Axcelis Team Incentive Plan for executive officers, adopted by the Compensation Committee of the Board of Directors on January 31, 2006. Incorporated by reference to the Company's Report on Form 8-K filed with the Commission on February 6, 2006.
- 10.4 Form of Indemnification Agreement entered into by the Company with each of its directors and executive officers. Incorporated by reference to Exhibit 10.2 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).

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- 10.5* Form of Change in Control Agreement, as amended on May 12, 2005, between the Company and each of its executive officers. Incorporated by reference to Exhibit 10.1 of the Company's report on Form 10-Q filed with the Commission on August 9, 2005.
 - 10.6* Form of Employee non-qualified stock option grant under the 2000 Stock Plan, updated as of April 5, 2002. Incorporated by reference to Exhibit 10.1 of the Company's report on Form 10-Q filed with the Commission on November 9, 2004.
 - 10.7 Form of Non-Employee Director stock non-qualified stock option grant under the 2000 Stock Plan, updated as of July 12, 2004. Incorporated by reference to Exhibit 10.2 of the Company's report on Form 10-Q filed with the Commission on November 9, 2004.
 - 10.8 Form of Restricted Stock Agreement for use under the 2000 Stock Plan. Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.
 - 10.9 Form of Restricted Stock Unit Award Agreement for use under the 2000 Stock Plan. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.
 - 10.10* Form of Lock-Up Agreement dated October 26, 2005 between the registrant and each of its executive officers. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on October 26, 2005.
 - 10.11* Non-Employee Director Compensation effective July 1, 2005. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.
 - 10.12 Executive Officer Cash Compensation at March 1, 2006. Filed with the Original Form 10-K on March 14, 2006.
 - 10.13 Director Compensation at March 1, 2006. Filed with the Original Form 10-K on March 14, 2006.
 - 10.14* Employment Agreement between the Company and Mary G. Puma. Incorporated by reference to Exhibit 10.5 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
 - 10.15* Executive Officer Agreement dated as of December 18, 2003 between the Company and Stephen G. Bassett. Incorporated by reference to Exhibit 10.2 of the Company's report on Form 10-K filed with the Commission on March 8, 2004 .
 - 10.16* Executive Separation Agreement dated as of January 28, 2005 between Axcelis Technologies, Inc. and Jan Paul van Maaren. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on February 3, 2005.
 - 10.17* Executive Separation Agreement dated as of July 1, 2005 between the Company and David W. Duff, Ph.D. Incorporated by reference to Exhibit 10.7 of the Company's report on Form 10-Q for the quarter ended June 30, 2005 filed with the Commission on August 9, 2005.
 - 10.18** Organization Agreement dated December 3, 1982 between Eaton Corporation and Sumitomo Heavy Industries, Ltd. relating to SEN Corporation, an SHI and Axcelis Company (formerly Sumitomo Eaton Nova Corporation), as amended. Incorporated by reference to Exhibit 10.6 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).

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- 10.19** Master License Agreement dated January 16, 1996 between Eaton Corporation and SEN Corporation, an SHI and Axcelis Company (formerly Sumitomo Eaton Nova Corporation). Incorporated by reference to Exhibit 10.7 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).

- 14.1 Ethical Business Conduct at Axcelis, revised through January 2003. Incorporated by reference to Exhibit 14.1 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.
- 21.1 Subsidiaries of the Company. Filed with the Original Form 10-K on March 14, 2006.
- 23.1 Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm. Filed with the Original Form 10-K on March 14, 2006.
- 23.2 Consent of Ernst & Young ShinNihon, Independent Auditors, relating to the financial statements of SEN Corporation, an SHI and Axcelis Company. Filed herewith.
- 31.1 Certification of the Chief Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated June 29, 2006. Filed herewith.
- 31.2 Certification of the Chief Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated June 29, 2006. Filed herewith.
- 32.1 Certification of the Chief Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated June 29, 2006. Filed herewith.
- 32.2 Certification of the Chief Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated June 29, 2006. Filed herewith.
- 99.1 Charter of the Audit Committee of the Board of Directors of Axcelis, as adopted on April 29, 2004. Incorporated by reference to Exhibit 99.2 of the Company's report on Form 10-Q filed with the Commission on August 6, 2004.
- 99.2 Governance Policies adopted by the Board of Directors of Axcelis on September 25, 2002 and amended on October 22, 2003, June 22, 2005 and November 9, 2005. Filed with the Original Form 10-K on March 14, 2006.
- 99.3 Charter of the Nominating and Governance Committee of the Board of Directors, as adopted on September 26, 2002. Incorporated by reference to Exhibit 99.6 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.
- 99.4 Charter of the Compensation Committee of the Board of Directors of Axcelis, as adopted on January 23, 2003. Incorporated by reference to Exhibit 99.7 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.

* Indicates a management contract or compensatory plan.

** Certain confidential information contained in the document has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended, or Rule 24b-2 promulgated under the Securities and Exchange Act of 1934, as amended

Consent of Ernst & Young ShinNihon, Independent Auditors

We consent to the incorporation by reference in the Registration Statements (Form S-3 Nos. 333-85214 and 333-134920) of Axcelis Technologies, Inc. and in the related Prospectuses, the Registration Statement (Form S-8 No. 333-49726) pertaining to the Axcelis Technologies, Inc. Employee Stock Purchase Plan and the Registration Statements (Form S-8 Nos. 333-49768 and 333-120356) pertaining to the Axcelis Technologies, Inc. 2000 Stock Plan, of our report dated June 26, 2006, with respect to the consolidated financial statements of SEN Corporation, an SHI and Axcelis Company, included in the Axcelis Technologies, Inc. amended Annual Report (Form 10-K/A) for the year ended December 31, 2005.

/s/Ernst & Young ShinNihon

Tokyo, Japan
June 26, 2006

CERTIFICATION**of the Principal Executive Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Mary G. Puma, certify that:

1. I have reviewed this annual report on Form 10-K/A of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 29, 2006

/s/ Mary G. Puma

Mary G. Puma,
Chairman and Chief Executive Officer

CERTIFICATION**of the Principal Financial Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Stephen G. Bassett, certify that:

1. I have reviewed this annual report on Form 10-K/A of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 29, 2006

/s/ Stephen G. Bassett

Stephen G. Bassett,
Chief Financial Officer
and Executive Vice President

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief Executive Officer

Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-K/A annual report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of June 29, 2006.

/s/ Mary G. Puma

Mary G. Puma

Chairman and Chief Executive Officer of Axcelis
Technologies, Inc.

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief Financial Officer

Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-K/A annual report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of June 29, 2006.

/s/ Stephen G. Bassett

Stephen G. Bassett
Chief Financial Officer and Executive Vice President
of Axcelis Technologies, Inc.