

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2010

or

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)

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 whether the registrant has submitted electronically and posted on its corporate Web site, of any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No .

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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

As of August 4, 2010 there were 104,649,926 shares of the registrant's common stock outstanding.

PART I—FINANCIAL INFORMATION

| | | |
|----------------|---|---|
| Item 1. | <u>Financial Statements (unaudited)</u> | 3 |
| | <u>Consolidated Statement of Operations for the three and six months ended June 30, 2010 and 2009</u> | 3 |
| | <u>Consolidated Balance Sheets as of June 30, 2010 and December 31, 2009</u> | 4 |
| | <u>Consolidated Statements of Cash Flows for the six months ended June 30, 2010 and 2009</u> | 5 |

| | | |
|----------------------------------|--|----|
| Item 2. | Management's Discussion and Analysis of Financial Condition and Results of Operations | 6 |
| | Overview | 11 |
| | Critical Accounting Estimates | 11 |
| | Results of Operations | 12 |
| | Liquidity and Capital Resources | 15 |
| Item 3. | Quantitative and Qualitative Disclosures About Market Risk | 16 |
| Item 4. | Controls and Procedures | 16 |
| PART II—OTHER INFORMATION | | |
| Item 1. | Legal Proceedings | 17 |
| Item 1A. | Risk Factors | 17 |
| Item 2. | Unregistered Sales of Equity Securities and Use of Proceeds | 17 |
| Item 3. | Defaults Upon Senior Securities | 17 |
| Item 4. | (Removed and Reserved) | 17 |
| Item 5. | Other Information | 17 |
| Item 6. | Exhibits | 17 |

[Table of Contents](#)**PART 1—FINANCIAL INFORMATION****Item 1. Financial Statements.****Axcelis Technologies, Inc.****Consolidated Statements of Operations**

(In thousands, except per share amounts)

(Unaudited)

| | Three months ended June 30, | | Six months ended June 30, | |
|---|--------------------------------|--------------------|------------------------------|--------------------|
| | 2010 | 2009 | 2010 | 2009 |
| Revenue | | | | |
| Product | \$ 50,693 | \$ 25,764 | \$ 90,971 | \$ 43,498 |
| Service | 7,510 | 7,611 | 15,732 | 15,395 |
| Royalties from SEN | — | 175 | — | 385 |
| | <u>58,203</u> | <u>33,550</u> | <u>106,703</u> | <u>59,278</u> |
| Cost of revenue | | | | |
| Product | 33,690 | 22,658 | 64,010 | 40,890 |
| Service | 4,645 | 5,006 | 9,818 | 9,495 |
| | <u>38,335</u> | <u>27,664</u> | <u>73,828</u> | <u>50,385</u> |
| Gross profit | 19,868 | 5,886 | 32,875 | 8,893 |
| Operating expenses | | | | |
| Research and development | 9,477 | 7,752 | 18,610 | 17,287 |
| Sales and marketing | 6,606 | 6,285 | 13,210 | 13,164 |
| General and administrative | 7,464 | 8,531 | 15,164 | 19,201 |
| Restructuring charges | — | 4,114 | — | 5,098 |
| | <u>23,547</u> | <u>26,682</u> | <u>46,984</u> | <u>54,750</u> |
| Loss from operations | (3,679) | (20,796) | (14,109) | (45,857) |
| Other income (expense) | | | | |
| Gain on sale of SEN | — | — | — | 1,080 |
| Equity loss of SEN | — | — | — | (3,238) |
| Interest income | 25 | 30 | 54 | 93 |
| Interest expense | — | — | — | (1,676) |
| Other, net | 342 | (1,311) | (65) | (1,516) |
| | <u>367</u> | <u>(1,281)</u> | <u>(11)</u> | <u>(5,257)</u> |
| Loss before income taxes | (3,312) | (22,077) | (14,120) | (51,114) |
| Income taxes | 1,217 | 302 | 1,510 | 420 |
| Net loss | <u>\$ (4,529)</u> | <u>\$ (22,379)</u> | <u>\$ (15,630)</u> | <u>\$ (51,534)</u> |
| Net loss per share | | | | |
| Basic and diluted net loss per share | <u>\$ (0.04)</u> | <u>\$ (0.22)</u> | <u>\$ (0.15)</u> | <u>\$ (0.50)</u> |
| Shares used in computing basic and diluted net loss per share | | | | |
| Weighted average common shares | <u>104,170</u> | <u>103,286</u> | <u>104,143</u> | <u>103,285</u> |

See accompanying Notes to these Consolidated Financial Statements

Axcelis Technologies, Inc.

Consolidated Balance Sheets

(In thousands)

(Unaudited)

| | June 30, 2010 | December 31, 2009 |
|---|-------------------|----------------------|
| ASSETS | | |
| Current assets | | |
| Cash and cash equivalents | \$ 47,886 | \$ 45,020 |
| Restricted cash | 4,047 | 4,918 |
| Accounts receivable, net | 34,264 | 19,094 |
| Inventories, net | 97,824 | 114,558 |
| Prepaid expenses and other current assets | 14,877 | 10,016 |
| Total current assets | 198,898 | 193,606 |
| Property, plant and equipment, net | 39,521 | 40,868 |
| Long-term restricted cash | — | 2,245 |
| Other assets | 10,255 | 13,884 |
| | <u>\$ 248,674</u> | <u>\$ 250,603</u> |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities | | |
| Accounts payable | \$ 17,854 | \$ 9,680 |
| Accrued compensation | 10,402 | 9,267 |
| Warranty | 974 | 638 |
| Income taxes | 1,367 | 1,499 |
| Deferred revenue | 10,097 | 5,127 |
| Other current liabilities | 4,424 | 3,546 |
| Total current liabilities | 45,118 | 29,757 |
| Long-term deferred revenue | 895 | 563 |
| Other long-term liabilities | 3,630 | 3,884 |
| Commitments and contingencies (Note 11) | | |
| Stockholders' equity | | |
| Preferred stock | — | — |
| Common stock | 104 | 104 |
| Additional paid-in capital | 490,686 | 488,321 |
| Treasury stock | (1,218) | (1,218) |
| Accumulated deficit | (291,577) | (275,947) |
| Accumulated other comprehensive income | 1,036 | 5,139 |
| | <u>199,031</u> | <u>216,399</u> |
| | <u>\$ 248,674</u> | <u>\$ 250,603</u> |

See accompanying Notes to these Consolidated Financial Statements

[Table of Contents](#)

Axcelis Technologies, Inc.

Consolidated Statements of Cash Flow

(In thousands)

(Unaudited)

| | Six months ended June 30, | |
|---|------------------------------|-------------|
| | 2010 | 2009 |
| Cash flows from operating activities | | |
| Net loss | \$ (15,630) | \$ (51,534) |
| Adjustments to reconcile net loss to net cash used for operating activities | | |
| Undistributed loss of SEN | — | 3,238 |
| Depreciation and amortization | 3,711 | 3,727 |
| Gain on sale of SEN | — | (1,080) |
| Accretion of premium on convertible debt | — | 133 |
| Stock-based compensation expense | 1,568 | 1,316 |
| Provision for excess inventory | 1,331 | 7,492 |
| Changes in operating assets & liabilities | | |
| Accounts receivable | (16,011) | 4,117 |
| Inventories | 13,844 | 9,229 |
| Prepaid expenses and other current assets | (5,051) | 5,956 |
| Accounts payable & other current liabilities | 11,502 | (5,932) |

| | | |
|--|------------------|------------------|
| Deferred revenue | 5,366 | (5,072) |
| Income taxes | (110) | 139 |
| Other assets and liabilities | 1,673 | (401) |
| Net cash provided by (used for) operating activities | 2,193 | (28,672) |
| Cash flows from investing activities | | |
| Expenditures for property, plant, and equipment | (480) | (354) |
| Decrease in restricted cash | 3,116 | 1,741 |
| Proceeds from sale of SEN | — | 132,847 |
| Payments related to sale of SEN | — | (10,590) |
| Net cash provided by investing activities | 2,636 | 123,644 |
| Cash flows from financing activities | | |
| Repayment of convertible debt | — | (83,344) |
| Financing fees and other expenses | (514) | — |
| Proceeds from exercise of stock options | 55 | — |
| Proceeds from Employee Stock Purchase Plan | 206 | 65 |
| Net cash used for financing activities | (253) | (83,279) |
| Effect of exchange rate changes on cash | (1,710) | 384 |
| Net increase in cash and cash equivalents | 2,866 | 12,077 |
| Cash and cash equivalents at beginning of period | 45,020 | 37,694 |
| Cash and cash equivalents at end of period | <u>\$ 47,886</u> | <u>\$ 49,771</u> |

See accompanying Notes to these Consolidated Financial Statements

[Table of Contents](#)

Axcelis Technologies, Inc.

Notes To Consolidated Financial Statements (Unaudited)

Note 1. Nature of Business and Basis of Presentation

Axcelis Technologies, Inc. (“Axcelis” or the “Company”), is a worldwide producer of ion implantation, dry strip and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services to the semiconductor industry.

Until March 30, 2009, the Company owned 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. (“SHI”) in Japan. Detailed information about the Company’s investment in the joint venture is provided in Note 2.

During the six months ended June 30, 2010, the Company experienced positive cash flows from operations of \$2.2 million, which reflects improved market conditions and working capital improvements. Cash and cash equivalents at June 30, 2010 were \$47.9 million, compared to \$34.8 million at March 31, 2010. The Company’s 2010 plan includes improvement in revenue and operating cash flow and reduction in working capital as compared to 2009. The Company believes that based on its current market, revenue and expense forecasts, its existing cash and cash equivalents will be sufficient to satisfy its anticipated cash requirements. During the six months ended June 30, 2010 the Company continued to benefit from improving market conditions and increased capacity utilization at customers’ manufacturing facilities. Industry forecasts project this positive trend to continue throughout the remainder of 2010 and into 2011.

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments, which are of a normal recurring nature, considered necessary for a fair presentation of these financial statements have been included. Operating results for the interim periods presented are not necessarily indicative of the results that may be expected for other interim periods or for the year as a whole.

The balance sheet at December 31, 2009 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. For further information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2009.

Note 2. Sale of Investment in SEN

Until March 30, 2009, the Company owned 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. (“SHI”) in Japan. This joint venture, which was known as SEN Corporation, an SHI and Axcelis Company (“SEN”), licensed technology from the Company relating to the manufacture of specified ion implantation products and had exclusive rights to manufacture and sell these products in the territory of Japan. On March 30, 2009, pursuant to a Share Purchase Agreement dated February 26, 2009, the Company sold to SHI all of the Company’s common shares in SEN in exchange for a cash payment of 13 billion Yen, which resulted in proceeds of approximately \$132.8 million before advisor fees and other expenses of \$10.6 million. The sales price was determined through an arm’s length negotiation. This transaction terminated all prior agreements among the three parties relating to the SEN joint venture. In addition, the arbitration with SEN initiated by Axcelis in Tokyo was dismissed.

In connection with the sale of its investment in SEN, on March 30, 2009, the Company and SEN entered into a License Agreement pursuant to which the parties have cross licensed each other to use certain patents and technical information on a non-exclusive, perpetual, royalty-free, worldwide basis, provided that the Company and SEN received sole exclusive licenses for 4 years in the U.S. and Japan, respectively. The licenses to technical information cover only technical information shared by the parties prior to the date of the license, so the license to SEN does not cover technical information relating to the Optima HD and Optima XE. The license also excludes patents relating to Axcelis’ work in molecular implant and certain patents developed for the

Optima HD and Optima XE. The parties provided each other with limited warranties regarding their right to grant these licenses, and indemnity with respect thereto, but disclaim any warranty regarding the validity or freedom from infringement of the licensed intellectual property. Neither party will provide any support for the

[Table of Contents](#)

other party's use of the licensed intellectual property.

The sale of the Company's investment in SEN on March 30, 2009, resulted in a gain of approximately \$1.1 million. This gain includes net proceeds of \$122.2 million (after payment of advisor fees and other costs of \$10.6 million) and cumulative foreign translation gain of \$23.5 million, previously recorded in other comprehensive income, reduced by the carrying value of the investment on the date of sale of \$144.6 million. The gain from the sale of the Company's investment in SEN is recorded in other income.

On March 30, 2009, a portion of the proceeds of the sale were used to pay off, in full, the amounts due to the holder of the Company's 4.25% Convertible Senior Subordinated Notes. See Note 8.

Note 3. Stock-Based Compensation

The Company maintains the Axcelis Technologies, Inc. 2000 Stock Plan (the "2000 Plan"), a stock award and incentive plan which permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan. The 2000 Plan and the ESPP are more fully described in Note 14 to the consolidated financial statements in the Company's 2009 Annual Report on Form 10-K.

Under Accounting Standards Codification Topic 718, the Company recognized stock-based compensation expense of \$0.8 million and \$1.6 million for the three and six months ended June 30, 2010, respectively. For the three and six months ended June 30, 2009, the Company recognized stock-based compensation expense of \$0.5 million and \$1.3 million respectively. These amounts include the impact of recognizing compensation expense related to restricted stock units, restricted stock, non-qualified stock options and stock under the ESPP.

Note 4. Net Loss Per Share

Basic earnings per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings per share is similar to basic earnings per share, except that the denominator is increased to include additional common shares that would have been outstanding if the potentially dilutive common shares had been issued. Because the Company has net losses for the three and six-month periods ended June 30, 2010 and 2009, any potentially dilutive common shares related to outstanding stock options, restricted stock, restricted stock units and convertible debt have been excluded from the calculation of net loss per share because the effect would be anti-dilutive.

[Table of Contents](#)

Note 5. Comprehensive Loss

The components of comprehensive loss are as follows:

| | Three months ended June 30, | | Six months ended June 30, | |
|--|--------------------------------|--------------------|------------------------------|--------------------|
| | 2010 | 2009 | 2010 | 2009 |
| | (in thousands) | | (in thousands) | |
| Net loss | \$ (4,529) | \$ (22,379) | \$ (15,630) | \$ (51,534) |
| Other comprehensive income (loss) | | | | |
| Foreign currency translation adjustments | (3,336) | 2,823 | (4,103) | (8,966) |
| | <u>\$ (7,865)</u> | <u>\$ (19,556)</u> | <u>\$ (19,733)</u> | <u>\$ (60,500)</u> |

Note 6. Inventories

The components of inventories are as follows:

| | June 30, 2010 | December 31, 2009 |
|------------------------------------|------------------|----------------------|
| | (in thousands) | |
| Raw materials | \$ 66,637 | \$ 69,661 |
| Work in process | 22,777 | 27,654 |
| Finished goods (completed systems) | 8,410 | 17,243 |
| | <u>\$ 97,824</u> | <u>\$ 114,558</u> |

When recorded, reserves reduce the carrying value of inventory to its net realizable value. The Company establishes inventory reserves when conditions exist that indicate inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for the Company's products or market conditions. The Company regularly evaluates the ability to realize the value of inventory based on a combination of factors including forecasted sales or usage, estimated product end- of- life dates, estimated current and future market value and new product introductions. Purchasing and usage alternatives are also explored to mitigate inventory exposure. As of June 30, 2010 and December 31, 2009, inventory is stated net of inventory reserves of \$26.6 million and \$37.0 million, respectively.

Note 7. Product Warranty

The Company offers a one to three year warranty for all of its products, the terms and conditions of which vary depending upon the product sold. For all systems sold, the Company accrues a liability for the estimated cost of standard warranty at the time of system shipment and defers the portion of systems revenue attributable to the fair value of non-standard warranty. Costs for non-standard warranty are expensed as incurred. Factors that affect the Company's warranty liability 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 liability and adjusts the amount as necessary.

8

[Table of Contents](#)

Changes in the Company's product warranty liability are as follows:

| | Six months ended June 30, | |
|--|------------------------------|----------|
| | 2010 | 2009 |
| | (in thousands) | |
| Balance at December 31 | \$ 726 | \$ 3,530 |
| Warranties issued during the period | 1,229 | 388 |
| Settlements made during the period | (919) | (1,302) |
| Changes in estimate of liability for pre-existing warranties during the period | 11 | (1,310) |
| Balance at June 30 | \$ 1,047 | \$ 1,306 |
| Amount classified as current | \$ 974 | \$ 1,251 |
| Amount classified as long-term | 73 | 55 |
| Total Warranty Liability | \$ 1,047 | \$ 1,306 |

Note 8. Financial Arrangements

Bank Credit Facility

On March 12, 2010, the Company amended its existing revolving credit facility with a bank. The amended agreement provides for borrowings up to the lesser of \$20 million or specified percentages of the amounts of qualifying accounts receivable and inventory. The facility has certain financial covenants requiring the Company to maintain minimum levels of operating results and liquidity. Borrowings made under the facility will bear interest at the greater of 6.0% or the bank's prime rate (3.25% at June 30, 2010) plus 2.0%. The agreement will terminate on March 12, 2011. For each of the three and six month periods ended June 30, 2010 and 2009 the Company incurred fees and costs of \$0.2 million and \$0.4 million related to its revolving credit facilities.

On May 25, 2010 the Company and its lender agreed to modify a financial covenant in the revolving credit facility regarding maximum allowable quarterly losses. Based on current forecasts, the Company believes it will be in compliance with the financial covenants, as modified, throughout 2010.

Convertible Subordinated Debt

On March 30, 2009, Axcelis used a portion of the proceeds of the sale of its interest in SEN (see Note 2) to pay all amounts due (approximately \$85 million) under an Indenture between Axcelis and U.S. Bank National Association, as trustee, relating to the Company's 4.25% Convertible Senior Subordinated Notes, resulting in an extinguishment of the debt in full.

Note 9. Income Taxes

Income tax expense relates principally to operating results of foreign entities in jurisdictions, primarily in Asia, where the Company earns taxable income. The Company has significant net operating losses in the United States and certain foreign tax jurisdictions and, as a result, does not pay significant income taxes in those jurisdictions. Accordingly, the effective income tax rate is not meaningful.

Note 10. Significant Customers

For the three months ended June 30, 2010, one customer accounted for approximately 16.8% of revenue. For the six months ended June 30, 2010, two customers each accounted for approximately 12.9% and 11.2% of revenue, respectively. For the three months ended June 30, 2009, three customers each accounted for approximately 12.1%, 10.2%, and 10.0% of revenue, respectively. For the six months ended June 30, 2009, one customer accounted for approximately 11.4% of revenue.

Note 11. Contingencies

Litigation

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations.

9

[Table of Contents](#)

The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations.

Indemnifications

The Company's system sales agreements typically include provisions under which the Company agrees to take certain actions, provide certain remedies and defend its customers against third-party claims of intellectual property infringement under specified conditions and to indemnify customers against any damage and costs awarded in connection with such claims. The Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements

Note 12. Recent Accounting Pronouncements

In September 2009, the FASB issued a new accounting standard to provide guidance on revenue recognition criteria for multiple-element arrangements. The new accounting standard modifies the criteria used to separate elements in a multiple-element arrangement by introducing the concept of best estimate of selling price, establishing a hierarchy of evidence for determining selling price (fair value), requiring the use of relative selling price method and prohibiting the use of the residual method to allocate arrangement consideration among units of accounting. The new accounting standard also expands the disclosure requirements for all multiple element arrangements and is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010 (January 1, 2011 for a calendar year-end entity). The Company is currently evaluating the impact of adopting this pronouncement.

[Table of Contents](#)

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Form 10-Q are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth under "Liquidity and Capital Resources," and "Risk Factors" and others discussed elsewhere in this Form 10-Q. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. We assume no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements, except as may be required by law.

Overview

The semiconductor capital equipment industry is subject to significant cyclical swings in capital spending by semiconductor manufacturers. Capital spending is influenced by demand for semiconductors and the products using them, the utilization rate and capacity of existing semiconductor manufacturing facilities and changes in semiconductor technology, all of which are outside of our control. As a result, our revenue and gross margins fluctuate from year to year and period to period. The industry experienced a downturn beginning in the second half of 2008 which extended through 2009, although signs of improvement began during the fourth quarter of 2009 and have continued through the first six months of 2010. Our gross margins are also affected by the introduction of new products. We typically become more efficient in manufacturing products as they mature. Our expense base is largely fixed and does not vary significantly with changes in volume. Therefore, we experience fluctuations in operating results and cash flows depending on our revenue as driven by the level of capital expenditures by semiconductor manufacturers.

The sizable expense of building, upgrading or expanding a semiconductor fabrication facility is increasingly causing semiconductor companies to contract with foundries to manufacture their semiconductors. In addition, consolidation and partnering within the semiconductor manufacturing industry is increasing. We expect these trends to continue to reduce the number of our potential customers. This growing concentration of Axcelis' customers may increase pricing pressure as higher percentages of our total revenue are tied to the buying decisions of a particular customer or a small number of customers.

During the last six months of 2008 and through 2009 challenging market conditions severely limited our ability to increase sales and market share. During this period, adverse market conditions such as credit constriction, higher unemployment, lower corporate earnings, lower business investment and lower consumer spending severely impacted many technology manufacturers and significantly lowered the demand for our products. During the three and six months ended June 30, 2010, the economy and the market for our products have begun to improve. We also believe we are gaining market share with our single wafer ion implant systems for high current and high energy applications (the Optima HDx and Optima XEx), as customers are showing a higher acceptance for our technology. Our expense base is reduced from earlier periods due to cost reduction initiatives implemented in 2009 and 2008.

Operating results for the periods presented are not necessarily indicative of the results that may be expected for future interim periods or years as a whole.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon Axcelis' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, income taxes, accounts receivable, inventory and warranty obligations. Management's estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

[Table of Contents](#)

There has been no material change in the nature of our critical accounting estimates and judgments as described in Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2009.

Results of Operations

The following table sets forth our results of operations as a percentage of revenue for the periods indicated:

| | Three months ended June 30, | | Six months ended June 30, | |
|-------------------------------|-----------------------------|---------|---------------------------|---------|
| | 2010 | 2009 | 2010 | 2009 |
| Revenue | | | | |
| Product | 87.1% | 76.8% | 85.3% | 73.4% |
| Service | 12.9 | 22.7 | 14.7 | 26.0 |
| Royalties from SEN | 0.0 | 0.5 | 0.0 | 0.6 |
| Total revenue | 100.0 | 100.0 | 100.0 | 100.0 |
| Cost of revenue | | | | |
| Product | 57.9 | 67.5 | 60.0 | 69.0 |
| Service | 8.0 | 14.9 | 9.2 | 16.0 |
| Total cost of revenue | 65.9 | 82.4 | 69.2 | 85.0 |
| Gross profit | 34.1 | 17.6 | 30.8 | 15.0 |
| Operating expenses | | | | |
| Research and development | 16.3 | 23.1 | 17.4 | 29.2 |
| Sales and marketing | 11.3 | 18.7 | 12.4 | 22.2 |
| General and administrative | 12.8 | 25.4 | 14.2 | 32.4 |
| Restructuring charges | 0.0 | 12.3 | 0.0 | 8.6 |
| Total operating expenses | 40.4 | 79.5 | 44.0 | 92.4 |
| Loss from operations | (6.3) | (61.9) | (13.2) | (77.4) |
| Other income (expense) | | | | |
| Gain on sale of SEN | 0.0 | 0.0 | 0.0 | 1.8 |
| Equity loss of SEN | 0.0 | 0.0 | 0.0 | (5.5) |
| Interest income | 0.0 | 0.1 | 0.1 | 0.2 |
| Interest expense | 0.0 | 0.0 | 0.0 | (2.8) |
| Other, net | 0.6 | (3.9) | (0.1) | (2.6) |
| Total other income (expense) | 0.6 | (3.8) | 0.0 | (8.9) |
| Loss before income taxes | (5.7) | (65.7) | (13.2) | (86.3) |
| Income taxes | 2.1 | 0.9 | 1.4 | 0.7 |
| Net loss | (7.8)% | (66.6)% | (14.6)% | (87.0)% |

[Table of Contents](#)

Three and six months ended June 30, 2010 in comparison to the three and six months ended June 30, 2009

Revenue

Product

Product revenue, which includes systems sales, sales of spare parts and product upgrades, was \$50.7 million, or 87.1% of revenue, for the three months ended June 30, 2010, compared with \$25.8 million, or 76.8% of revenue for the three months ended June 30, 2009. Product revenue was \$91.0 million, or 85.3% of revenue for the six months ended June 30, 2010, compared with \$43.5 million, or 73.4% of revenue for the six months ended June 30, 2009. System sales were \$22.1 million, or 38.0% of revenue, for the three months ended June 30, 2010, compared with \$9.5 million, or 28.3% of revenue for the three months ended June 30, 2009. System sales were \$38.2 million, or 35.8% of revenue, for the six months ended June 30, 2010, compared with \$16.6 million, or 28.0% of revenue, for the six months ended June 30, 2009. The increase in product revenue in the three and six month period ended June 30, 2010 is attributable to the strengthening of the semiconductor market and a related increase in capital spending by semiconductor manufacturers. In addition, we also believe we are gaining market share with our single wafer ion implant systems for high current and high energy applications (the Optima HDx and Optima XEx), as customers are showing a higher acceptance for our technology.

A portion of our revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at June 30, 2010 and 2009 was \$11.0 million and \$9.3 million, respectively. The increase was mainly due to the increase in systems sales in 2010.

Service

Service revenue, which includes the labor component of maintenance and service contracts and fees for service hours provided by on-site service personnel, was \$7.5 million, or 12.9% of revenue, for the three months ended June 30, 2010, compared with \$7.6 million, or 22.7% of revenue, for the three months ended June 30, 2009. Service revenue was \$15.7 million, or 14.7% of revenue for the six months ended June 30, 2010, compared with \$15.4 million, or 26.0% of revenue for the six months ended June 30, 2009. Although service revenue should increase with the expansion of the installed base of systems, it can fluctuate from period to period based on capacity utilization at customers' manufacturing facilities, which affects the need for equipment service. The slight increase during the six months ended June 30, 2010 was due to an increase in fabrication utilization in the semiconductor industry.

Royalties from SEN

We had no royalty revenue for the three and six month periods ended June 30, 2010, compared with \$0.2 million, or 0.5% of revenue, for the three months ended June 30, 2009 and \$0.4 million, or 0.6%, of revenue for the six months ended June 30, 2009. Royalties were earned under our prior license agreement with SEN. As a result of the sale of our investment in SEN, SEN has had no further royalty obligations since March 30, 2009.

Ion Implant

Included in total revenue of \$58.2 million for the three month period ended June 30, 2010 is revenue from sales of ion implantation products and service of \$47.7 million, or 82.0% of total revenue, compared with \$27.3 million, or 81.4% of total revenue, for the three months ended June 30, 2009. Revenue from sales of ion implantation products and service accounted for \$89.0 million, or 83.4% of revenue, for the six months ended June 30, 2010, compared to \$49.5 million, or 83.5% of revenue, in the six months ended June 30, 2009. The dollar increase was due to the factors discussed above for product revenue.

Aftermarket

The Company's product revenue includes sales of spare parts and product upgrades as well as complete systems. We refer to the business of selling spare parts and product upgrades, combined with the sale of maintenance labor and service contracts and service hours, as the "aftermarket" business. Included in total revenue of \$58.2 million is revenue from our aftermarket business of \$36.1 million for the three months ended June 30, 2010, compared to \$23.9 million for the three months ended June 30, 2009. The revenue from our aftermarket business was \$68.5 million for the six months ended June 30, 2010, compared to \$42.3 million for the six months ended June 30, 2009. Aftermarket revenue generally increases with expansion of the installed base of systems but can fluctuate period to period based on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts and

[Table of Contents](#)

demand for equipment service. After hitting bottom in the first quarter of 2009, capacity utilization across the industry has increased in every subsequent quarter. This has resulted in successive improvements in aftermarket revenue each quarter, a trend that is expected to continue throughout 2010 based on industry projections.

Gross Profit

Product

Gross profit from product revenue was 33.5% for the three months ended June 30, 2010, compared to gross profit of 12.1% for the three months ended June 30, 2009. Approximately 4.3% of the 21.4% increase resulted from a lower provision for excess inventory. The remaining 17.1% increase in gross profit from product revenue is attributable to higher system sales volume and the related favorable absorption of manufacturing overhead costs, which accounted for 16.4%, and the favorable impact of increased parts and upgrade revenue at higher margins, which accounted for 0.7%. Gross profit from product revenue was 29.6% for the six months ended June 30, 2010, compared with 6.0% for the six months ended June 30, 2009. Approximately 6.8% of the 23.6% increase resulted from a lower provision for excess inventory. The remaining 16.8% increase in gross profit from product revenue is attributable to higher systems sales volume and the related favorable absorption of manufacturing overhead costs which accounted for 14.7% and the favorable impact of increased parts and upgrade revenue at higher margins which accounted for 2.1%.

Service

Gross profit from service revenue was 38.1% for the three months ended June 30, 2010, compared to 34.2% for the three months ended June 30, 2009. The increase in gross profit is attributable to the favorable absorption of fixed service costs due to an increase in billable service hours. Gross profit from service revenue was 37.6% for the six months ended June 30, 2010, compared to 38.3% for the six months ended June 30, 2009. The decrease in gross profit is attributable to changes in the mix of service contracts.

Operating Expenses

In response to continuing weak market conditions in 2009 the Company took several actions, including reduction in headcount, to reduce operating expenses. The aggregate of research and development, sales and marketing, and general and administrative expense reduction in 2010 compared to 2009 for the three month and six month period ended June 30, 2010 was \$3.1 and \$7.8 million, respectively.

Research and Development

Research and development expense was \$9.5 million in the three months ended June 30, 2010, an increase of \$1.7 million, or 21.8%, compared with \$7.8 million in the three months ended June 30, 2009. The increase was due to increased payroll costs (\$0.6 million), increased consulting costs (\$0.5 million) and increased project material costs (\$0.6 million). Research and development expense was \$18.6 million for the six months ended June 30, 2010, an increase of \$1.3 million or 7.5%, compared with \$17.3 million for the six months ended June 30, 2009. The increase relates principally to the acceleration of certain research and development projects to enable us to take advantage of opportunities where we believe we have a technology edge. Many of the projects have been accelerated at the request of our customers. The increase was comprised of increased payroll costs (\$0.1 million), increased consulting costs (\$0.5 million), increased project material costs (\$0.6 million), and increased development asset amortization and depreciation costs (\$0.1 million). Research and development expense was attributable to the following activities for the six months ended June 30, 2010: 53% for new product development, 31% for improvement of existing products, and 16% for product testing.

Sales and Marketing

Sales and marketing expense was \$6.6 million in the three months ended June 30, 2010, an increase of \$0.3 million, or 4.8%, compared with \$6.3 million for the three months ended June 30, 2009. The increase was primarily due to increased travel costs of (\$0.3 million) due to the increased sales volume experienced by the Company during the quarter. Sales and marketing expense was \$13.2 million for the six months ended June 30, 2010, equal to the spending for the six months ended June 30, 2009.

[Table of Contents](#)

General and Administrative

General and administrative expense was \$7.5 million for the three months ended June 30, 2010, a decrease of \$1.0 million or 11.8%, compared with \$8.5 million in the three months ended June 30, 2009. The decrease was due to decreased professional fee expenses (\$1.6 million), decreased other miscellaneous expenses (\$0.1 million) and increased payroll expense (\$0.7 million). General and administrative expense was \$15.2 million for the six months ended June 30, 2010, a decrease of \$4.0 million, or 20.8%, compared with \$19.2 million in the six months ended June 30, 2009. The decrease was primarily due to decreased professional fee expenses (\$4.8 million) offset by increased payroll expense (\$0.9 million).

Restructuring

The company incurred no restructuring charges for the three and six months ended June 30, 2010. For the three and six months ended June 30, 2009, we implemented a reduction in force to further reduce costs to mitigate deteriorating industry fundamentals. This reduction in force resulted in a total charge to expense of approximately \$5.6 million related to separation and outplacement costs for the six months ended June 30, 2009, offset by a reversal of \$0.5 million of accrued compensation expense related to terminated employees. A charge to expense of \$4.6 million was recorded in the three months ended June 30, 2009, offset by a reversal of \$0.5 million of accrued compensation expense related to terminated employees.

Other Income (Expense)

The sale of the Company's investment in SEN resulted in a gain of approximately \$1.1 million for the six months ended June 30, 2009. This gain includes net proceeds of \$122.2 million and cumulative foreign translation gain of \$23.5 million, previously recorded in other comprehensive income, reduced by the carrying value of the investment on the date of sale of \$144.6 million.

Equity loss attributable to SEN was \$3.2 million for the six months ended June 30, 2009. As a result of the sale of the Company's investment in SEN, subsequent to March 30, 2009, the Company no longer records equity income or loss from SEN.

We had no interest expense for the three and six month period ended June 30, 2010. Interest expense decreased by \$1.7 million for the six months ended June 30, 2010, compared to the six months ended June 30, 2009. The decrease is due to the payment in full of the convertible senior subordinated notes at March 30, 2009. At June 30, 2010 the Company had no outstanding obligation incurring interest.

Income Taxes

We incur income tax expense relating principally to operating results of foreign entities in jurisdictions, principally in Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain foreign jurisdictions, principally Europe, and, as a result, we do not currently pay significant income taxes in those jurisdictions and we do not recognize the tax benefit for such losses as discussed in Note 9 to the consolidated financial statements. Accordingly, our effective income tax rate is not meaningful.

Liquidity and Capital Resources

Our liquidity is affected by many factors. Some of these relate specifically to the operations of our business, for example, the rate of acceptance of the Optima product line, and others relate to the uncertainties of global economies, including the availability of credit, and the condition of the overall semiconductor equipment industry.

We have net operating loss and tax credit carryforwards which are available to reduce future income tax liabilities in the United States and certain foreign jurisdictions. These carryforwards, which expire principally between 2018 and 2028, had an aggregate tax effect of \$90.2 million at December 31, 2009. The sale of our investment in SEN generated taxable income which we off-set with existing net operating loss carry forwards.

During the six months ended June 30, 2010, we experienced positive cash flows from operations. Cash and cash equivalents at June 30, 2010 were \$47.9 million, compared to \$45.0 million at December 31, 2009.

[Table of Contents](#)

On March 12, 2010, we amended our existing revolving credit facility with a bank. The amended agreement provides for borrowings up to the lesser of \$20 million or specified percentages of the amounts of qualifying accounts receivable and inventory. The facility has certain financial covenants requiring us to maintain minimum levels of operating results and liquidity. On May 25, 2010 the Company and its lender agreed to modify a financial covenant in the revolving credit facility regarding maximum allowable quarterly losses. Based on current forecasts, the Company believes it will be in compliance with the financial covenants, as modified, throughout 2010.

We believe that based on our current market, revenue and expense forecasts, our existing cash and cash equivalents will be sufficient to satisfy our anticipated cash requirements. Our 2010 forecast reflects revenue and gross margins consistent with our understanding of customer plans, the improving market conditions currently forecasted by the industry (and experienced by the Company to date in 2010), and increasing capacity utilization at customers' manufacturing facilities, which has had a positive impact on our aftermarket business for the past several quarters. Forecasted operating expense levels are based on 2010 run rates.

Recent Accounting Pronouncements

In September 2009, the FASB issued a new accounting standard to provide guidance on revenue recognition criteria for multiple-element arrangements. The new accounting standard modifies the criteria used to separate elements in a multiple-element arrangement by introducing the concept of best estimate of selling price, establishing a hierarchy of evidence for determining selling price (fair value), requiring the use of relative selling price method and prohibiting the use of the residual method to allocate arrangement consideration among units of accounting. The new accounting standard also expands the disclosure requirements for all multiple element arrangements and is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010 (January 1, 2011 for a calendar year-end entity). The Company is currently evaluating the impact of adopting this pronouncement.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

As of June 30, 2010, there have been no material changes to the information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2009.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of the end of the period covered by this report (the "Evaluation Date"). Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the Evaluation Date, these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control that occurred during the second quarter of 2010 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

[Table of Contents](#)

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations. The Company is, from time to time, a party to litigation that arises in the normal course of its business operations.

Item 1A. Risk Factors.

As of June 30, 2010, there have been no material changes to the risk factors described in Item 1A to our annual report on Form 10-K for the year ended December 31, 2009.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. (Removed and Reserved).

Item 5. Other Information.

None.

Item 6. Exhibits.

The following exhibits are filed herewith:

| 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 Current Report on Form 8-K filed with the Commission on May 11, 2009. |
| 3.2 | Bylaws of the Company, as amended as of August 8, 2007. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-Q for the quarter ended June 30, 2007, filed with the Commission on August 9, 2007. |
| 10.1 | First Loan Modification Agreement entered into as of May 25, 2010 among the Company, Axcelis Technologies CCS Corporation and Silicon Valley Bank. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the Commission on May 27, 2010. |
| 31.1 | Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 6, 2010. Filed herewith. |
| 31.2 | Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 6, 2010. Filed herewith. |
| 32.1 | Certification of the Principal 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 August 6, 2010. Filed herewith. |
| 32.2 | Certification of the Principal 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 August 6, 2010. Filed herewith. |

[Table of Contents](#)

SIGNATURES

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, thereunto duly authorized.

AXCELIS TECHNOLOGIES, INC.

DATED: August 6, 2010

By: _____ /s/ STEPHEN G. BASSETT

Stephen G. Bassett
*Executive Vice President and
Chief Financial Officer
Duly Authorized Officer and
Principal Financial Officer*

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 quarterly report on Form 10-Q 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 registrant as of, and for, the periods presented in this report;
4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant'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 registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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: August 6, 2010

/s/ MARY G. PUMA

Mary G. Puma,
Chairman, Chief Executive Officer and President

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 quarterly report on Form 10-Q 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 registrant as of, and for, the periods presented in this report;
4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant'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 registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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: August 6, 2010

/s/ STEPHEN G. BASSETT

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

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal 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-Q quarterly 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 August 6, 2010.

/s/ MARY G. PUMA

Mary G. Puma
*Chairman, Chief Executive Officer and President
of Axcelis Technologies, Inc.*

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal 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-Q quarterly 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 August 6, 2010.

/s/ STEPHEN G. BASSETT

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