

**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 September 30, 2013

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, if 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   
(Do not check if a smaller reporting company)

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 October 31, 2013 there were 109,596,844 shares of the registrant's common stock outstanding.

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**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 September 30,		Nine months ended September 30,	
	2013	2012	2013	2012
Revenue				
Product	\$ 42,934	\$ 37,093	\$ 118,151	\$ 136,096
Services	5,897	7,547	18,907	22,664
Total revenue	48,831	44,640	137,058	158,760
Cost of revenue				
Product	27,339	24,809	74,976	84,692
Services	4,516	5,464	15,427	16,377
Total cost of revenue	31,855	30,273	90,403	101,069
Gross profit	16,976	14,367	46,655	57,691
Operating expenses				
Research and development	8,148	9,851	25,857	31,999
Sales and marketing	5,330	5,470	16,128	18,284
General and administrative	6,164	6,325	19,165	20,611
Gain on sale of dry strip assets and intellectual property	—	—	(1,167)	—
Restructuring charges	112	578	2,334	3,612
Total operating expenses	19,754	22,224	62,317	74,506
Loss from operations	(2,778)	(7,857)	(15,662)	(16,815)
Other income (expense)				
Interest income	3	9	8	27
Interest expense	(193)	—	(308)	—
Other, net	(1,252)	(627)	(671)	(999)
Total other income (expense)	(1,442)	(618)	(971)	(972)
Loss before income taxes	(4,220)	(8,475)	(16,633)	(17,787)
Income taxes	530	243	1,125	1,429
Net loss	\$ (4,750)	\$ (8,718)	\$ (17,758)	\$ (19,216)
Net loss per share				
Basic and Diluted	\$ (0.04)	\$ (0.08)	\$ (0.16)	\$ (0.18)
Shares used in computing net loss per share				
Basic and diluted weighted average common shares	109,074	107,855	108,573	107,521

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**Axcelis Technologies, Inc.**  
**Consolidated Statements of Comprehensive Loss**  
(In thousands)  
(Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2013	2012	2013	2012
Net loss	\$ (4,750)	\$ (8,718)	\$ (17,758)	\$ (19,216)
Other comprehensive income (loss):				
Foreign currency translation adjustments	2,012	1,105	53	(308)
Amortization of actuarial losses from pension plan	8	—	24	—
Comprehensive loss	<u>\$ (2,730)</u>	<u>\$ (7,613)</u>	<u>\$ (17,681)</u>	<u>\$ (19,524)</u>

See accompanying Notes to these Consolidated Financial Statements

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**Axcelis Technologies, Inc.**  
**Consolidated Balance Sheets**  
(In thousands, except per share amounts)  
(Unaudited)

	September 30, 2013	December 31, 2012
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents	\$ 48,317	\$ 44,986
Accounts receivable, net	29,321	24,843
Inventories, net	94,316	100,234
Restricted cash	1,583	106
Prepaid expenses and other current assets	5,066	5,056
Total current assets	<u>178,603</u>	<u>175,225</u>
Property, plant and equipment, net	32,311	34,413
Restricted cash, long-term	825	—
Other assets	15,542	12,520
Total assets	<u>\$ 227,281</u>	<u>\$ 222,158</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities		
Accounts payable	\$ 16,075	\$ 10,166
Accrued compensation	7,309	7,283
Warranty	1,461	1,700
Income taxes	262	278
Deferred revenue	3,911	6,423
Current portion of long-term debt	185	—
Other current liabilities	4,250	3,932
Total current liabilities	<u>33,453</u>	<u>29,782</u>
Long-term debt	14,815	—
Long-term deferred revenue	154	456
Other long-term liabilities	6,129	5,844
Total liabilities	<u>54,551</u>	<u>36,082</u>
Commitments and contingencies (Note 13)		
Stockholders' equity		
Preferred stock, \$0.001 par value, 30,000 shares authorized; none issued or outstanding	—	—
Common stock, \$0.001 par value, 300,000 shares authorized; 109,586 shares issued and 109,466 shares outstanding at September 30, 2013; 108,293 shares issued and 108,173 shares outstanding at December 31, 2012	110	108
Additional paid-in capital	508,976	504,643
Treasury stock, at cost, 120 shares at September 30, 2013 and December 31, 2012	(1,218)	(1,218)
Accumulated deficit	(340,235)	(322,477)
Accumulated other comprehensive income	5,097	5,020
Total stockholders' equity	<u>172,730</u>	<u>186,076</u>

See accompanying Notes to these Consolidated Financial Statements

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**Axcelis Technologies, Inc.**  
**Consolidated Statements of Cash Flows**  
(In thousands)  
(Unaudited)

	Nine months ended September 30,	
	2013	2012
<b>Cash flows from operating activities</b>		
Net loss	\$ (17,758)	\$ (19,216)
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	3,948	5,419
Gain on sale of dry strip assets and intellectual property	(1,167)	—
Deferred taxes	272	998
Stock-based compensation expense	3,105	3,411
Provision for excess inventory	2,451	678
Changes in operating assets & liabilities		
Accounts receivable	(4,359)	10,143
Inventories	3,455	(3,496)
Prepaid expenses and other current assets	(429)	4,490
Accounts payable and other current liabilities	6,276	(11,601)
Deferred revenue	(2,816)	(5,089)
Income taxes	(14)	(135)
Other assets and liabilities	(3,813)	3,025
Net cash used for operating activities	(10,849)	(11,373)
<b>Cash flows from investing activities</b>		
Proceeds from sale of dry strip assets and intellectual property	1,200	—
Expenditures for property, plant, and equipment	(484)	(536)
(Increase) decrease in restricted cash	(1,477)	1
Net cash used for investing activities	(761)	(535)
<b>Cash flows from financing activities</b>		
Increase in restricted cash	(825)	—
Financing fees and other expenses	(473)	—
Proceeds from exercise of stock options	1,113	863
Proceeds from Employee Stock Purchase Plan	197	179
Proceeds from issuance of Term Loan	15,000	—
Net cash provided by financing activities	15,012	1,042
Effect of exchange rate changes on cash	(71)	(791)
Net increase (decrease) in cash and cash equivalents	3,331	(11,657)
Cash and cash equivalents at beginning of period	44,986	46,877
Cash and cash equivalents at end of period	\$ 48,317	\$ 35,220

See accompanying Notes to these Consolidated Financial Statements

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**Axcelis Technologies, Inc.**  
**Notes to Consolidated Financial Statements (Unaudited)**

**Note 1. Nature of Business**

Axcelis Technologies, Inc. ("Axcelis" or the "Company") is a worldwide producer of ion implantation 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.

In December 2012, the Company sold its intellectual property rights and certain assets relating to the Company's dry strip product line to Lam Research Corporation ("Lam"). As a result of this transaction, the Company has ceased the sale of 300 mm dry strip wafer processing equipment in the quarter ended September 30, 2013. The Company will be able to continue to sell dry strip systems for smaller wafers until December 2015 and to support its installed base of all dry strip systems indefinitely. The gain on this transaction is more fully described in Note 3 below and in Note 3 to the consolidated financial statements in the Company's 2012 Annual Report on Form 10-K.

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 and 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, 2012 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, 2012.

The Company, incorporated in December 1995, is a successor to an ion implantation business founded in 1978.

## Note 2. Stock-Based Compensation

The Company maintains the Axcelis Technologies, Inc. 2012 Equity Incentive Plan (the "2012 Equity Plan"), which became effective on May 2, 2012, and permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company's 2000 Stock Plan (the "2000 Stock Plan"), expired on May 1, 2012. Awards granted under the 2000 Stock Plan remain outstanding and subject to the terms of the 2000 Stock Plan until the exercise or expiration of such grants. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan.

The 2012 Equity Plan and the ESPP are more fully described in Note 13 to the consolidated financial statements in the Company's 2012 Annual Report on Form 10-K.

The Company recognized stock-based compensation expense of \$1.5 million for both the three-month periods ended September 30, 2013 and 2012. The Company recognized stock-based compensation expense of \$3.1 million and \$3.4 million for the nine-month periods ended September 30, 2013 and 2012, respectively. These amounts include compensation expense related to restricted stock units, non-qualified stock options and stock to be issued to participants under the ESPP.

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## Note 3. Gain on Sale of Dry Strip Assets and Intellectual Property

In December 2012, the Company sold its dry strip assets and intellectual property to Lam. A portion of the purchase consideration (up to \$2.0 million) was contingent upon the Company achieving certain milestones by June 30, 2013. The Company recorded nil and \$1.2 million for the proceeds received based on its achievement of milestones during the three and nine months ended September 30, 2013, respectively. These amounts were partially offset by additional costs associated with the lab system purchased by Lam.

## Note 4. Computation of Net Loss per Share

Basic earnings or loss per share is computed by dividing income available or loss attributable 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 the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued, calculated using the treasury stock method.

The components of net loss per share are as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2013	2012	2013	2012
	(in thousands, except per share data)			
Net loss attributable to common stockholders	\$ (4,750)	\$ (8,718)	\$ (17,758)	\$ (19,216)
Weighted average common shares outstanding used in computing basic and diluted net loss per share	109,074	107,855	108,573	107,521
Net loss per share				
Basic and Diluted	\$ (0.04)	\$ (0.08)	\$ (0.16)	\$ (0.18)

The Company incurred net losses for the three and nine-month periods ended September 30, 2013 and 2012, and has excluded the incremental shares attributable to outstanding stock options, restricted stock and restricted stock units from the calculation of net loss per share because the effect would have been anti-dilutive. The following table sets forth the number of incremental shares excluded from the calculation above:

	Three months ended September 30,		Nine months ended September 30,	
	2013	2012	2013	2012
	(in thousands)			
Incremental shares excluded from the calculation of net loss per share	4,383	1,010	2,620	1,508

## Note 5. Accumulated Other Comprehensive Income

The following table presents the changes in accumulated other comprehensive income, net of tax, by component for the nine months ended September 30, 2013:

	Foreign currency	Defined benefit pension plan (in thousands)	Total
Balance at December 31, 2012	\$ 5,375	\$ (355)	\$ 5,020
Other comprehensive loss before reclassifications	53	—	53
Amounts reclassified from accumulated other comprehensive income (1)	—	24	24
Net current-period other comprehensive income	53	24	77
Balance at September 30, 2013	<u>\$ 5,428</u>	<u>\$ (331)</u>	<u>\$ 5,097</u>

(1) Amount presented before taxes as the tax effect is not material to the consolidated financial statements.

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**Note 6. Inventories, net**

The components of inventories are as follows:

	September 30, 2013	December 31, 2012
	(in thousands)	
Raw materials	\$ 58,265	\$ 72,013
Work in process	22,622	12,253
Finished goods (completed systems)	13,429	15,968
	<u>\$ 94,316</u>	<u>\$ 100,234</u>

When recorded, inventory reserves are intended to reduce the carrying value of inventories to their 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 inventories based on a combination of factors including the following: 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 September 30, 2013 and December 31, 2012, inventories are stated net of inventory reserves of \$34.4 million and \$33.6 million respectively.

During the three and nine months ended September 30, 2013, the Company recorded a charge to cost of sales of nil and \$2.1 million, respectively, for 300mm dry strip components. Under the terms of the agreement with Lam, the Company was permitted to manufacture and sell dry strip products through September 2013. Due to changes in the forecasted sales of the Company's dry strip products that become known during the nine months ended September 30, 2013, a portion of the dry strip inventory components were determined to be non-recoverable.

During the three months and nine months ended September 30, 2013, the Company recorded a charge to cost of sales of \$0.1 million and \$0.6 million, respectively, due to production levels below normal capacity. During the three months and nine months ended September 30, 2012, the Company recorded a charge to cost of sales of \$1.1 million and \$1.2 million, respectively, due to production levels below normal capacity.

**Note 7. Restructuring Charges**

In 2012, the Company completed reductions in force related to actions taken by management to control costs, improve the focus of its operations, sustain future profitability and conserve cash. As of December 31, 2012, approximately \$0.7 million of these costs were accrued and unpaid.

During the nine months ended September 30, 2013, the Company implemented further actions, which resulted in restructuring charges for severance and related costs of \$2.3 million recorded. The liability at September 30, 2013 of \$0.1 million is expected to be paid primarily in the fourth quarter of 2013.

Changes in the Company's restructuring liability, which consists primarily of severance and related costs, included in amounts reported as other current liabilities, are as follows:

	(In thousands)
Balance at December 31, 2012	\$ 659
Severance and related costs	2,333
Cash payments	(2,861)
Balance at September 30, 2013	<u>\$ 131</u>

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**Note 8. Product Warranty**

The Company generally offers a one year warranty for all of its systems, 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.

The changes in the Company's standard product warranty liability are as follows:

	Nine months ended September 30,	
	2013	2012
	(in thousands)	
Balance at January 1 (beginning of year)	\$ 1,801	\$ 3,697
Warranties issued during the period	1,401	2,170
Settlements made during the period	(1,107)	(2,550)
Changes in estimate of liability for pre-existing warranties during the period	(586)	(1,155)
Balance at September 30 (end of period)	\$ 1,509	\$ 2,162
Amount classified as current	\$ 1,461	\$ 2,107
Amount classified as long-term	48	55
Total warranty liability	\$ 1,509	\$ 2,162

## Note 9. Fair Value Measurements

Certain of the assets and liabilities on the Company's balance sheet are reported at their "fair value." Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

### (a) Fair Value Hierarchy

The accounting guidance for fair value measurement requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

Level 1 applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

Level 2 applies to assets or liabilities for which there are inputs other than quoted prices that are observable for the asset or liability, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which significant inputs are observable or can be derived principally from, or corroborated by, observable market data.

Level 3 applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

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### (b) Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company's money market funds are included in cash and cash equivalents in the consolidated balance sheets, and are considered a level 1 investment as they are valued at quoted market prices in active markets. The carrying value of our term loan which is carried at amortized cost approximates fair value based on current market pricing of similar debt and is categorized as level 2.

The following table sets forth Company's assets which are measured at fair value on a recurring basis by level within the fair value hierarchy.

	September 30, 2013 Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	\$ 4,882	\$ —	\$ —	\$ 4,882

	December 31, 2012 Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	\$ 29,179	\$ —	\$ —	\$ 29,179

### (c) Other Financial Instruments

The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents (which are comprised primarily of deposit and overnight sweep accounts), accounts receivable, prepaid expenses and other current assets, accounts payable and accrued expenses approximate fair value due to their short-term maturities.

## Note 10. Financing Arrangements

### Bank Credit Facility

Effective July 5, 2013, the Company terminated a revolving credit facility with Silicon Valley Bank (“SVB”) pursuant to an Amended and Restated Loan and Security Agreement dated April 25, 2011 as amended. The facility provided for borrowings up to \$30.0 million, based primarily on accounts receivable, and was subject to certain financial covenants requiring the Company to maintain minimum levels of operating results and liquidity. The Company used the facility to support letters of credit. The Company paid a \$0.3 million early termination fee to SVB during the quarter ended September 30, 2013.

With the termination of this facility, the Company has cash collateralized two letters of credit issued by SVB in the aggregate amount of \$1.5 million which are presented as restricted cash on the balance sheet as of September 30, 2013. As described in Note 15 below, the Company reinstated a revolving credit facility with SVB in October 2013.

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**Term Loan Secured by Real Estate**

On July 5, 2013, the Company entered into a Business Loan Agreement with Northern Bank & Trust Company (the “Bank”), which provides for a three year term loan of \$15.0 million, secured by the Company’s real estate in Beverly, Massachusetts (the “Term Loan”). The Company will use the proceeds of the Term Loan as needed to fund growth, specifically investments in the leading edge Purion ion implant platform, and other working capital and general corporate purposes. \$0.8 million of the loan proceeds are held in a restricted interest reserve escrow account which is classified as restricted cash, long-term on the consolidated balance sheets. The Company incurred debt issuance costs of \$0.2 million which will be amortized over the life of the Term Loan.

The Term Loan bears interest at the rate of 5.5% per annum, with payments of principal beginning August 5, 2014 on a 10 year amortization schedule of the principal on a straight-line basis. Interest is payable monthly beginning on August 5, 2013. All outstanding principal and unpaid interest is due and payable on July 5, 2016. In addition, under the Term Loan, the Company must comply with financial covenants relating to debt service ratio, net worth and liquidity.

As of September 30, 2013, the Company was in compliance with all covenant requirements of the Term Loan.

**Note 11. Income Taxes**

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

During the three months ended September 30, 2013, the Company incurred charges related to the write-off of deferred tax assets in certain foreign jurisdictions that are no longer realizable which resulted in a noncash tax expense of \$0.3 million. This tax expense did not have a significant impact on the Company’s results of operations or cash flows for the three and nine months ended September 30, 2013.

As of December 31, 2012 the Company’s valuation allowance related to income taxes was approximately \$145.0 million. The Company is in a three year cumulative loss position in the United States. As a result, the Company maintains a 100% valuation allowance to reduce the carrying value of the related deferred tax assets to zero. The Company will continue to maintain a full valuation allowance for those tax assets until sustainable future levels of profitability are evident.

**Note 12. Concentration of Risk**

For the three months ended September 30, 2013, two customers accounted for approximately 19.0% and 14.5% of consolidated revenue. For the nine months ended September 30, 2013, two customers accounted for approximately 10.9% and 10.4% of consolidated revenue.

For the three months ended September 30, 2012, three customers accounted for approximately 16.1%, 13.1% and 10.9% of consolidated revenue, respectively. For the nine months ended September 30, 2012, two customers accounted for approximately 21.3% and 11.4% of consolidated revenue, respectively.

At September 30, 2013, three customers accounted for 18.3%, 12.7%, and 11.2% of consolidated gross accounts receivable. At December 31, 2012, two customers accounted for 11.9% and 11.5% of consolidated gross accounts receivable, respectively.

**Note 13. Contingencies**

**(a) Litigation**

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.

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**(b) 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 14. Recent Accounting Guidance**



## Accounting Standards or Updates Recently Adopted

Effective January 1, 2013, the Company adopted Accounting Standards Update No. 2013-02, *Reporting of Amounts Reclassified out of Accumulated Other Comprehensive Income*. This newly issued accounting update requires that companies present either in a single note or parenthetically on the face of the financial statements, the effect of significant amounts reclassified from each component of accumulated other comprehensive income based on its source and the income statement line items affected by the reclassification. If a component is not required to be reclassified to net income in its entirety, companies would instead cross reference to the related footnote for additional information. As this update only requires enhanced disclosure, the adoption of this update did not impact the Company's financial position or results of operations.

## Accounting Standards or Updates Not Yet Effective

The Company has evaluated the accounting guidance recently issued and has determined that these standards or updates will not have a material impact on its financial position or results of operations.

### **Note 15. Subsequent Events**

On October 31, 2013, the Company entered into a revolving credit facility agreement (the "facility") with Silicon Valley Bank ("SVB") that provides for borrowings of up to \$10.0 million, based primarily on accounts receivable. The facility has certain financial covenants requiring the Company to maintain minimum levels of operating results and liquidity. The agreement will terminate on October 31, 2015. The Company will use the facility to support letters of credit and if needed, to fund a ramp in business. Upon the establishment of the facility, SVB released the Company from a cash collateralization arrangement with respect to \$1.5 million of letters of credit issued by SVB, and these outstanding letters of credit were deemed covered by the facility.

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### **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" 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. Our established cost structure does not vary significantly with changes in volume. We may experience fluctuations in operating results and cash flows depending on our revenue as driven by the level of capital expenditures by semiconductor manufacturers.

In December 2012, we sold to Lam Research Corporation the intellectual property rights and other assets relating to our dry strip systems product line. The purchased intellectual property rights include, among other things, worldwide patent rights, patent applications, copyrights, industrial designs, know-how and related rights used by us in our dry strip products. Lam granted us a worldwide, non-exclusive, non-transferable, royalty free license to use the intellectual property rights sold by us. The license allowed us to make and sell 300 mm dry strip wafer processing equipment for semiconductor applications through September 2013. We will continue to sell dry strip systems for smaller wafers until December 2015 and support our installed base of dry strip systems indefinitely. Due to this continuing interest in the dry strip business, the sale of the intellectual property rights and other assets to Lam have been reported in continuing operations.

Consolidation and partnering within the semiconductor manufacturing industry has resulted in a small number of customers representing a substantial portion of our business. Our net revenue from our ten largest customers accounted for 71.3% of total revenue for the nine months ended September 30, 2013; compared to 73.6% of revenue for the nine months ended September 30, 2012.

Weak industry conditions that we experienced in 2012 continued through the first quarter of 2013, but beginning in the second quarter of 2013 we entered a period of gradual market improvement which continued during the third quarter. Our financial results in 2013 reflect our investment of a significant portion of our resources in research and development programs related to our new leading edge Purion ion implantation platform and the market introduction and initial sales of Purion systems. These results also reflect our efforts to lower our breakeven revenue levels by maintaining tight control of discretionary spending. As a result of increasing revenues and cost containment, we expect to return to profitability in the fourth quarter of 2013.

Operating results for the interim 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, revenue and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates and assumptions. 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

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Management has not identified any need to make any material change in, and has not changed, any of our critical accounting estimates and judgments as described in Management's Discussion and Analysis of Financial Conditions and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2012.

**Results of Operations**

The following table sets forth our results of operations as a percentage of total revenue:

	Three months ended September 30,		Nine months ended September 30,	
	2013	2012	2013	2012
<b>Revenue:</b>				
Product	87.9%	83.1%	86.2%	85.7%
Services	12.1	16.9	13.8	14.3
Total revenue	100.0	100.0	100.0	100.0
<b>Cost of revenue:</b>				
Product	56.0	55.6	54.7	53.3
Services	9.2	12.2	11.2	10.3
Total cost of revenue	65.2	67.8	65.9	63.6
Gross profit	34.8	32.2	34.1	36.4
<b>Operating expenses:</b>				
Research and development	16.7	22.1	18.9	20.2
Sales and marketing	10.9	12.2	11.8	11.5
General and administrative	12.6	14.2	14.0	13.0
Gain on sale of dry strip assets and intellectual property	—	—	(0.9)	—
Restructuring charges	0.2	1.3	1.7	2.3
Total operating expenses	40.4	49.8	45.5	47.0
Loss from operations	(5.6)	(17.6)	(11.4)	(10.6)
<b>Other income (expense):</b>				
Interest expense	(0.4)	—	(0.2)	—
Other, net	(2.6)	(1.4)	(0.5)	(0.6)
Total other income (expense)	(3.0)	(1.4)	(0.7)	(0.6)
Loss before income taxes	(8.6)	(19.0)	(12.1)	(11.2)
Income taxes	1.1	0.5	0.8	0.9
Net loss	(9.7)%	(19.5)%	(12.9)%	(12.1)%

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**Revenue**

The following table sets forth our revenues.

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)								
<b>Revenues:</b>								
Product	\$ 42,934	\$ 37,093	\$ 5,841	15.7%	\$ 118,151	\$ 136,096	\$ (17,945)	(13.2)%
Percentage of revenues	87.9%	83.1%			86.2%	85.7%		
Services	5,897	7,547	(1,650)	(21.9)%	18,907	22,664	(3,757)	(16.6)%
Percentage of revenues	12.1%	16.9%			13.8%	14.3%		
Total revenues	\$ 48,831	\$ 44,640	\$ 4,191	9.4%	\$ 137,058	\$ 158,760	\$ (21,702)	(13.7)%

*Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012*

*Product*

Product revenue, which includes system sales, sales of spare parts and product upgrades, was \$42.9 million, or 87.9% of revenue during the three months ended September 30, 2013, compared with \$37.1 million, or 83.1% of revenue for the three months ended September 30, 2012. The year over year increase in product revenue is attributable to improved semiconductor market spending which has increased system revenue levels.

*Services*

Service revenue, which includes the labor component of maintenance and service contracts and fees for service hours provided by on-site service personnel, was \$5.9 million, or 12.1 % of revenue for the three months ended September 30, 2013, compared with \$7.5 million, or 16.9% of revenue for the three months ended September 30, 2012. Service revenue fluctuates from period to period based on capacity utilization at customers' manufacturing facilities,

which affects the need for equipment service. The decrease during the three months ended September 30, 2013 as compared to the three months ended September 30, 2012 was primarily due to cautious European aftermarket spending at the end of the 2013 quarter.

Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

*Product*

Product revenue was \$118.2 million, or 86.2% of revenue for the nine months ended September 30, 2013, compared with \$136.1 million, or 85.7% of revenue for the nine months ended September 30, 2012. The decrease in product revenue is attributable to the timing associated with the semiconductor industry cycle.

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 September 30, 2013 and December 31, 2012 was \$4.1 million and \$6.9 million, respectively. The decrease was mainly due to lower systems sales during the nine months ended September 30, 2013, and the timing of acceptance of deferred system sales.

*Services*

Service revenue was \$18.9 million, or 13.8% of revenue for the nine months ended September 30, 2013, compared with \$22.7 million, or 14.3% of revenue for the nine months ended September 30, 2012. Results for the first three quarters of 2013 were primarily driven by the timing associated with the semiconductor industry cycle.

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**Revenue Categories used by Management**

As an alternative to the line item revenue categories discussed above, management also uses revenue categorizations which look at revenue by product line (the most significant of which is ion implant) and by aftermarket, as described below.

Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012

*Ion Implant*

Included in total revenue of \$48.8 million during the three months ended September 30, 2013 is revenue from sales of ion implantation products and related service of \$40.2 million, or 82.4% of total revenue, compared with \$33.9 million, or 76.0%, of total revenue for the three months ended September 30, 2012. The dollar increase is due to the factors discussed above for product and services revenue. The increase in ion implant's share of total revenue for the 2013 period reflects a reduction in dry strip revenue following the sale of assets relating to the dry strip product line in December 2012, as discussed in the Overview.

*Aftermarket*

Our 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 \$48.8 million during the three months ended September 30, 2013 is revenue from our aftermarket business of \$28.6 million, compared to \$31.9 million for the three months ended September 30, 2012. Aftermarket revenue fluctuates from period to period based on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts and demand for equipment service. The decrease in aftermarket revenue for the three months ended September 30, 2013 as compared to the same period in 2012 was due to the factors discussed above for product and services revenue.

Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

*Ion Implant*

Included in total revenue of \$137.1 million during the nine months ended September 30, 2013 is revenue from sales of ion implantation products and related service of \$111.6 million, or 81.4% of total revenue, compared with \$124.8 million, or 78.6%, of total revenue for the nine months ended September 30, 2012. The dollar decrease was due to the factors discussed above for product and services revenue.

*Aftermarket*

Included in total revenue of \$137.1 million during the nine months ended September 30, 2013 is revenue from our aftermarket business of \$87.5 million, compared to \$96.8 million for the nine months ended September 30, 2012. The dollar decrease was due to the factors discussed above for product and services revenue.

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**Gross Profit / Gross Margin**

The following table sets forth our gross profit / gross margin.

Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)							

<b>Gross Profit:</b>									
Product	\$ 15,595	\$ 12,284	\$ 3,311	27.0%	\$ 43,175	\$ 51,404	\$ (8,229)	(16.0)%	
<i>Product gross margin</i>	36.3%	33.1%			36.5%	37.8%			
Services	1,381	2,083	(702)	(33.7)%	3,480	6,287	(2,807)	(44.6)%	
<i>Services gross margin</i>	23.4%	27.6%			18.4%	27.7%			
Total gross profit	\$ 16,976	\$ 14,367	\$ 2,609	18.2%	\$ 46,655	\$ 57,691	\$ (11,036)	(19.1)%	
Gross margin	34.8%	32.2%			34.1%	36.4%			

Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012

*Product*

Gross profit from product revenue was 36.3% for the three months ended September 30, 2013, compared to 33.1% for the three months ended September 30, 2012. The increase in gross profit of 3.2 percentage points is attributable to higher systems sales volumes and the related favorable absorption of fixed overhead costs, which increased gross profit 10.2 percentage points, offset by a 7.0 percentage point decrease in gross profit since revenue from our higher margin parts and upgrades represented a smaller percentage of total revenue.

*Services*

Gross profit from service revenue was 23.4% for the three months ended September 30, 2013, compared to 27.6% for the three months ended September 30, 2012. The decrease in gross profit is attributable to lower volumes, and changes in the mix and timing of service contracts.

Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

*Product*

Gross profit from product revenue was 36.5% for the nine months ended September 30, 2013, compared to 37.8% for the nine months ended September 30, 2012. The decrease in gross profit of 1.3% percentage points is due to an incremental reserve for excess inventory which reduced gross profit by 1.0 percentage point and lower systems sales volumes and the related unfavorable absorption of fixed overhead costs which reduced gross profit by 0.8 percentage points, offset by a 0.5 percentage point increase in gross profit resulting from an increased mix of parts and upgrade revenue.

*Services*

Service revenue gross margin was 18.4% for the nine months ended September 30, 2013, compared to 27.7% for the nine months ended September 30, 2012. The decrease in gross margin is attributable to lower sales volumes and the changes in the mix and timing of service contracts.

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**Operating Expenses**

The following table sets forth our operating expenses:

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
	(dollars in thousands)							
Research and development	\$ 8,148	\$ 9,851	\$ (1,703)	(17.3)%	\$ 25,857	\$ 31,999	\$ (6,142)	(19.2)%
<i>Percentage of revenues</i>	16.7%	22.1%			18.9%	20.2%		
Sales and marketing	5,330	5,470	(140)	(2.6)%	16,128	18,284	(2,156)	(11.8)%
<i>Percentage of revenues</i>	10.9%	12.2%			11.8%	11.5%		
General and administrative	6,164	6,325	(161)	(2.5)%	\$ 19,165	20,611	(1,446)	(7.0)%
<i>Percentage of revenues</i>	12.6%	14.2%			14.0%	13.0%		
Gain on sale of dry strip assets and intellectual property	—	—	—	—	(1,167)	—	(1,167)	—
<i>Percentage of revenues</i>	0.0%	0.0%			(0.9)%	0.0%		
Restructuring charges	112	578	(466)	(80.6)%	2,334	3,612	(1,278)	(35.4)%
<i>Percentage of revenues</i>	0.2%	1.3%			1.7%	2.3%		
Total operating expenses	\$ 19,754	\$ 22,224	\$ (2,470)	(11.1)%	\$ 62,317	\$ 74,506	\$ (12,189)	(16.4)%
<i>Percentage of revenues</i>	40.4%	49.8%			45.5%	47.0%		

Our operating expenses consist primarily of personnel costs, including salaries, commissions, bonuses, share-based compensation and related benefits and taxes; project material costs related to the design and development of new products and enhancement of existing products; and professional fees, travel and depreciation expenses.

Personnel costs are our largest expense, representing \$11.3 million and \$35.8 million, or 57.7% and 58.6%, of our total operating expenses, excluding the gain on sale of the dry strip assets and intellectual property and restructuring charges, for the three and nine-month periods ended September 30, 2013, respectively. For the three and nine-month periods ended September 30, 2012, personnel costs were \$12.6 million and \$41.3 million, or 58.0% and 58.3%, of our total operating expenses excluding restructuring charges.

We continue to maintain tight control over our discretionary spending. As a result of the industry conditions in the semiconductor industry, we took a number of actions during 2013 to reduce our operating expenses and manage our cash. These actions included a reduction in our global workforce; focusing our R&D spending on critical programs; and asking our employees to take three weeks of unpaid shutdowns.

The impact of these actions and our operating results are discussed below.

## Research and Development

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
	(dollars in thousands)							
Research and development	\$ 8,148	\$ 9,851	\$ (1,703)	(17.3)%	\$ 25,857	\$ 31,999	\$ (6,142)	(19.2)%
Percentage of revenues	16.7%	22.1%			18.9%	20.2%		

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Our ability to remain competitive depends largely on continuously developing innovative technology, with new and enhanced features and systems and introducing them at competitive prices on a timely basis. Accordingly, based on our strategic plan, we establish annual R&D budgets to fund programs that we expect will drive competitive advantages.

### Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012

Research and development expense was \$8.1 million during the three months ended September 30, 2013; a decrease of \$1.7 million, or 17.3%, compared with \$9.8 million during the three months ended September 30, 2012. The decrease included a reduction in payroll costs of \$0.8 million. As we focused our R&D spend on critical programs, consulting, project material and related costs decreased by \$0.5 million and depreciation expense for internal use assets used as demonstration and/or test systems decreased by \$0.5 million.

### Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

Research and development expense was \$25.9 million during the nine months ended September 30, 2013; a decrease of \$6.1 million, or 19.2%, compared with \$32.0 million during the nine months ended September 30, 2012. The decrease included the reduction in payroll costs of \$2.9 million as a result of lowering our headcount through reductions in force. As we focused our R&D spend on critical programs, consulting, project material and related costs decreased by \$2.0 million and depreciation expense for internal use assets used as demonstration and/or test systems decreased by \$1.3 million.

## Sales and Marketing

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
	(dollars in thousands)							
Sales and marketing	\$ 5,330	\$ 5,470	\$ (140)	(2.6)%	\$ 16,128	\$ 18,284	\$ (2,156)	(11.8)%
Percentage of revenues	10.9%	12.2%			11.8%	11.5%		

Our sales and marketing expenses result primarily from the sale of our equipment and services through our direct sales force.

### Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012

Sales and marketing expense was \$5.3 million during the three months ended September 30, 2013; a decrease of \$0.1 million, or 2.6%, compared with \$5.4 million during the three months ended September 30, 2012. The decrease was primarily due to the reduction in payroll and related costs of \$0.4 million partly attributable to the cost savings realized by one week of unpaid shutdown taken by our employees, offset in part by smaller increases in various other expense accounts.

### Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

Sales and marketing expense was \$16.1 million during the nine months ended September 30, 2013; a decrease of \$2.2 million, or 11.8%, compared with \$18.3 million during the nine months ended September 30, 2012. The decrease was primarily due to the reduction in payroll and related costs of \$1.8 million as a result of lowering our headcount through reductions in force and the cost savings realized by three weeks of unpaid shutdown taken by our employees. As a result of our tightened control over discretionary spending, we reduced our travel and entertainment costs by \$0.3 million and our utilities and other facility costs by \$0.3 million.

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## General and Administrative

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
	(dollars in thousands)							
General and administrative	\$ 6,164	\$ 6,325	\$ (161)	(2.5)%	\$ 19,165	\$ 20,611	\$ (1,446)	(7.0)%
Percentage of revenues	12.6%	14.2%			14.0%	13.0%		

Our general and administrative expenses result primarily from the costs associated with our executive, finance, legal and human resource functions.

### Three Months Ended September 30, 2013 Compared with Three Months Ended September 30, 2012

General and administrative expense was \$6.2 million during the three months ended September 30, 2013; a decrease of \$0.1 million, or 2.5%, compared with \$6.3 million during the three months ended September 30, 2012, essentially flat for the third quarter.

Nine Months Ended September 30, 2013 Compared with Nine Months Ended September 30, 2012

General and administrative expense was \$19.2 million during the nine months ended September 30, 2013, a decrease of \$1.4 million, or 7.0%, compared with \$20.6 million during the nine months ended September 30, 2012. The decrease was primarily due to the reduction in salary and fringe benefits of \$0.8 million as a result of lowering our headcount through reductions in force and the cost savings realized by three weeks of unpaid shutdown taken by our employees. As a result of our tightened control over discretionary spending, we reduced our professional fees by \$0.3 million and our utilities and other facility costs by \$0.4 million compared to the same period in 2012.

**Gain on Sale of Dry Strip Assets and Intellectual Property**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)								
Gain on Sale of Dry Strip Assets and Intellectual Property	\$	—	\$	—	\$	1,167	\$	(1,167)
Percentage of revenues		0.0%		0.0%		(0.9)%		0.0%

In December 2012, we sold our dry strip assets and intellectual property to Lam. A portion of the purchase consideration (up to \$2.0 million) was contingent upon our achieving certain milestones by June 30, 2013. During the three and nine-month periods ended September 30, 2013, the Company recorded nil and \$1.2 million, respectively, representing achievement of two milestones under the agreement. These amounts were partially offset by additional costs associated with the lab system purchased by Lam.

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**Restructuring Charges**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)								
Restructuring charges	\$	112	\$	578	\$	(466)	\$	(1,278)
Percentage of revenues		0.2%		1.3%		(80.6)%		(35.4)%
						1.7%		2.3%

We continue to align our organization with market demands. We implemented reductions in force in the periods presented to improve the focus of our operations, control costs, achieve future profitability and conserve cash. As a result of these actions, we recorded a restructuring expense for severance and related costs during the three and nine-month periods ended September 30, 2013 and 2012, respectively.

**Other Income (Expense)**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to- Period Change	
	2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)								
Other income (expense), net	\$	(1,442)	\$	(618)	\$	(824)	\$	(972)
Percentage of revenues		(3.0)%		(1.4)%		(133.3)%		0.1%
						(0.7)%		(0.6)%

Other income (expense) consists primarily of foreign exchange gains and losses attributable to fluctuations of the U.S. dollar against the local currencies of certain of the countries in which we operate, interest earned on our invested cash balances and bank fees associated with maintaining our financing arrangements. Also included within other income (expense) for the three month period ended September 30, 2013 is \$0.3 million in early termination fees the Company incurred as a result of terminating a revolving credit facility with SVB.

During the three and nine-month periods ended September 30, 2013 and 2012, we had no significant off-balance-sheet risk such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

**Income Taxes**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2013	2012	\$	%	2013	2012	\$	%
(dollars in thousands)								
Income taxes	\$	530	\$	243	\$	287	\$	(304)
Percentage of revenues		1.1%		0.5%		118.1%		(21.3)%
						0.8%		0.9%

We incur income tax expense relating principally to operating results of foreign entities in Europe and Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain European tax jurisdictions, and, as a result, we do not currently pay significant income taxes in those jurisdictions. Additionally, we do not recognize the tax benefit for losses in the United States and certain European tax jurisdictions as we believe it is more likely than not that these benefits will not be recognized.

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During the three months ended September 30, 2013, we incurred charges related to the write-off of deferred tax assets in certain foreign jurisdictions that were no longer realizable which resulted in a noncash tax expense of \$0.3 million. This tax expense did not have a significant impact on our results of operations or cash flows for the three and nine months ended September 30, 2013.

### **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 sale of our product lines, and others relate to the uncertainties of global economies, including the availability of credit and the condition of the overall semiconductor equipment industry. Our established cost structure does not vary significantly with changes in volume. We have reduced operating expense to try to achieve profitability towards the lower end of our quarterly revenue swings. We may experience fluctuations in operating results and cash flows depending on these changes in revenue levels.

During the nine-month periods ended September 30, 2013 and 2012, we used \$10.8 million and \$11.4 million, respectively, of cash to support operating activities. The net cash used by operations during the nine months ended September 30, 2013 was predominately driven by the loss from operations excluding non-cash charges for depreciation and amortization and stock based compensation expense, the increase in the accounts receivable, and other assets and liabilities balances, and off-set by the increase in our accounts payable and accrued liability balances. Investing activities included \$1.2 million in cash received for the achievement of a milestone associated with the Lam transaction, which was offset by a \$1.5 million increase in restricted cash. Net financing activities of \$15 million were driven by the \$15 million proceeds from the issuance of our term loan and \$1.1 million of proceeds from the exercise of stock options partially off-set by \$0.8 million of long-term restricted cash related to the loan agreement. These changes resulted in cash and cash equivalents at September 30, 2013 of \$48.3 million, compared to \$45.0 million at December 31, 2012. Cash, cash equivalents and restricted cash were \$50.7 million at September 30, 2013 compared to \$45.1 million at December 31, 2012. Approximately \$22.4 million of cash held at September 30, 2013 was located in foreign jurisdictions.

Effective July 5, 2013, we terminated our revolving credit facility with Silicon Valley Bank, which had provided for borrowings up to \$30.0 million based primarily on accounts receivable. With the termination of this facility, we cash collateralized two letters of credit issued by Silicon Valley Bank in the aggregate amount of \$1.5 million. We paid a \$0.3 million early termination fee to Silicon Valley Bank. On October 31, 2013, we reinstated a new revolving credit facility with Silicon Valley Bank, as discussed in Note 15.

Additionally, on July 5, 2013, we entered into a Business Loan Agreement with Northern Bank & Trust Company which provides for a three year term loan of \$15.0 million, secured by our real estate in Beverly, Massachusetts. \$0.8 million of the loan proceeds are held in a restricted interest reserve escrow account. The Bank will also maintain a reserve on our loan account with the Bank for our quarterly real estate taxes on the mortgaged property. We will use the proceeds of this loan as needed to fund growth, specifically investments in the leading edge Purion ion implant platform, and other working capital and general corporate purposes. This loan bears interest at the rate of 5.5% per annum, with payments of principal beginning August 5, 2014 on a 10 year amortization schedule of the principal on a straight-line basis. Interest is payable monthly beginning on August 5, 2013. All outstanding principal and unpaid interest is due and payable on July 5, 2016. We are required to comply with certain financial covenants under the Business Loan Agreement, as described in Note 10 to the financial statements included in this Form 10-Q.

At September 30, 2013, we were in compliance with the applicable covenants.

We expect that our capital expenditures in the next twelve months will not exceed \$2.5 million.

We believe that based on our current market, revenue, expense and cash flow forecasts, our existing cash and cash equivalents will be sufficient to satisfy our anticipated cash requirements for the short and long-term.

### **Commitments and Contingencies**

Significant commitments and contingencies at September 30, 2013 are consistent with those discussed in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and Note 16 to the consolidated financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2012.

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### **Item 3. Quantitative and Qualitative Disclosures about Market Risk.**

As of September 30, 2013, there have been no material changes to the quantitative information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2012.

### **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 three months ended September 30, 2013 that has materially affected, or is reasonably likely to

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**PART II—OTHER INFORMATION**

**Item 1. Legal Proceedings.**

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

**Item 1A. Risk Factors.**

As of September 30, 2013, 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, 2012.

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

None.

**Item 3. Defaults Upon Senior Securities.**

None.

**Item 4. Mine Safety Disclosures.**

Not Applicable.

**Item 5. Other Information.**

None.

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**Item 6. Exhibits.**

The following exhibits are filed herewith:

<b>Exhibit No</b>	<b>Description</b>
3.1	Amended and Restated Certificate of Incorporation of the Company adopted May 6, 2009. 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 quarterly period ended June 30, 2007, filed with the Commission on August 9, 2007.
10.1	Business Loan Agreement dated as of July 5, 2013 between the Company and Northern Bank & Trust Company. Incorporated by reference to Exhibit 10.1 to the Company's report on Form 10-Q filed with the Commission on August 2, 2013.
10.2	Mortgage and Fixture Filing dated as of July 5, 2013 by the Company in favor of Northern Bank & Trust Company. Incorporated by reference to Exhibit 10.2 to the Company's report on Form 10-Q filed with the Commission on August 2, 2013.
10.3	Executive Separation Agreement between the Company and Jay Zager dated as of July 17, 2013. Incorporated by reference to Exhibit 10.1 to the Company's report on Form 8-K filed with the Commission on August 2, 2013.
10.4	Loan and Security Agreement dated as of October 31, 2013 between the Company and Silicon Valley Bank. Filed herewith.
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 November 8, 2013. 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 November 8, 2013. 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 November 8, 2013. 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 November 8, 2013. Filed herewith.





## LOAN AND SECURITY AGREEMENT

This **LOAN AND SECURITY AGREEMENT** (this “**Agreement**”) dated as the Effective Date between **SILICON VALLEY BANK**, a California corporation, with its principal place of business at 3003 Tasman Drive, Santa Clara, California 95054 and with a loan production office located at 275 Grove Street, Suite 2-200, Newton, Massachusetts 02466 (“**Bank**”), and **AXCELIS TECHNOLOGIES, INC.**, a Delaware corporation with offices located at 108 Cherry Hill Drive, Beverly, Massachusetts 01915 (“**Borrower**”), provides the terms on which Bank shall lend to Borrower and Borrower shall repay Bank. The parties agree as follows:

### 1 **ACCOUNTING AND OTHER TERMS**

Accounting terms not defined in this Agreement shall be construed following GAAP. Calculations and determinations must be made following GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein.

### 2 **LOAN AND TERMS OF PAYMENT**

**2.1 Promise to Pay.** Borrower hereby unconditionally promises to pay Bank the outstanding principal amount of all Credit Extensions and accrued and unpaid interest thereon as and when due in accordance with this Agreement.

#### **2.1.1 Revolving Advances.**

(a) **Availability.** Subject to the terms and conditions of this Agreement and to deduction of Reserves, Bank shall make Advances not exceeding the Availability Amount. Amounts borrowed under the Revolving Line may be repaid and, prior to the Revolving Line Maturity Date, reborrowed, subject to the applicable terms and conditions precedent herein.

(b) **Termination; Repayment.** The Revolving Line terminates on the Revolving Line Maturity Date, when the principal amount of all Advances, the unpaid interest thereon, and all other Obligations relating to the Revolving Line shall be immediately due and payable.

**2.2 Overadvances.** If, at any time, (i) the sum of (a) the outstanding principal amount of any Advances, plus (b) the Bank Services Reserve, exceeds (ii) the lesser of either the Revolving Line or the Borrowing Base (the amount by which (i) exceeds (ii) being an “**Overadvance**”), Borrower shall immediately pay to Bank in cash such Overadvance. Without limiting Borrower’s obligation to repay Bank any amount of the Overadvance, Borrower agrees to pay Bank interest on the outstanding amount of any Overadvance, on demand, at the Default Rate.

#### **2.3 Payment of Interest on the Credit Extensions.**

(a) **Advances.** Subject to Section 2.3(b), the principal amount outstanding under the Revolving Line shall accrue interest at a floating per annum rate equal to one percentage point (1.0%) above the Prime Rate, which interest shall be payable monthly in accordance with Section 2.3(f) below.

(b) **Default Rate.** Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall bear interest at a rate per annum which is three and one half of one percentage points (3.50%) above the rate that is otherwise applicable thereto (the “**Default Rate**”). Fees and expenses which are required to be paid by Borrower pursuant to the Loan Documents (including, without limitation, Bank Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to

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timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Bank.

(c) **Computation of Interest.** Interest on the Credit Extensions and all fees payable hereunder shall be computed on the basis of a 360-day year and the actual number of days elapsed in the period during which such interest accrues. In computing interest on any Credit Extension, the date of the making of such Credit Extension shall be included and the date of payment shall be excluded; provided, however, that if any Credit Extension is repaid on the same day on which it is made, such day shall be included in computing interest on such Credit Extension. Interest shall also be paid on the date of any prepayment of any Credit Extension pursuant to this Agreement for the portion of any Credit Extension so prepaid and upon payment (including prepayment) in full thereof. All accrued but unpaid interest on the Credit Extensions shall be due and payable on the Revolving Line Maturity Date.

(d) **Adjustment to Interest Rate.** Changes to the interest rate of any Credit Extension based on changes to the Prime Rate shall be effective on the effective date of any change to the Prime Rate and to the extent of any such change. Bank shall use its best efforts to give Borrower prompt notice of any such change in the Prime Rate; provided, however, that any failure by Bank to provide Borrower with notice hereunder shall not affect Bank’s right to make changes in the interest rate of the Prime Rate Credit Extensions based on changes in the Prime Rate.

(e) **Debit of Accounts.** Bank may debit any of Borrower’s deposit accounts, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes Bank when due. These debits shall not constitute a set-off.

(f) **Payments.** Unless otherwise provided, interest is payable monthly in arrears on the first (1<sup>st</sup>) calendar day of each month. Payments of principal and/or interest received after 12:00 p.m. Eastern time are considered received at the opening of business on the next Business Day. When any payment is due on a day that is not a Business Day, the payment shall be due the next Business Day and all fees or interest, as applicable, shall continue to accrue until paid.

(g) **Application of Payments.** Subject to Section 6.3(c), Bank shall apply the whole or any part of collected funds against the Revolving Line or credit such collected funds to a depository account of Borrower with Bank (or an account maintained by an Affiliate of Bank), the order and method of such application to be in the sole discretion of Bank. Borrower shall have no right to specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement.

2.4 **Fees.** Borrower shall pay to Bank:

(a) **Commitment Fee.** A fully earned, non refundable commitment fee of Fifty Thousand Dollars (\$50,000.00) on the Effective Date; and

(b) **Termination Fee.** In accordance with the terms of Section 12.1, a termination fee; and

(c) **Unused Revolving Line Facility Fee.** A fee (the “**Unused Revolving Line Facility Fee**”), payable monthly, in arrears, on a calendar year basis, in an amount per annum equal to the Unused Line Fee Percentage of the average unused portion of the Revolving Line, as reasonably determined by Bank. Borrower shall not be entitled to any credit, rebate or repayment of any Unused Revolving Line Facility Fee previously earned by Bank pursuant to this Section notwithstanding any termination of the Agreement, or suspension or termination of Bank’s obligation to make loans and advances hereunder; and

(d) **Bank Expenses.** All Bank Expenses (including reasonable attorneys’ fees and expenses, plus expenses, for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

2.5 **Withholding.** Payments received by Bank from Borrower hereunder will be made free and clear of any withholding taxes. Specifically, however, if at any time any governmental authority, applicable law, regulation or international agreement requires Borrower to make any such withholding or deduction from any such

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payment or other sum payment hereunder to Bank, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, Bank receives a net sum equal to the sum which it would have received had no withholding or deduction been required and Borrower shall pay the full amount withheld or deducted to the relevant governmental authority. Borrower will, upon request, furnish Bank with proof satisfactory to Bank indicating that Borrower has made such withholding payment provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings and as to which payment in full is bonded or reserved against by Borrower. If Borrower’s compliance with this Section 2.5 results in Bank receiving more than it would have received had no withholding or deduction been required, Bank shall promptly refund such excess amount to Borrower. The agreements and obligations of Borrower contained in this Section 2.5 shall survive the termination of this Agreement.

### 3 **CONDITIONS OF LOANS**

3.1 **Conditions Precedent to Initial Credit Extension.** Bank’s obligation to make the initial Credit Extension is subject to the condition precedent that Borrower shall consent to or have delivered, in form and substance satisfactory to Bank, such documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate, including, without limitation:

(a) duly executed original signatures to the Loan Documents;

(b) duly executed original signatures to the Control Agreements for Collateral Accounts to the extent required under 6.8(b);

(c) the Operating Documents and long-form good standing certificates of Borrower and each of its Domestic Subsidiaries certified by the Secretary of State (or equivalent agency) of Borrower’s and such Domestic Subsidiaries’ jurisdiction of organization or formation and each jurisdiction in which Borrower and such Domestic Subsidiary is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(d) completed Borrowing Resolutions for Borrower;

(e) an Intercreditor Agreement by Real Estate Creditor in favor of Bank, together with the duly executed original signatures thereto;

(f) certified copies, dated as of a recent date, of financing statement searches, as Bank shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(g) the Perfection Certificates executed by Borrower and each Guarantor;

(h) a legal opinion of Borrower’s counsel dated as of the Effective Date together with the duly executed original signature thereto;

(i) the duly executed original signatures to the Guaranty and Guarantor Security Agreement from each Guarantor, together with the duly executed original signatures to the completed Borrowing Resolutions for Guarantor; and

(j) payment of the fees and Bank Expenses then due as specified in Section 2.4 hereof.

3.2 **Conditions Precedent to all Credit Extensions.** Bank’s obligations to make each Credit Extension, including the initial Credit Extension, is subject to the following:

(a) timely receipt of a completed and executed Transaction Report; and

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(b) the representations and warranties in Section 5 shall be true, accurate and complete in all material respects on the date of the Transaction Report and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Default or Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower’s representation and warranty on that date that the representations

and warranties in Section 5 remain true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; and

(c) as determined in Bank's reasonable business judgment, there has not been a Material Adverse Change.

**3.3 Covenant to Deliver.** Borrower agrees to deliver to Bank each item required to be delivered to Bank under this Agreement as a condition to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in Bank's sole discretion.

**3.4 Procedures for Borrowing.** Subject to the prior satisfaction of all other applicable conditions to the making of an Advance set forth in this Agreement, to obtain an Advance, Borrower shall notify Bank (which notice shall be irrevocable) by electronic mail by 12:00 p.m. Eastern time on the Funding Date of the Advance. In connection with such notification, Borrower must promptly deliver to Bank by electronic mail a completed Transaction Report executed by an authorized signer together with such other reports and information, including without limitation, sales journals, cash receipts journals, accounts receivable aging reports, as Bank may request in its sole discretion. Bank shall credit proceeds of an Advance to the Designated Deposit Account. Bank may make Advances under this Agreement based on instructions from an authorized signer or without instructions if the Advances are necessary to meet Obligations which have become due.

## **4 CREATION OF SECURITY INTEREST**

**4.1 Grant of Security Interest.** Borrower hereby grants Bank, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Bank, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that may have superior priority to Bank's Lien under this Agreement). If Borrower shall acquire a commercial tort claim, Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof and upon request of Bank grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank.

Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations in cash. Upon payment in full in cash of the Obligations (except for contingent indemnification obligations for which no claim has been made) and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall, at Borrower's sole cost and expense, release its Liens in the Collateral and all rights therein shall revert to Borrower.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that may have superior priority to Bank's Lien in this Agreement). In the event (a) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (b) this Agreement is terminated, Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment for Bank Services,

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if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then at least one hundred five percent (105.0%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then at least one hundred ten percent (110.0%), of the Dollar Equivalent of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its business judgment), to secure all of the Obligations relating to such Letters of Credit.

**4.2 Authorization to File Financing Statements.** Borrower hereby authorizes Bank to file financing statements, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Bank's interest or rights hereunder, including a notice that any disposition of the Collateral except as permitted by the terms of this Agreement, by either Borrower or any other Person, shall be deemed to violate the rights of Bank under the Code. Such financing statements may indicate the Collateral as "all assets of the Debtor" or words of similar effect, or as being of an equal or lesser scope, or with greater detail, all in Bank's discretion, provided that such financing statements shall acknowledge the rights of SEN under the SEN License.

## **5 REPRESENTATIONS AND WARRANTIES**

Borrower represents and warrants as follows:

**5.1 Due Organization, Authorization; Power and Authority.** Borrower and each of its Domestic Subsidiaries is validly existing and in good standing as a Registered Organization in its jurisdiction of formation and is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its business or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a material adverse effect on Borrower's business. In connection with this Agreement, Borrower has delivered to Bank completed certificates each signed by Borrower and Guarantor, respectively, entitled "Perfection Certificate". Borrower represents and warrants to Bank that (a) Borrower's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof; (b) Borrower is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (c) the Perfection Certificate accurately sets forth Borrower's organizational identification number or accurately states that Borrower has none; (d) the Perfection Certificate accurately sets forth Borrower's place of business, or, if more than one, its chief executive office as well as Borrower's mailing address (if different than its chief executive office); (e) Borrower (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificate pertaining to Borrower and each of its Subsidiaries is accurate and complete (it being understood and agreed that Borrower may from time to time update certain information in the Perfection Certificate after the Effective Date to the extent permitted by one or more specific provisions in this Agreement). If Borrower is not now a Registered Organization but later becomes one, Borrower shall promptly notify Bank of such occurrence and provide Bank with Borrower's organizational identification number.

The execution, delivery and performance by Borrower of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by

which Borrower or any of its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect) or (v) constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a material adverse effect on Borrower's business.

**5.2 Collateral.** Borrower has good title to, rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens. Borrower has no Collateral Accounts other than (a) Collateral Accounts with Bank, (b) the Exempted Real Estate Creditor Accounts, (c) the Other Permitted Accounts and (d) the other Collateral Accounts, if any, described in the Perfection Certificate delivered to Bank in connection herewith and in which Borrower has given Bank notice and taken such actions as are necessary to give Bank a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

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The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate. None of the components of the Collateral shall be maintained at locations other than as provided in the Perfection Certificate or as permitted pursuant to Section 7.2. Borrower shall at all times during the term of this Agreement maintain at least two-thirds of its Inventory (based upon the fair market value of all Inventory) at Borrower's 108 Cherry Hill Drive, Beverly, Massachusetts location and at other locations of the Borrower for which Bank has received a landlord's consent or a bailee waiver in form and substance reasonably satisfactory to Bank.

All Inventory is in all material respects of good and marketable quality, free from material defects.

Borrower is the sole owner of the intellectual property which Borrower owns or purports to own, including, without limitation, the intellectual property set forth on the Perfection Certificate, except for non-exclusive licenses granted to its customers in the ordinary course of business. Each patent which Borrower owns or purports to own is valid and enforceable and no part of the intellectual property has been judged invalid or unenforceable, in whole or in part, and to the best of Borrower's knowledge, no claim has been made that any part of the intellectual property violates the rights of any third party.

Except as noted on the Perfection Certificate, Borrower is not a party to, nor is it bound by, any Restricted License.

**5.3 Accounts Receivable; Inventory.**

(a) For each Account with respect to which Advances are requested, on the date each Advance is requested and made, such Account shall be an Eligible Account.

(b) All statements made and all unpaid balances appearing in all invoices, instruments and other documents evidencing the Eligible Accounts are and shall be true and correct and all such invoices, instruments and other documents, and all of Borrower's Books are genuine and in all respects what they purport to be. Whether or not an Event of Default has occurred and is continuing, Bank may notify any Account Debtor owing Borrower money of Bank's security interest in such funds. All sales and other transactions underlying or giving rise to each Eligible Account shall comply in all material respects with all applicable laws and governmental rules and regulations. Borrower has no knowledge of any actual or imminent Insolvency Proceeding of any Account Debtor whose accounts are Eligible Accounts in any Transaction Report. To the best of Borrower's knowledge, all signatures and endorsements on all documents, instruments, and agreements relating to all Eligible Accounts are genuine, and all such documents, instruments and agreements are legally enforceable in accordance with their terms.

(c) For any item of Inventory, such Inventory (i) meets all applicable governmental standards; (ii) has been manufactured in compliance with the Fair Labor Standards Act; and (iii) is not subject to any Liens, except the first priority Liens granted in favor of Bank under this Agreement or any of the other Loan Documents or Permitted Liens. At least two thirds of such Inventory (based on the fair market value of all Inventory) is located at (A) the Headquarters Location which is owned by Borrower, provided that Bank is permitted access thereto pursuant to an intercreditor agreement with Real Estate Creditor so long as the Real Estate Debt is outstanding, (B) Borrower's 75 Sylvan Street, Danvers, Massachusetts location provided that Bank has received a landlord waiver for such location in form and substance reasonably satisfactory to Bank, or (C) at McCollisters United's location at 29B Concord Street, Reading, Massachusetts provided that Bank has received a bailee's waiver for such location in form and substance reasonably satisfactory to Bank.

**5.4 Litigation.** There are no actions or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than, individually or in the aggregate, One Million Dollars (\$1,000,000) or that would reasonably be expected to have a material adverse effect on Borrower's business.

**5.5 No Material Deviation in Financial Statements.** All consolidated financial statements for Borrower and any of its Subsidiaries delivered to Bank fairly present in all material respects Borrower's consolidated financial condition and Borrower's consolidated results of operations. There has not been any material deterioration in Borrower's consolidated financial condition since the date of the most recent financial statements submitted to Bank.

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**5.6 Solvency.** The fair salable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; Borrower is not left with unreasonably small capital after the transactions in this Agreement; and Borrower is able to pay its debts (including trade debts) as they mature.

**5.7 Regulatory Compliance.** Borrower is not an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Borrower is not engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Borrower has not violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a material adverse effect on its business. None of Borrower's or any of its Subsidiaries' properties or assets has been used by Borrower or any Subsidiary or, to the best of Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than legally. Borrower and each of its Subsidiaries have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Government Authorities that are necessary to continue their respective businesses as

currently conducted except where the failure to make such declarations, notices or filings could not reasonably be expected to have a material adverse effect on Borrower's business.

**5.8 Subsidiaries; Investments.** Borrower does not own any stock, partnership interest or other equity securities except for Permitted Investments.

**5.9 Tax Returns and Payments; Pension Contributions.** Borrower and its Subsidiaries have timely filed all required tax returns and reports, and have timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower or such Subsidiary. Borrower may defer payment of any contested taxes, provided that Borrower (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Bank in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the governmental authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "Permitted Lien". Borrower is unaware of any claims or adjustments proposed for any of Borrower's prior tax years which could result in additional taxes becoming due and payable by Borrower. Borrower has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and Borrower has not withdrawn from participation in, and has not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

**5.10 Use of Proceeds.** Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements and not for personal, family, household or agricultural purposes.

**5.11 Full Disclosure.** No written representation, warranty or other statement of Borrower in any certificate or written statement given to Bank, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Bank, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

## **6 AFFIRMATIVE COVENANTS**

Borrower shall do all of the following:

### **6.1 Government Compliance.**

(a) Subject to Sections 7.2 and 7.3, maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the

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failure to so qualify would reasonably be expected to have a material adverse effect on Borrower's business. Borrower shall comply, and have each Subsidiary comply, with all laws, ordinances and regulations to which it is subject, noncompliance with which could have a material adverse effect on Borrower's business.

(b) Obtain all of the Governmental Approvals necessary for the performance by Borrower of its obligations under the Loan Documents to which it is a party and the grant of a security interest to Bank in all of its property. Borrower shall promptly provide copies of any such obtained Governmental Approvals to Bank.

### **6.2 Financial Statements, Reports, Certificates.**

(a) Borrower shall provide Bank with the following:

(i) upon each request for a Credit Extension, and within thirty (30) days after the end of each month in which Obligations under the Revolving Line were at any time outstanding, a Transaction Report (and any schedules related thereto including, but not limited to, a schedule of any litigation of the type described in Section 5.4 which may arise or be threatened from and after the Effective Date);

(ii) within thirty (30) days after the end of each month, (A) monthly accounts receivable agings, aged by invoice date, (B) monthly accounts payable agings, aged by invoice date, and outstanding or held check registers, if any, (C) monthly reconciliations of accounts receivable agings for accounts under this Agreement (aged by invoice date), transaction reports and general ledger, and (D) monthly inventory reports for Inventory valued on a first-in, first-out basis at the lower of cost or market (in accordance with GAAP), Inventory backlog reports, or such other inventory reports as are requested by Bank in its good faith business judgment;

(iii) within (A) thirty (30) days after the last day of each month (other than a month ending on the last day of a fiscal quarter of Borrower), and (B) forty-five (45) days after the last day of each month ending on the last day of a fiscal quarter of Borrower, a Compliance Certificate signed by a Responsible Officer, certifying that as of the end of such month, Borrower was in full compliance with all of the terms and conditions of this Agreement, and setting forth calculations showing compliance with the financial covenants set forth in this Agreement and such other information as Bank shall reasonably request, including, without limitation, a statement that at the end of such month there were no held checks;

(iv) as soon as available, and in any event within (A) thirty (30) days after the last day of each month (other than a month ending on the last day of a fiscal quarter of Borrower), and (B) forty-five (45) days after the last day of each month ending on the last day of a fiscal quarter of Borrower, unaudited financial statements with respect to such month, prepared on a consolidated and consolidating basis, in a form reasonably satisfactory to Bank;

(v) within sixty (60) days after the end of each fiscal year of Borrower, (A) annual operating budgets (including income statements, balance sheets and cash flow statements, by quarter) for the then current fiscal year of Borrower, and (B) annual financial projections for the then current fiscal year (on a quarterly basis) as approved by Borrower's board of directors, together with any related

business forecasts used in the preparation of such annual financial projections, all prepared on a consolidated and consolidating basis in a form reasonably satisfactory to Bank;

(vi) as soon as available, and in any event within one hundred twenty (120) days following the end of Borrower's fiscal year, annual financial statements prepared on a consolidated and consolidating basis in a form reasonably satisfactory to Bank, certified by, and with an unqualified opinion of, independent certified public accountants acceptable to Bank;

(vii) within five (5) days of delivery, copies of all statements, reports and notices made available to Borrower's security holders or to any holders of Subordinated Debt (which if

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filed with the Securities and Exchange Commission may be provided by a link thereto on Borrower's or another website on the Internet); and

(viii) prompt report of any legal actions pending or threatened in writing against Borrower or any of its Subsidiaries that could result in damages or costs to Borrower or any of its Subsidiaries of, individually or in the aggregate, One Million Dollars (\$1,000,000) or more;

(b) within ten (10) days after filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission or a link thereto on Borrower's or another website on the Internet; and

(c) with the monthly reporting provided pursuant to Section 6.2(a)(ii) above, written notice of (i) any material change in the composition of the intellectual property, (ii) the registration of any copyright (including any subsequent ownership right of Borrower in or to any copyright), patent or trademark not previously disclosed to Bank, or (iii) Borrower's knowledge of an event that materially adversely affects the value of the intellectual property.

### **6.3 Accounts Receivable.**

(a) Schedules and Documents Relating to Accounts. Borrower shall deliver to Bank Transaction Reports, as provided in Section 6.2, on Bank's standard forms; provided, however, that Borrower's failure to execute and deliver the same shall not affect or limit Bank's Lien and other rights in all of Borrower's Accounts, nor shall Bank's failure to advance or lend against a specific Account affect or limit Bank's Lien and other rights therein. If requested by Bank, Borrower shall furnish Bank with copies (or, at Bank's request, originals) of all contracts, orders, invoices, and other similar documents, and all shipping instructions, delivery receipts, bills of lading, and other evidence of delivery, for any goods the sale or disposition of which gave rise to such Accounts. In addition, Borrower shall deliver to Bank, on its request, the originals of all instruments, chattel paper, security agreements, guarantees and other documents and property evidencing or securing any Accounts, in the same form as received, with all necessary endorsements, and copies of all credit memos.

(b) Disputes. Borrower shall promptly notify Bank of all disputes or claims relating to material Accounts. Borrower may forgive (completely or partially), compromise, or settle any Account for less than payment in full, or agree to do any of the foregoing so long as (i) Borrower does so in good faith, in a commercially reasonable manner, in the ordinary course of business, in arm's-length transactions, and reports the same to Bank in the regular reports provided to Bank; (ii) no Default or Event of Default has occurred and is continuing; and (iii) after taking into account all such discounts, settlements and forgiveness, the total outstanding Advances will not exceed the Availability Amount.

(c) Collection of Accounts. Borrower shall have the right to collect all Accounts, unless and until a Default or an Event of Default has occurred and is continuing. Whether or not an Event of Default has occurred and is continuing, Borrower shall hold all payments on, and proceeds of, Accounts in trust for Bank, and Borrower shall immediately deliver all such payments and proceeds to Bank in their original form, duly endorsed, to be applied to the Obligations pursuant to the terms of Section 9.4 hereof. All payments on, and proceeds of, Accounts shall be deposited directly by the applicable Account Debtor into a lockbox account, or such other "blocked account" as Bank may specify, pursuant to a blocked account agreement in form and substance reasonably satisfactory to Bank in its sole discretion. Whether or not an Event of Default has occurred and is continuing, Borrower shall immediately deliver all payments on and proceeds of Accounts to an account maintained with Bank to be applied (i) prior to an Event of Default, to the Revolving Line pursuant to the terms of Section 2.3(f) hereof, and (ii) after the occurrence and during the continuance of an Event of Default, pursuant to the terms of Section 9.4 hereof.

(d) Returns. Provided no Event of Default has occurred and is continuing, if any Account Debtor returns any Inventory to Borrower, Borrower shall promptly (i) determine the reason for such return, (ii) issue a credit memorandum to the Account Debtor in the appropriate amount, and (iii) provide a copy of such credit memorandum to Bank, upon request from Bank. In the event any attempted return occurs after the occurrence and during the continuance of any Event of Default, Borrower shall hold the returned Inventory in trust for Bank, and immediately notify Bank of the return of the Inventory.

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(e) Verification. Bank may, from time to time, verify directly with the respective Account Debtors the validity, amount and other matters relating to the Accounts, either in the name of Borrower or Bank or such other name as Bank may choose.

(f) No Liability. Bank shall not be responsible or liable for any shortage or discrepancy in, damage to, or loss or destruction of, any goods, the sale or other disposition of which gives rise to an Account, or for any error, act, omission, or delay of any kind occurring in the settlement, failure to settle, collection or failure to collect any Account, or for settling any Account in good faith for less than the full amount thereof, nor shall Bank be deemed to be responsible for any of Borrower's obligations under any contract or agreement giving rise to an Account. Nothing herein shall, however, relieve Bank from liability for its own gross negligence or willful misconduct.

**6.4 Remittance of Proceeds.** Except as otherwise provided in Section 6.3(c), deliver, in kind, all proceeds arising from the disposition of any Collateral to Bank in the original form in which received by Borrower not later than the following Business Day after receipt by Borrower, to be applied to the Obligations pursuant to the terms of Section 9.4 hereof; provided that, if no Default or Event of Default has occurred and is continuing, Borrower shall not be obligated to remit to Bank the proceeds of the sale of worn out or obsolete Equipment disposed of by Borrower in good faith in an arm's length transaction for an aggregate purchase price of Five Hundred Thousand Dollars (\$500,000.00) or less (for all such transactions in any fiscal year). Borrower agrees that it will not commingle proceeds of Collateral with any of Borrower's other funds or property, but will hold such proceeds separate and apart from such other

funds and property and in an express trust for Bank. Nothing in this Section 6.4 limits the restrictions on disposition of Collateral set forth elsewhere in this Agreement.

**6.5 Taxes; Pensions.** Timely file, and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower and each of its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.9 hereof, and shall deliver to Bank, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

**6.6 Access to Collateral; Books and Records.** Upon reasonable notice (provided no notice is required if an Event of Default has occurred and is continuing), Bank, or its agents, shall have the right, with such frequency as Bank shall determine necessary in its sole discretion, to inspect the Collateral and the right to audit and copy Borrower's Books. The foregoing inspections and audits shall be at Borrower's expense, and the charge therefor shall be \$850 per person per day (or such higher amount as shall represent Bank's then-current standard charge for the same), plus reasonable out-of-pocket expenses; provided, however, that Bank shall conduct no more than one (1) such audit per fiscal year at Borrower's expense in the event no Event of Default has occurred and is continuing. In the event Borrower and Bank mutually agree on a scheduled audit date, and Borrower cancels or seeks to or reschedules the audit with less than ten (10) days written notice to Bank, then (without limiting any of Bank's rights or remedies), Borrower shall pay Bank a fee of \$1,000 plus any out-of-pocket expenses incurred by Bank to compensate Bank for the anticipated costs and expenses of the cancellation or rescheduling.

**6.7 Insurance.** Keep its business and the Collateral insured for risks and in amounts standard for companies in Borrower's industry and location and as Bank may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Bank. All property policies shall have a loss payable endorsement showing Bank as loss payee and waive subrogation against Bank, and all liability policies shall show, or have endorsements showing, Bank as an additional insured. All policies (or the loss payable and additional insured endorsements) shall provide that the insurer shall endeavor to give Bank at least twenty (20) days notice before canceling, amending, or declining to renew its policy. At Bank's request, Borrower shall deliver certificates of insurance and/or copies of policies and evidence of all premium payments. Proceeds payable under any property policy shall, at Bank's option, be payable to Bank on account of the Obligations. Notwithstanding the foregoing, (a)(x) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to One Hundred Thousand Dollars (\$100,000.00) with respect to any loss, but not exceeding Two Hundred Fifty Thousand Dollars (\$250,000.00) in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Bank has been granted a first priority security interest, and

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(b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Bank, be payable to Bank on account of the Obligations. If Borrower fails to obtain insurance as required under this Section 6.7 or to pay any amount or furnish any required proof of payment to third persons and Bank, Bank may make all or part of such payment or obtain such insurance policies required in this Section 6.7, and take any action under the policies Bank deems prudent.

**6.8 Operating Accounts.**

(a) Maintain all of Borrower's and its Subsidiaries' operating accounts, disbursement accounts, and other deposit accounts and securities accounts in the United States with Bank and Bank's Affiliates, except for the Additional Permitted Accounts.

(b) Provide Bank five (5) days prior written notice before establishing any Collateral Account within the United States at or with any bank or financial institution other than Bank or Bank's Affiliates. For each Collateral Account located within the United States that Borrower at any time maintains, other than the Exempted Real Estate Creditor Accounts and Other Permitted Accounts, Borrower shall cause the applicable bank or financial institution (other than Bank) at or with which any such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder which Control Agreement may not be terminated without the prior written consent of Bank. The provisions of the previous sentence shall not apply to (i) deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such, or (ii) deposit or investment accounts maintained at Bank.

**6.9 Financial Covenants.**

(a) Adjusted Quick Ratio. Borrower and its Subsidiaries, on a consolidated basis, shall maintain at all times, to be tested as of the last day of each month, a ratio of (i) Quick Assets to (ii) (A) Current Liabilities (excluding the Real Estate Debt), minus (B) Deferred Revenue, of at least 1.5:1.0.

(b) Minimum Adjusted Net Income. Borrower and its Subsidiaries, on a consolidated basis, shall achieve Adjusted Net Income of at least (i) (\$1,500,000) for the trailing three (3) month period ending on the last day of the fiscal quarter ending September 30, 2013; (ii) \$1.00 for the trailing three (3) month period ending on the last day of the fiscal quarter ending December 31, 2013; and (iii) \$2,500,000 for the trailing six month period ending on (A) the last day of the fiscal quarter ending March 31, 2014, and (B) the last day of each fiscal quarter thereafter.

**6.10 Protection and Registration of Intellectual Property Rights.** Borrower shall: (i) protect, defend and maintain the validity and enforceability of its material intellectual property; (ii) promptly advise Bank in writing of material infringements of its intellectual property; and (iii) not allow any intellectual property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Bank's written consent. If Borrower (A) obtains any patent, registered trademark or servicemark, registered copyright, registered mask work, or any pending application for any of the foregoing, whether as owner, licensee or otherwise, or (B) applies for any patent or the registration of any trademark or servicemark, then Borrower shall provide written notice thereof to Bank on a quarterly basis upon the delivery of the Compliance Certificate for such period, and shall execute such intellectual property security agreements and other documents and take such other actions as Bank shall request in its good faith business judgment to perfect and maintain a first priority perfected security interest in favor of Bank in such property. If Borrower decides to register any copyrights or mask works in the United States Copyright Office, Borrower shall: (x) provide Bank with at least fifteen (15) days prior written notice of Borrower's intent to register such copyrights or mask works together with a copy of the application it intends to file with the United States Copyright Office (excluding exhibits thereto); (y) execute an intellectual property security agreement and such other documents and take such other actions as Bank may request in its good faith business judgment to perfect and maintain a first priority perfected security interest in favor of Bank in the copyrights or mask works intended to be registered with the United States Copyright Office; and (z) record such intellectual property security agreement with the United States Copyright Office contemporaneously with filing the copyright or mask work application(s) with the United States Copyright Office. Upon Bank's request, Borrower shall



promptly provide to Bank copies of all applications that it files for patents or for the registration of trademarks, servicemarks, copyrights or mask works, together with evidence of the recording of the intellectual

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property security agreement necessary for Bank to perfect and maintain a first priority perfected security interest in such property. Provide written notice to Bank within thirty (30) days of entering or becoming bound by any Restricted License (other than over-the-counter software that is commercially available to the public). Except with respect to the SEN License, Borrower shall take such steps as Bank requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (i) any Restricted License to be deemed "Collateral" and for Bank to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, whether now existing or entered into in the future, and (ii) Bank to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with Bank's rights and remedies under this Agreement and the other Loan Documents.

Bank acknowledges the terms and conditions of the license granted to SEN Corporation under the SEN License, which license is a Permitted Lien. Bank agrees that notwithstanding anything to the contrary contained in the Loan Documents, Bank's security interest under the IP Security Agreement is and shall be at all times subject to the rights, title and interest granted to SEN Corporation under the SEN License, and no exercise of remedies by Bank under the Loan Documents, and no enforcement of Bank's rights with respect to such intellectual property (including without limitation, any foreclosure, strict foreclosure or deed in lieu of foreclosure) shall terminate, modify, alter or extinguish the license granted to SEN Corporation under the terms of the SEN License. These provisions shall be for the benefit of and may be relied on by SEN Corporation and its successors and assigns.

**6.11 Litigation Cooperation.** From the date hereof and continuing through the termination of this Agreement, make available to Bank, without expense to Bank, Borrower and its officers, employees and agents and Borrower's books and records, to the extent that Bank may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

**6.12 Further Assurances.** Execute any further instruments and take further action as Bank reasonably requests to perfect or continue Bank's Lien in the Collateral or to effect the purposes of this Agreement. Deliver to Bank, within five (5) days after the same are sent or received, copies of all correspondence, reports, documents and other filings with any Governmental Authority regarding compliance with or maintenance of Governmental Approvals or Requirements of Law that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals or otherwise on the operations of Borrower or any of its Subsidiaries.

**6.13 Designated Senior Indebtedness.** Borrower shall designate all principal of, interest (including all interest accruing after the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding), and all fees, costs, expenses and other amounts accrued or due under this Agreement as "Designated Senior Indebtedness", or such similar term, in any future Subordinated Debt incurred by Borrower after the date hereof.

**6.14 Creation/Acquisition of Subsidiaries.** Notwithstanding and without limiting the negative covenant contained in Section 7.3 hereof, in the event Borrower or any Subsidiary creates or acquires any Subsidiary (other than through Transfers of equity interests in an existing Subsidiary from another Subsidiary to Borrower or a Guarantor), Borrower and such Subsidiary shall promptly notify Bank of the creation or acquisition of such new Subsidiary and, at Bank's request, in its sole discretion, take all such action as may be reasonably required by Bank to cause each such Subsidiary to, in Bank's sole discretion, become a co-Borrower or Guarantor under the Loan Documents and grant a continuing pledge and security interest in and to the assets of such Subsidiary (substantially as described on Exhibit A hereto); and Borrower or the applicable Guarantor shall grant and pledge to Bank a perfected security interest in the stock, units or other evidence of ownership of each Subsidiary under the terms set forth in the Pledge Agreement.

**6.15 Post-Closing Conditions.** Borrower shall deliver to Bank, in form and substance satisfactory to Bank in its sole discretion: (a) within thirty (30) days following the Effective Date: (i) a landlord's consent in favor of Bank for Borrower's leased location at 75 Sylvan Street, Danvers, MA 01923, together with the duly executed original signatures thereto; (ii) a bailee's waiver in favor of Bank with respect to Collateral maintained with McCollisters United at 29B Concord Street, Reading, MA 01864, together with the duly executed original signatures thereto; and (iii) evidence satisfactory to Bank that the insurance policies required by Section 6.7 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Bank, (b) within five (5) Business Days following the Effective Date, original stock

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certificates for each Subsidiary set forth in an exhibit to any Pledge Agreement, together with five (5) blank stock powers for each such stock certificate, (c) on or prior to December 31, 2013, evidence that the Corporate Restructuring Event has occurred, and (d) on or prior to the occurrence of the Corporate Restructuring Event (but no later than December 31, 2013), an Amended and Restated Pledge Agreement from Borrower.

## **7 NEGATIVE COVENANTS**

Borrower shall not do any of the following without Bank's prior written consent:

**7.1 Dispositions.** Convey, sell, lease, transfer or otherwise dispose of (collectively, "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out or obsolete Equipment; (c) in connection with Permitted Liens and Permitted Investments; and (d) of non-exclusive licenses for the use of the property of Borrower or its Subsidiaries in the ordinary course of business.

**7.2 Changes in Business, Management, Ownership, Control, or Business Locations.** (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses currently engaged in by Borrower and such Subsidiary, as applicable, or reasonably related thereto; (b) liquidate or dissolve (other than as permitted pursuant to Section 7.3); or (c) have a material change in executive management (provided that Borrower shall have ninety (90) days to retain a replacement reasonably acceptable to Bank) or permit or suffer any Change in Control. Borrower shall not, without at least thirty (30) days prior written notice to Bank: (1) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than One Million Dollars (\$1,000,000.00) in Borrower's assets or property or Borrower obtains a landlord agreement or bailee agreement in form and substance reasonably satisfactory to Bank), (2) change its jurisdiction of organization, (3) change its organizational structure or type, (4) change its legal name, or (5) change any organizational number (if any) assigned by its jurisdiction of organization.

**7.3 Mergers or Acquisitions.** Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person, except for Permitted Acquisitions. A Subsidiary (other than a Domestic Subsidiary) may merge or consolidate into another Subsidiary or into Borrower, and a Domestic Subsidiary may merge or consolidate into another Domestic Subsidiary or into Borrower.

**7.4 Indebtedness.** Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

**7.5 Encumbrance.** Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Bank) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's intellectual property, except as is otherwise permitted in Section 7.1 hereof and the definition of "Permitted Lien" herein.

**7.6 Maintenance of Collateral Accounts.** Maintain any Collateral Account except pursuant to the terms of Section 6.8(b) hereof.

**7.7 Distributions; Investments.** (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any capital stock provided that (i) Borrower may convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, and (ii) Borrower may pay dividends solely in common stock; or (b) directly or indirectly make any Investment other than Permitted Investments, or permit any of its Subsidiaries to do so.

**7.8 Transactions with Affiliates.** Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower, except for transactions that are in the ordinary course of Borrower's

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business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person.

**7.9 Subordinated Debt.** Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to Bank.

**7.10 Compliance.** Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a material adverse effect on Borrower's business, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

## **8 EVENTS OF DEFAULT**

Any one of the following shall constitute an event of default (an "Event of Default") under this Agreement:

**8.1 Payment Default.** Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) day grace period shall not apply to payments due on the Revolving Line Maturity Date). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

### **8.2 Covenant Default.**

(a) Borrower fails or neglects to perform any obligation in Sections 6.2, 6.4, 6.7, 6.8, 6.9, 6.12, 6.15 or violates any covenant in Section 7; or

(b) Borrower fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

**8.3 Material Adverse Change.** A Material Adverse Change occurs;

**8.4 Attachment; Levy; Restraint on Business.** (a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or of any entity under the control of Borrower (including a Subsidiary) on deposit with Bank or any Bank Affiliate, or (ii) a notice of lien, levy, or assessment is filed against any of Borrower's assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; and (b) (i) any material portion of Borrower's assets is attached, seized, levied on, or comes into possession of a trustee or

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receiver, or (ii) any court order enjoins, restrains, or prevents Borrower from conducting any material part of its business;

**8.5 Insolvency.** (a) Borrower is unable to pay its debts (including trade debts) as they become due or otherwise becomes insolvent; (b) Borrower begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while any of the conditions described in clause (a) exist and/or until any Insolvency Proceeding is dismissed);

**8.6 Other Agreements.** There is a default in any agreement to which Borrower or any Guarantor is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Thousand Dollars (\$500,000.00) or that could have a material adverse effect on Borrower's or any Guarantor's business.

**8.7 Judgments.** One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars (\$500,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order, or decree);

**8.8 Misrepresentations.** Borrower or any Person acting for Borrower makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Bank or to induce Bank to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

**8.9 Subordinated Debt.** A default or breach occurs under any agreement between Borrower and any creditor of Borrower that signed a subordination, intercreditor, or other similar agreement with Bank, or any creditor that has signed such an agreement with Bank breaches any terms of such agreement;

**8.10 Guaranty; Guarantor Defaults.** (a) Any Guaranty of any Obligations terminates or ceases for any reason to be in full force and effect (other than pursuant to a merger of the applicable Guarantor with and into another Guarantor or into Borrower as permitted pursuant to Section 7.3); (b) any Guarantor does not perform any obligation or covenant under any Guaranty of the Obligations; (c) any circumstance described in Sections 8.3, 8.4, 8.5, 8.7, or 8.8. occurs with respect to any Guarantor; (d) the liquidation, winding up, or termination of existence of any Guarantor (except as permitted in Section 7.3); (e) the occurrence of any "Event of Default" under (and as defined in) any Guarantor Security Agreement; or (f) the occurrence of any "Event of Default" under (and as defined in) any Pledge Agreement executed and delivered by any Guarantor; or

**8.11 Governmental Approvals.** Any Governmental Approval shall have been (a) revoked, rescinded, suspended, modified in an adverse manner or not renewed in the ordinary course for a full term or (b) subject to any decision by a Governmental Authority that designates a hearing with respect to any applications for renewal of any of such Governmental Approval or that could result in the Governmental Authority taking any of the actions described in clause (a) above, and such decision or such revocation, rescission, suspension, modification or non-renewal (i) has, or could reasonably be expected to have, a Material Adverse Change, or (ii) adversely affects the legal qualifications of Borrower or any of its Subsidiaries to hold such Governmental Approval in any applicable jurisdiction and such revocation, rescission, suspension, modification or non-renewal could reasonably be expected to affect the status of or legal qualifications of Borrower or any of its Subsidiaries to hold any Governmental Approval in any other jurisdiction.

## **9 BANK'S RIGHTS AND REMEDIES**

**9.1 Rights and Remedies.** While an Event of Default occurs and continues Bank may, without notice or demand, do any or all of the following:

(a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Bank);

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(b) stop advancing money or extending credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Bank;

(c) demand that Borrower (i) deposits cash with Bank in an amount equal to the aggregate amount of any Letters of Credit remaining undrawn, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all Letter of Credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit; provided, however, if an Event of Default described in Section 8.5 occurs, the obligation of Borrower to cash collateralize all Letters of Credit remaining undrawn shall automatically become effective without any action by Bank;

(d) terminate any FX Forward Contracts;

(e) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Bank considers advisable, notify any Person owing Borrower money of Bank's security interest in such funds, and verify the amount of such account;

(f) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Bank requests and make it available as Bank designates. Bank may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Bank a license to enter and occupy any of its premises, without charge, to exercise any of Bank's rights or remedies;

(g) apply to the Obligations any (i) balances and deposits of Borrower it holds, or (ii) any amount held by Bank owing to or for the credit or the account of Borrower;

(h) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral. Bank is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section, Borrower's rights under all licenses and all franchise agreements inure to Bank's benefit;

(i) place a "hold" on any account maintained with Bank and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(j) demand and receive possession of Borrower's Books; and

(k) exercise all rights and remedies available to Bank under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

**9.2 Power of Attorney.** Borrower hereby irrevocably appoints Bank as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's name on any checks or other forms of payment or security; (b) sign Borrower's name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Bank determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Bank or a third party as the Code permits. Borrower hereby appoints Bank as its lawful attorney-in-fact to sign Borrower's name on any documents necessary to perfect or continue the perfection of Bank's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations have been satisfied in full (except for contingent indemnification obligations for which no claim has been made) and Bank is under no further obligation to make Credit Extensions hereunder. Bank's foregoing appointment as Borrower's attorney in fact, and all of Bank's rights and powers,

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coupled with an interest, are irrevocable until all Obligations have been fully repaid and performed and Bank's obligation to provide Credit Extensions terminates.

**9.3 Protective Payments.** If Borrower fails to obtain the insurance called for by Section 6.7 or fails to pay any premium thereon or fails to pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document, Bank may obtain such insurance or make such payment, and all amounts so paid by Bank are Bank Expenses and immediately due and payable, bearing interest at the then highest applicable rate, and secured by the Collateral. Bank will make reasonable efforts to provide Borrower with notice of Bank obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Bank are deemed an agreement to make similar payments in the future or Bank's waiver of any Event of Default.

**9.4 Application of Payments and Proceeds.** Borrower shall have no right to specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement. If an Event of Default has occurred and is continuing, Bank may apply any funds in its possession, whether from Borrower account balances, payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations in such order as Bank shall determine in its sole discretion. Any surplus shall be paid to Borrower by credit to the Designated Deposit Account or to other Persons legally entitled thereto; Borrower shall remain liable to Bank for any deficiency. If Bank, in its good faith business judgment, directly or indirectly enters into a deferred payment or other credit transaction with any purchaser at any sale of Collateral, Bank shall have the option, exercisable at any time, of either reducing the Obligations by the principal amount of the purchase price or deferring the reduction of the Obligations until the actual receipt by Bank of cash therefor.

**9.5 Bank's Liability for Collateral.** So long as Bank complies with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Bank, Bank shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

**9.6 No Waiver; Remedies Cumulative.** Bank's failure, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Bank thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by Bank and then is only effective for the specific instance and purpose for which it is given. Bank's rights and remedies under this Agreement and the other Loan Documents are cumulative. Bank has all rights and remedies provided under the Code, by law, or in equity. Bank's exercise of one right or remedy is not an election, and Bank's waiver of any Event of Default is not a continuing waiver. Bank's delay in exercising any remedy is not a waiver, election, or acquiescence.

**9.7 Demand Waiver.** Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Bank on which Borrower is liable.

## **10 NOTICES**

All notices, consents, requests, approvals, demands, or other communication (collectively, "Communication") by any party to this Agreement or any other Loan Document must be in writing and be delivered or sent by facsimile at the addresses or facsimile numbers listed below. Bank or Borrower may change its notice address by giving the other party written notice thereof. Each such Communication shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, registered or certified mail, return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by facsimile transmission (with such facsimile promptly confirmed by delivery of a copy by personal delivery or United States mail as otherwise provided in this Section 10); (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address or facsimile number indicated below. Advance requests made pursuant to Section 3.4 must be in writing and may be in the form of electronic mail, delivered to Bank by Borrower at the e-mail address of Bank provided below and shall be deemed to

have been validly served, given, or delivered when sent (with such electronic mail promptly confirmed by delivery of a copy by personal delivery or United States mail as otherwise provided in this Section 10). Bank or Borrower may change its address, facsimile number, or electronic mail address by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower: Axcelis Technologies, Inc.  
108 Cherry Hill Drive  
Beverly, Massachusetts 01915  
Attn: Kevin J. Brewer, Chief Financial Officer and Executive Vice President  
Fax: 978-787-4090  
Email: kevin.brewer@axcelis.com

If to Borrower: Axcelis Technologies, Inc.  
108 Cherry Hill Drive  
Beverly, Massachusetts 01915  
Attn: Lynnette C. Fallon, Executive Vice President HR/Legal, General Counsel and Secretary  
Fax: 978-787-4090  
Email: lynnette.fallon@axcelis.com

With a copy to: Edwards Wildman Palmer LLP  
111 Huntington Avenue  
Boston, Massachusetts 02199  
Attn: James I. Rubens, Esquire  
Fax: 888-325-9130  
Email: jrubens@edwardswildman.com

If to Bank: Silicon Valley Bank  
275 Grove Street, Suite 2-200  
Newton, Massachusetts 02466  
Attn: Michael Quinn  
Fax: 617.969.5973  
Email: mquinn@svb.com

with a copy to: Riemer & Braunstein LLP  
Three Center Plaza  
Boston, Massachusetts 02108  
Attn: Charles W. Stavros, Esquire  
Fax: 617.880.3456  
Email: CStavros@riemerlaw.com

## **11 CHOICE OF LAW, VENUE, JURY TRIAL WAIVER AND JUDICIAL REFERENCE**

Massachusetts law governs the Loan Documents without regard to principles of conflicts of law. Borrower and Bank each submit to the exclusive jurisdiction of the State and Federal courts in Massachusetts; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Bank from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Bank. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in Section 10 of this Agreement and that service so made shall be deemed completed upon

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the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid. NOTWITHSTANDING ANYTHING TO THE CONTRARY SET FORTH HEREINABOVE, BANK SHALL SPECIFICALLY HAVE THE RIGHT TO BRING ANY ACTION OR PROCEEDING AGAINST BORROWER OR ITS PROPERTY IN THE COURTS OF ANY OTHER JURISDICTION WHICH BANK DEEMS NECESSARY OR APPROPRIATE IN ORDER TO REALIZE ON THE COLLATERAL OR TO OTHERWISE ENFORCE BANK'S RIGHTS AGAINST BORROWER OR ITS PROPERTY.

**TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER AND BANK EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR BOTH PARTIES TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.**

## **12 GENERAL PROVISIONS**

**12.1 Termination Prior to Revolving Line Maturity Date.** This Agreement may be terminated prior to the Revolving Line Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank. Notwithstanding any such termination, Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations in cash (except for contingent indemnification obligations for which no claim has been made). If such termination is at Borrower's election (regardless of whether any Default or Event of Default then exists) or at Bank's election due to the occurrence and continuance of an Event of Default, Borrower shall pay to Bank, in addition to the payment of any other expenses or fees

then-owing, a termination fee in an amount equal to One Hundred Thousand Dollars (\$100,000.00) (i.e., one percent (1.00%) of the Revolving Line); provided that no termination fee shall be charged if the credit facility hereunder is refinanced with a new facility from Bank.

**12.2 Right of Set-Off.** Borrower hereby grants to Bank a Lien and a right of setoff as security for all Obligations to Bank, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Bank or any entity under the control of Bank (including a subsidiary of Bank) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Bank may setoff the same or any part thereof and apply the same to any liability or Obligation of Borrower even though unmaturing and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE BANK TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER, ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

**12.3 Successors and Assigns.** This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign this Agreement or any rights or obligations under it without Bank's prior written consent (which may be granted or withheld in Bank's discretion). Bank has the right, without the consent of or notice to Borrower, to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents.

**12.4 Indemnification.** Borrower agrees to indemnify, defend and hold Bank and its directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Bank (each, an "**Indemnified Person**") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") claimed or asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (b) all losses or expenses (including Bank Expenses) in any way suffered, incurred, or paid by such Indemnified Person as a result of, following from, consequential to, or arising from transactions between Bank and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct.

**12.5 Time of Essence.** Time is of the essence for the performance of all Obligations in this Agreement.

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**12.6 Severability of Provisions.** Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

**12.7 Correction of Loan Documents.** Bank may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

**12.8 Amendments in Writing; Waiver; Integration.** No purported amendment or modification of any Loan Document, or waiver, discharge or termination of any obligation under any Loan Document, shall be enforceable or admissible unless, and only to the extent, expressly set forth in a writing signed by the party against which enforcement or admission is sought. Without limiting the generality of the foregoing, no oral promise or statement, nor any action, inaction, delay, failure to require performance or course of conduct shall operate as, or evidence, an amendment, supplement or waiver or have any other effect on any Loan Document. Any waiver granted shall be limited to the specific circumstance expressly described in it, and shall not apply to any subsequent or other circumstance, whether similar or dissimilar, or give rise to, or evidence, any obligation or commitment to grant any further waiver. The Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of the Loan Documents merge into the Loan Documents.

**12.9 Counterparts.** This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, are an original, and all taken together, constitute one Agreement.

**12.10 Survival.** All covenants, representations and warranties made in this Agreement continue in full force until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. The obligation of Borrower in Section 12.2 to indemnify Bank shall survive until the statute of limitations with respect to such claim or cause of action shall have run. The grant of security interest by Borrower in Section 4.1 shall survive until the termination of this Agreement and all Bank Services Agreements.

**12.11 Confidentiality.** In handling any confidential information, Bank shall exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to Bank's Subsidiaries or Affiliates; (b) to prospective transferees or purchasers of any interest in the Credit Extensions (provided, however, Bank shall use commercially reasonable efforts to obtain such prospective transferee's or purchaser's agreement to the terms of this provision); (c) as required by law, regulation, subpoena, or other order; (d) to Bank's regulators or as otherwise required in connection with Bank's examination or audit; (e) as Bank considers appropriate in exercising remedies under the Loan Documents; and (f) to third-party service providers of Bank so long as such service providers have executed a confidentiality agreement with Bank with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in Bank's possession when disclosed to Bank, or becomes part of the public domain after disclosure to Bank; or (ii) is disclosed to Bank by a third party, if Bank does not know that the third party is prohibited from disclosing the information.

Bank may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis, so long as Bank does not disclose Borrower's identity or the identity of any person associated with Borrower unless otherwise expressly permitted by this Agreement. The provisions of the immediately preceding sentence shall survive the termination of this Agreement.

**12.12 Electronic Execution of Documents.** The words "execution," "signed," "signature" and words of like import in any Loan Document shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act.

**12.13 Captions.** The headings used in this Agreement are for convenience only and shall not affect the interpretation of this Agreement.

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**12.14 Construction of Agreement.** The parties mutually acknowledge that they and their attorneys have participated in the preparation and negotiation of this Agreement. In cases of uncertainty this Agreement shall be construed without regard to which of the parties caused the uncertainty to exist.

**12.15 Relationship.** The relationship of the parties to this Agreement is determined solely by the provisions of this Agreement. The parties do not intend to create any agency, partnership, joint venture, trust, fiduciary or other relationship with duties or incidents different from those of parties to an arm's-length contract.

**12.16 Third Parties.** Nothing in this Agreement, whether express or implied, is intended to: (a) confer any benefits, rights or remedies under or by reason of this Agreement on any persons other than the express parties to it and their respective permitted successors and assigns; (b) relieve or discharge the obligation or liability of any person not an express party to this Agreement; or (c) give any person not an express party to this Agreement any right of subrogation or action against any party to this Agreement.

## **13 DEFINITIONS**

**13.1 Definitions.** As used in the Loan Documents, the word "shall" is mandatory, the word "may" is permissive, the word "or" is not exclusive, the words "includes" and "including" are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative. As used in this Agreement, the following terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"**Additional Permitted Accounts**" are (a) the Real Estate Creditor Accounts, and (b) Other Permitted Accounts.

"**Adjusted Net Income**" means, on a consolidated basis for Borrower and its Subsidiaries, for any period, (a) the net profit (or loss), of Borrower and its Subsidiaries for such period, plus, without duplication, (b) (i) interest expense, (ii) income tax expense, (iii) depreciation and amortization expense, (iv) non-cash stock compensation expense, (v) non-realized non-cash losses from Borrower's foreign exchange transactions, and (vi) other reasonable add-backs for non-cash items, which have been approved by Bank in writing in its sole and absolute discretion on a case-by-case basis, minus (c) (i) Capital Expenditures, (ii) taxes paid in cash and (iii) non-realized non-cash gains from Borrower's foreign exchange transactions.

"**Advance**" or "**Advances**" means an advance (or advances) under the Revolving Line.

"**Affiliate**" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

"**Agreement**" is defined in the preamble hereof.

"**Availability Amount**" is (i) the lesser of the Revolving Line or the amount available under the Borrowing Base minus (ii) the Bank Services Reserve, and minus (iii) the outstanding principal balance of any Advances.

"**Bank**" is defined in the preamble hereof.

"**Bank Expenses**" are all audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower.

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"**Bank Services**" are any products and/or credit services and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, guidance facilities, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank's various agreements related thereto (each, a "**Bank Services Agreement**").

"**Bank Services Agreement**" is defined in the definition of "Bank Services" appearing alphabetically in Section 13.1.

"**Bank Services Reserve**" is an amount equal to the aggregate amount of Bank's commitment to provide Bank Services to Borrower (including, without limitation, all Obligations and Contingent Obligations of Bank pursuant to Bank Services Agreements).

"**Borrower**" is defined in the preamble hereof.

"**Borrower's Books**" are all Borrower's books and records including ledgers, federal and state tax returns, records regarding Borrower's assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Borrowing Base**" is the sum of (a) 80% of Eligible Accounts (excluding Foreign Currency Accounts not subject to a Foreign Currency Hedge Agreement), plus (b) 60% of Foreign Currency Accounts not subject to a Foreign Currency Hedge Agreement, as determined by Bank from Borrower's most recent Transaction Report; provided, however, that Bank may, following any Collateral inspection or audit conducted by or on behalf of Bank, decrease the foregoing percentage in its good faith business judgment based on events, conditions, contingencies, or risks which, as reasonably determined by Bank after consultation with Borrower, may adversely affect the Collateral.

**“Borrowing Resolutions”** are, with respect to any Person, those resolutions adopted by such Person’s Board of Directors (or other applicable governing body) and delivered by such Person to Bank approving the Loan Documents to which such Person is a party and the transactions contemplated thereby, together with a certificate executed by its secretary on behalf of such Person certifying that (a) such Person has the authority to execute, deliver, and perform its obligations under each of the Loan Documents to which it is a party, (b) that attached to such certificate is a true, correct, and complete copy of the resolutions then in full force and effect authorizing and ratifying the execution, delivery, and performance by such Person of the Loan Documents to which it is a party, (c) the name(s) of the Person(s) authorized to execute the Loan Documents on behalf of such Person, together with a sample of the true signature(s) of such Person(s), and (d) that Bank may conclusively rely on such certificate unless and until such Person shall have delivered to Bank a further certificate canceling or amending such prior certificate.

**“Business Day”** is any day other than a Saturday, Sunday or other day on which banking institutions in the Commonwealth of Massachusetts are authorized or required by law or other governmental action to close.

**“Capital Expenditures”** means, with respect to any Person for any period, the sum of (a) the aggregate of all expenditures by such Person and its Subsidiaries during such period that are capital expenditures as determined in accordance with GAAP, whether such expenditures are paid in cash or financed, plus (b) to the extent not covered by clause (a), the aggregate of all expenditures by such Person and its Subsidiaries during such period to acquire by purchase or otherwise the business or capitalized assets or the capital stock of any other Person.

**“Cash Equivalents”** means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc.; (c) Bank’s certificates of deposit issued maturing no more than one (1) year after issue.

**“Change in Control”** means any event, transaction, or occurrence as a result of which (a) any “person” (as such term is defined in Sections 3(a)(9) and 13(d)(3) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)), other than a trustee or other fiduciary holding securities under an employee benefit plan of

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Borrower, is or becomes a beneficial owner (within the meaning Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of Borrower, representing twenty-five percent (25%) or more of the combined voting power of Borrower’s then outstanding securities; or (b) during any period of twelve consecutive calendar months, individuals who at the beginning of such period constituted the Board of Directors of Borrower (together with any new directors whose election by the Board of Directors of Borrower was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of such period or whose election or nomination for election was previously so approved) cease for any reason other than death or disability to constitute a majority of the directors then in office.

**“Code”** is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the Commonwealth of Massachusetts; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Bank’s Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the Commonwealth of Massachusetts, the term “Code” shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes on the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

**“Collateral”** is any and all properties, rights and assets of Borrower described on Exhibit A.

**“Collateral Account”** is any Deposit Account, Securities Account, or Commodity Account.

**“Commodity Account”** is any “commodity account” as defined in the Code with such additions to such term as may hereafter be made.

**“Compliance Certificate”** is that certain certificate in the form attached hereto as Exhibit B.

**“Consent and Agreement”** means the Consent and Agreement dated as of March 30, 2009 by and among the Bank, SEN, Sumitomo Heavy Industries, Ltd. (solely for purposes of Section 2(b) thereunder), the Borrower and certain of Borrower’s Subsidiaries named therein.

**“Contingent Obligation”** is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such Person as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but “Contingent Obligation” does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

**“Control Agreement”** is any control agreement entered into among the depository institution at which Borrower maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower maintains a Securities Account or a Commodity Account, Borrower, and Bank pursuant to which Bank obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

**“Corporate Restructuring Event”** means the occurrence of each of the following: (i) High Temperature Engineering Corporation has merged with and into Borrower (with Borrower as the sole surviving legal entity), (ii) each of Fusion Technology International, Inc. and Fusion Investments, Inc. has merged with and into Axcelis Technologies CCS Corporation (with Axcelis Technologies CCS Corporation as the sole surviving legal entity in each case), and (iii) Axcelis Technologies CCS Corporation has merged with and into Borrower (with Borrower as the sole surviving legal entity).

**“Credit Extension”** is any Advance or any other extension of credit by Bank for Borrower’s benefit.

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“**Current Liabilities**” are all obligations and liabilities of Borrower and its Subsidiaries to Bank, plus, without duplication, the aggregate amount of Borrower’s and its Subsidiaries’ consolidated Total Liabilities that mature within one (1) year.

“**Default**” means any event which with notice or passage of time or both, would constitute an Event of Default.

“**Default Rate**” is defined in Section 2.3(b).

“**Deferred Revenue**” is all amounts received or invoiced by Borrower in advance of services to be performed under contracts and/or delivery of products and not yet recognized as revenue.

“**Deposit Account**” is any “deposit account” as defined in the Code with such additions to such term as may hereafter be made.

“**Designated Deposit Account**” is Borrower’s deposit account, account number ending in 227, maintained with Bank.

“**Dollars,**” “**dollars**” and “**\$**” each mean lawful money of the United States.

“**Dollar Equivalent**” is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

“**Domestic Subsidiary**” means a Subsidiary organized under the laws of the United States or any state or territory thereof or the District of Columbia.

“**Effective Date**” is October 31, 2013.

“**Eligible Accounts**” means Accounts which arise in the ordinary course of Borrower’s business that meet all Borrower’s representations and warranties in Section 5.3. Bank reserves the right at any time after the Effective Date to adjust any of the criteria set forth below and to establish new criteria in its good faith business judgment. Without limiting the fact that the determination of which Accounts are eligible for borrowing is a matter of Bank’s good faith judgment, the following (“**Minimum Eligibility Requirements**”) are the minimum requirements for an Account to be an Eligible Account and, unless Bank agrees otherwise in writing, Eligible Accounts shall not include:

- (a) Accounts that the Account Debtor has not paid within ninety (90) days of invoice date regardless of invoice payment period terms;
- (b) Accounts owing from an Account Debtor, fifty percent (50%) or more of whose Accounts have not been paid within ninety (90) days of invoice date;
- (c) Accounts billed in the United States and owing from an Account Debtor which does not have its principal place of business in the United States or Canada, except Eligible Foreign Accounts;
- (d) Accounts billed and payable outside of the United States;
- (e) Accounts owing from an Account Debtor to the extent that Borrower is indebted or obligated in any manner to the Account Debtor (as creditor, lessor, supplier or otherwise - sometimes called “contra” accounts, accounts payable, customer deposits or credit accounts), with the exception of customary credits, adjustments and/or discounts given to an Account Debtor by Borrower in the ordinary course of its business;
- (f) Accounts for which the Account Debtor is Borrower’s Affiliate (or a company in which Borrower or its Affiliates have greater than a 20% ownership interest), officer, employee, or agent;

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- (g) Accounts with credit balances over ninety (90) days from invoice date;
  - (h) Accounts owing from an Account Debtor, including Affiliates, whose total obligations to Borrower exceed twenty-five percent (25.0%) of all Accounts, for the amounts that exceed that percentage, unless Bank, on a case-by-case basis and in its sole discretion, otherwise approves any such Account;
  - (i) Accounts owing from an Account Debtor which is a United States government entity or any department, agency, or instrumentality thereof unless Borrower has assigned its payment rights to Bank and the assignment has been acknowledged under the Federal Assignment of Claims Act of 1940, as amended;
  - (j) Accounts for demonstration or promotional equipment, or in which goods are consigned, or sold on a “sale guaranteed”, “sale or return”, “sale on approval”, or other terms if Account Debtor’s payment may be conditional;
  - (k) Accounts for which an Account Debtor has not been invoiced or where goods or services have not yet been rendered to the Account Debtor (sometimes called memo billings or pre-billings);
  - (l) Accounts subject to contractual arrangements between Borrower and an Account Debtor where payments shall be scheduled or due according to completion or fulfillment requirements and where the Account Debtor has a right of offset for damages suffered as a result of Borrower’s failure to perform in accordance with the contract (sometimes called contracts accounts receivable, progress billings, milestone billings, or fulfillment contracts);
  - (m) Accounts owing from an Account Debtor the amount of which may be subject to withholding based on the Account Debtor’s satisfaction of Borrower’s complete performance (but only to the extent of that portion of the amount withheld which exceeds ten percent (10%) of the Account; sometimes called retainage billings);

- (n) Accounts subject to trust provisions, subrogation rights of a bonding company, or a statutory trust;
- (o) Accounts owing from an Account Debtor that have been invoiced for goods that have not been shipped to the Account Debtor unless Bank, Borrower, and the Account Debtor have entered into an agreement acceptable to Bank in its sole discretion wherein the Account Debtor acknowledges that (i) it has title to and has ownership of the goods wherever located, (ii) a bona fide sale of the goods has occurred, and (iii) it owes payment for such goods in accordance with invoices from Borrower (sometimes called “bill and hold” accounts);
- (p) Accounts for which the Account Debtor has not been invoiced;
- (q) Accounts that represent non-trade receivables or that are derived by means other than in the ordinary course of Borrower’s business;
- (r) Accounts for which Borrower has permitted Account Debtor’s payment to extend beyond 90 days;
- (s) Accounts subject to chargebacks or others payment deductions taken by an Account Debtor (but only to the extent the chargeback is determined invalid and subsequently collected by Borrower);
- (t) Accounts in which the Account Debtor disputes liability or makes any claim (but only up to the disputed or claimed amount), or if the Account Debtor is subject to an Insolvency Proceeding, or becomes insolvent, or goes out of business; and
- (u) Accounts for which Bank in its good faith business judgment determines collection to be doubtful or otherwise ineligible.

“**Eligible Foreign Accounts**” are accounts from an Account Debtor with its principal place of business outside of the United States or Canada approved by Bank in its sole discretion provided that in any event such accounts shall be (i) with Account Debtors headquartered in France, Germany, Italy, Japan, or the United Kingdom,

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and/or (ii) covered by credit insurance satisfactory to Bank, less any deductible, (iii) supported by letter(s) of credit acceptable to Bank, and/or (iv) have a billing and receipt history acceptable to Bank.

“**Equipment**” is all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“**ERISA**” is the Employee Retirement Income Security Act of 1974, and its regulations.

“**Event of Default**” is defined in Section 8.

“**Excluded Deposits**” means cash maintained by Borrower in accounts at Real Estate Creditor (other than the Interest Reserve Escrow Account and the Tax Payments Suspense Account) that is required to be maintained at Real Estate Creditor pursuant to the terms of the Real Estate Loan Documents in an aggregate amount not to exceed the lesser of (i) \$15,000,000, and (ii) the aggregate principal amount of the Real Estate Debt outstanding.

“**Exempted Real Estate Creditor Accounts**” means: (a) the Interest Reserve Escrow Account (to the extent amounts on deposit therein do not exceed \$825,000), and (b) the Tax Payments Suspense Account (to the extent amounts on deposit therein do not exceed the amount necessary to pay Borrower’s next due installment of real estate taxes).

“**Foreign Currency**” means lawful money of a country other than the United States.

“**Foreign Currency Accounts**” are Eligible Accounts denominated in a Foreign Currency that have been approved in writing by Bank in its sole discretion.

“**Foreign Currency Hedge Agreement**” means any agreement with respect to any swap, hedge, forward, future or derivative transaction or option or similar other similar agreement or arrangement, each of which is (i) for the purpose of hedging the foreign currency fluctuation exposure associated with Borrower’s operations and Accounts, (ii) acceptable to Bank, in its reasonable discretion, and (iii) not for speculative purposes.

“**Foreign Subsidiary**” means any Subsidiary which is not a Domestic Subsidiary.

“**Funding Date**” is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

“**FX Forward Contract**” is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

“**GAAP**” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination.

“**General Intangibles**” is all “general intangibles” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

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**“Governmental Approval”** is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

**“Governmental Authority”** is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

**“Guarantor”** is any present or future guarantor of the Obligations, including Axcelis Technologies CCS Corporation, Fusion Technology International, Inc., Fusion Investments, Inc., High Temperature Engineering Corporation, Axcelis Technologies (Israel), Inc. and all present or future Domestic Subsidiaries.

**“Guarantor Security Agreement(s)”** is each Security Agreement executed and delivered by a Guarantor to Bank to secure the Guaranty of such Guarantor.

**“Guaranty(ies)”** is any guaranty of the Obligations executed and delivered by a Guarantor to Bank.

**“Headquarters Location”** is 108 Cherry Hill Drive, Beverly, Massachusetts.

**“Indebtedness”** is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

**“Indemnified Person”** is defined in Section 12.4.

**“Insolvency Proceeding”** is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

**“Interest Reserve Escrow Account”** means Interest Reserve Escrow Account No. 8459314800 maintained by Borrower at Real Estate Creditor to secure payment of interest in respect of the Real Estate Debt in the maximum amount of \$825,000.

**“Inventory”** is all “inventory” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of Borrower’s custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

**“Investment”** is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

**“IP Agreement”** is that certain Intellectual Property Security Agreement executed and delivered by Borrower and Guarantors to Bank dated as of the Effective Date.

**“Letter of Credit”** means a standby letter of credit issued by Bank or another institution based upon an application, guarantee, indemnity or similar agreement on the part of Bank.

**“Lien”** is a claim, mortgage, deed of trust, levy, charge, pledge, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

**“Loan Documents”** are, collectively, this Agreement, the Perfection Certificate, the IP Agreement, the Pledge Agreements, the Guarantor Security Agreements, each Guaranty, any Bank Services Agreement, any note, or notes executed by Borrower or any Guarantor, and any other present or future agreement executed or delivered by Borrower or any Guarantor and/or for the benefit of Bank, all as amended, restated, or otherwise modified.

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**“Material Adverse Change”** is (a) a material impairment in the perfection or priority of Bank’s Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations, or condition (financial or otherwise) of Borrower, taken as a whole; or (c) a material impairment of the prospect of repayment of any portion of the Obligations or (d) Bank determines, based upon information available to it and in its reasonable judgment, that there is a reasonable likelihood that Borrower shall fail to comply with one or more of the financial covenants in Section 6 during the next succeeding financial reporting period.

**“Minimum Eligibility Requirements”** is defined in the definition entitled “Eligible Accounts” appearing alphabetically in this Section 13.1.

**“Obligations”** are Borrower’s obligation to pay when due any debts, principal, interest, Bank Expenses and other amounts Borrower owes Bank now or later, whether under this Agreement, the Loan Documents, or otherwise, including, without limitation, all interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and to perform Borrower’s duties under the Loan Documents.

**“Operating Documents”** are, for any Person, such Person’s formation documents, as certified with the Secretary of State of such Person’s state of formation on a date that is no earlier than 30 days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

“**Other Permitted Accounts**” means deposit or investment accounts maintained by Borrower and its Subsidiaries in the United States at institutions other than the Bank and its Affiliates or Real Estate Creditor, provided that the aggregate amount of monies or other assets on deposit or maintained in such deposit or investment accounts shall not exceed One Hundred Thousand Dollars (\$100,000.00) at any time.

“**Overadvance**” is defined in Section 2.2.

“**Perfection Certificate**” is defined in Section 5.1.

“**Permitted Acquisition**” is any acquisition by the Borrower of all or substantially all of the capital stock, or substantially all of the assets, of a Person, or of all or substantially all of the assets constituting a division, product line or business line of a Person, if such acquisition complies with the following criteria: (a) no Event of Default exists or would result from such acquisition; (b) the Person, division, product line or line of business acquired in such acquisition shall be in the same or substantially similar line of business as Borrower; (c) Bank shall have received at least five (5) Business Days prior written notice of the closing date for such acquisition (together with a description of the proposed acquisition or purchase, all diligence materials (including, without limitation, a certificate of a Responsible Officer, in form and substance reasonably satisfactory to Bank certifying that, as of the date thereof, the proposed purchase or acquisition is in compliance with Section 7.3 hereof) and other documents and information reasonably requested by Bank, each of which shall be in form and substance reasonably satisfactory to Bank); (d) Borrower is the surviving legal entity after such acquisition; (e) no Indebtedness or Liens are assumed in connection with such acquisition, other than Permitted Indebtedness and Permitted Liens; (f) any Person that is acquired and remains a separate legal entity shall, at Bank’s option, in its sole and absolute discretion, become a borrower or guarantor pursuant to the terms hereunder and documentation required by Bank in its sole discretion within thirty (30) days of such acquisition; (g) Borrower has provided Bank with written confirmation, supported by reasonably detailed calculations, that on a *pro forma* basis (including *pro forma* adjustments arising out of events which are directly attributable to such acquisition), Borrower would be in compliance with the financial covenants contained in Section 6.9, both immediately prior to, and immediately after the consummation of, such acquisition; (h) such transaction is accretive to Borrower’s EBITDA; and (i) the aggregate cash and non-cash consideration (including, without limitation, debt and equity consideration) for all Permitted Acquisitions shall not individually or in the aggregate exceed Thirty Million Dollars (\$30,000,000.00).

“**Permitted Indebtedness**” is:

(a) Borrower’s Indebtedness to Bank under this Agreement and the other Loan Documents;

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(b) Indebtedness existing on the Effective Date and shown on the Perfection Certificate;

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) unsecured Indebtedness with respect to surety bonds, letters of credit and/or and similar instruments in connection with value added tax recovery initiatives of Axcelis Technologies GmbH incurred in the ordinary course of business;

(f) Indebtedness owing from (i) Borrower to any Guarantor or any Guarantor to Borrower or another Guarantor; (ii) to the extent existing as of the Effective Date, from Borrower to (A) Borrower’s Taiwanese subsidiary in an aggregate amount not exceeding \$8,750,000, (B) Borrower’s French Subsidiary in an aggregate amount not exceeding \$1,000,000, and (C) Borrower’s German Subsidiary, in an aggregate amount not exceeding \$5,433,671, provided that Borrower shall not repay any portion of such Indebtedness in such clause (ii) without Bank’s prior written consent, (iii) Indebtedness of a Foreign Subsidiary to another Foreign Subsidiary, and (iv) except for trade indebtedness incurred in the ordinary course of business consistent with past practice, any Subsidiary that is not a Guarantor to any Borrower in an aggregate amount of up to \$1,000,000, provided that, in each case, such Indebtedness is incurred in the ordinary course of business of such Borrower or Subsidiary and pursuant to an arms-length transaction;

(g) Indebtedness pursuant to clause (c) of the definition of Permitted Liens appearing herein;

(h) the Real Estate Debt; and

(i) extensions, refinancings, modifications, amendments and restatements of Permitted Indebtedness referenced in items (a) through (d) and (f) and (g) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

“**Permitted Investments**” are:

(a) Investments shown on the Perfection Certificate and existing on the Effective Date;

(b) Cash Equivalents;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit accounts maintained with Bank and subject to Bank’s first priority Lien;

(e) Investments of Subsidiaries in or to Borrower or any Guarantor;

(f) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower’s Board of Directors (or other applicable governing body);

(g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(h) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary; and

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(i) Money market funds that (i) comply with the criteria set forth in Rule 2a-7 under the Investment Company Act of 1940, (ii) are rated AAA by S&P and Aaa by Moody's and (iii) have portfolio assets of at least \$500,000,000.00;

(j) Subject to Section 6.6 hereof, Investments of Borrower and its Domestic Subsidiaries consisting of deposit accounts held with foreign financial institutions; provided, that the aggregate dollar value of all such deposit accounts does not exceed 5% of the dollar value of all unrestricted cash of Borrower and its Domestic Subsidiaries; and

(k) Other equity and debt investments that are consistent with the investment policy of the Borrower dated as of March 2003, a copy of which has been delivered to Bank.

**"Permitted Liens" are:**

(a) Liens existing on the Effective Date and shown on the Perfection Certificate or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either not delinquent or being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) purchase money Liens (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than Five Million Dollars (\$5,000,000.00) in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;

(d) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(e) leases or subleases of real property granted in the ordinary course of business, and leases, subleases, non-exclusive licenses or sublicenses of property (other than real property or intellectual property) granted in the ordinary course of Borrower's business, if such leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest;

(f) non-exclusive license of intellectual property granted to third parties in the ordinary course of business;

(g) the SEN License;

(h) Liens on the Real Estate Creditor Collateral in favor of Real Estate Creditor, securing the Real Estate Debt, provided that each is subject to the intercreditor agreement among Real Estate Creditor and Bank; and

(i) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 8.4 and 8.7.

**"Person"** is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

**"Pledge Agreement(s)"** those certain Pledge Agreements dated as of the Effective Date executed and delivered by Borrower and Fusion Technology International, Inc. in favor of Bank.

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**"Prime Rate"** is, with respect to any day, the "Prime Rate" as quoted in the *Wall Street Journal* print edition on such day (or, if such day is not a day on which the *Wall Street Journal* is published, the immediately preceding day on which the *Wall Street Journal* was published) rate.

**"Quick Assets"** is, on any date, the sum of (a) Borrower's and its Subsidiaries' consolidated world-wide cash and Cash Equivalents (maintained with Bank or subject to a Control Agreement, but in all cases excluding Excluded Deposits, monies in the Interest Reserve Escrow Account and monies in the Tax Payments Suspense Account), plus (b) Borrower's and its Subsidiaries' consolidated net-billed accounts receivable.

**"Real Estate Creditor"** is Northern Bank & Trust Company, whose address is 275 Mishawum Road, Woburn, Massachusetts 01801.

**"Real Estate Creditor Accounts"** means any Accounts of Borrower maintained with Real Estate Creditor or its Affiliates, including, without limitation, the Exempted Real Estate Creditor Account.

**"Real Estate Creditor Collateral"** means (a) the Real Property (which term shall have the meaning given such term in the Mortgage and Fixture Filing attached as Exhibit D hereto), (b) the Personal Property, (which term shall have the meaning given such term in the Mortgage and Fixture Filing attached as Exhibit D hereto), (c) the Rents (which term shall have the meaning given such term in the Assignment of Rents attached as Exhibit E hereto), (d) the Interest Reserve Escrow Account, provided that the balance maintained therein does not at any time exceed \$825,000, and (e) the Tax Payments Suspense Account..

**“Real Estate Debt”** means any and all indebtedness and obligations for borrowed money (including, without limitation, principal, premium (if any), interest, fees, charges, expenses, costs, professional fees and expenses, and reimbursement obligations), in an aggregate principal amount not at any time exceeding Fifteen Million Dollars (\$15,000,000.00), at any time owing by Borrower to Real Estate Creditor under the Real Estate Loan Documents, including but not limited to such amounts as may accrue or be incurred before or after default or workout or the commencement of any liquidation, dissolution, bankruptcy, receivership, or reorganization case by or against Borrower.

**“Real Estate Loan Agreement”** means that certain Business Loan Agreement between Borrower and Real Estate Creditor whereby Borrower has borrowed up to Fifteen Million Dollars (\$15,000,000.00) from Real Estate Creditor and whereby Borrower’s obligations thereunder are secured solely by the Real Estate Creditor Collateral, as amended, supplemented, restated, amended and restated or otherwise modified from time to time.

**“Real Estate Loan Documents”** means the Real Estate Loan Agreement, and any other agreement, document, promissory note, financing statement, or instrument executed by Borrower in favor of Real Estate Creditor pursuant to or in connection with the Real Estate Debt, as the same may from time to time be amended, modified, supplemented, extended, renewed, restated or replaced.

**“Registered Organization”** is any “registered organization” as defined in the Code with such additions to such term as may hereafter be made

**“Requirement of Law”** is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

**“Reserves”** means, as of any date of determination, upon notice to and after consultation with Borrower, such amounts as Bank may reasonably from time to time establish and revise in its good faith business judgment, reducing the amount of Advances and other financial accommodations which would otherwise be available to Borrower to reflect events, conditions, contingencies or risks which, as determined by Bank in its good faith business judgment, do or may adversely affect in any material way (i) the assets, business or prospects of Borrower or any Guarantor, or (ii) the security interests and other rights of Bank in the Collateral (including the enforceability, perfection and priority thereof).

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**“Responsible Officer”** is any of the Chief Executive Officer, President, Chief Financial Officer and General Counsel.

**“Restricted License”** is any material license or other agreement, excluding the SEN License, with respect to which Borrower is the licensee (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower’s interest in such license or agreement or any other property, or (b) for which a default under or termination of could interfere with the Bank’s right to sell any Collateral.

**“Revolving Line”** is an Advance or Advances in an amount equal to Ten Million Dollars (\$10,000,000).

**“Revolving Line Maturity Date”** is October 31, 2015.

**“Securities Account”** is any “securities account” as defined in the Code with such additions to such term as may hereafter be made.

**“SEN”** means SEN Corporation, a Japanese company.

**“SEN License”** means that certain License Agreement dated March 30, 2009 by and between the Borrower and SEN.

**“Settlement Date”** is defined in Section 2.1.3.

**“Subordinated Debt”** is indebtedness incurred by Borrower subordinated to all of Borrower’s now or hereafter indebtedness to Bank (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Bank entered into between Bank and the other creditor), on terms acceptable to Bank.

**“Subsidiary”** means, with respect to any Person, any Person of which more than 50.0% of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled directly or indirectly by such Person or one or more of Affiliates of such Person.

**“Tax Payments Suspense Account”** means the suspense (non-operating) account in favor of Borrower maintained at Real Estate Creditor into which monies are set aside for payment of real estate taxes when due provided that the amount on deposit in such account shall at no time exceed the approximate amount necessary to pay Borrower’s next due installment of real estate taxes.

**“Total Liabilities”** is on any day, obligations that should, under GAAP, be classified as liabilities on the consolidated balance sheet of Borrower and its Subsidiaries, including all Indebtedness, but excluding all other Subordinated Debt.

**“Transaction Report”** is that certain report of transactions and schedule of collections in the form attached hereto as Exhibit C.

**“Transfer”** is defined in Section 7.1.

**“Unused Line Fee Percentage”** is three eighths of one percent (0.375%).

**“Unused Revolving Line Facility Fee”** is defined in Section 2.4(c).

[Signature page follows.]

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**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the Effective Date.

**BORROWER:**

**AXCELIS TECHNOLOGIES, INC.**

By /s/ Mary G. Puma  
Name: Mary G. Puma  
Title: Chairman, CEO and President

**BANK:**

**SILICON VALLEY BANK**

By /s/ Michael Quinn  
Name: Michael Quinn  
Title: Vice President

**EXHIBIT A – COLLATERAL DESCRIPTION**

The Collateral consists of all of Borrower’s right, title and interest in and to the following personal property:

All goods, Accounts, Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles, commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

all Borrower’s Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the “Collateral” does not include (a) more than 66% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of any Foreign Subsidiary which shares entitle the holder thereof to vote for directors or any other matter, (b) monies on deposit in the Interest Reserve Escrow Account (to the extent amounts on deposit therein do not exceed \$825,000), (c) monies on deposit in the Tax Payments Suspense Account (to the extent amounts on deposit therein do not exceed the amount necessary to pay Borrower’s next due installment of real estate taxes) or (d) the Excluded Deposits.

The security interest granted by Borrower to Secured Party in the Axcelis Licensed Intellectual Property (as defined in the SEN License) is subject to the license granted to SEN Corporation pursuant to the terms of the SEN License in accordance with that certain Consent and Agreement dated as of March 30, 2009 among the Borrower, the Secured Party, SEN Corporation and others.

**EXHIBIT B - COMPLIANCE CERTIFICATE**

TO: SILICON VALLEY BANK  
FROM: Axcelis Technologies, Inc.

Date: \_\_\_\_\_

The undersigned authorized officer of Axcelis Technologies, Inc. (“Borrower”) certifies that under the terms and conditions of the Loan and Security Agreement between, inter alia, Borrower and Bank (the “Agreement”), (1) Borrower is in complete compliance for the period ending \_\_\_\_\_ with all required covenants except as noted below, (2) there are no Events of Default, (3) all representations and warranties in the Agreement are true and correct in all material respects on this date except as noted below; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, (4) Borrower, and each of its Domestic Subsidiaries, has timely filed all required tax returns and reports, and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 5.9 of the Agreement, and (5) no Liens have been levied or claims made against Borrower or any of its Domestic Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank. Attached are the required documents supporting the certification. The undersigned certifies that these are prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The undersigned acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

**Please indicate compliance status by circling Yes/No under “Complies” column.**

<u>Reporting Covenant</u>	<u>Required</u>	<u>Complies</u>
Monthly and Quarterly consolidated and consolidating and financial statements with Compliance Certificate	Monthly within 30 days (except quarter end)/45 days following each quarter-end	<input type="radio"/> Yes <input type="radio"/> No
Annual financial statement (CPA Audited) + CC	FYE within 120 days	<input type="radio"/> Yes <input type="radio"/> No
10-Q, 10-K and 8-K	Within 10 days after filing with SEC	<input type="radio"/> Yes <input type="radio"/> No

A/R & A/P Agings, Inventory reports, Backlog Reports	Monthly within 30 days	<input type="radio"/> Yes <input type="radio"/> No
Transaction Report	Monthly within 30 days for months in which Obligations were at any time outstanding (and with each request for a Credit Extension)	<input type="radio"/> Yes <input type="radio"/> No

The following Intellectual Property was registered (or a registration application submitted) after the Effective Date (if no registrations, state "None")

<u>Financial Covenant</u>	<u>Required</u>	<u>Actual</u>	<u>Complies</u>
Maintain:			
Adjusted Quick Ratio, at all times, to be tested on a monthly basis	1.5:1.0	:1.0	<input type="radio"/> Yes <input type="radio"/> No
Minimum Adjusted Net Income (as of the	As set forth in Section 6.9(b) of the Agreement	\$	<input type="radio"/> Yes <input type="radio"/> No

last day of each quarter)

The following financial covenant analysis and information set forth in Schedule 1 attached hereto are true and accurate as of the date of this Certificate.

Schedule 2 attached hereto sets forth all applications for any patent or the registration of any trademark or servicemark made by Borrower since the date of the last Compliance Certificate delivered to Bank.

The following are the exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions to note.")

AXCELIS TECHNOLOGIES, INC.

**BANK USE ONLY**

By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_

Received by: \_\_\_\_\_  
 AUTHORIZED SIGNER

Date: \_\_\_\_\_

Verified: \_\_\_\_\_  
 AUTHORIZED SIGNER

Date: \_\_\_\_\_

Compliance Status:  Yes  No

**Schedule 1 to Compliance Certificate**

**Financial Covenants of Borrower**

In the event of a conflict between this Schedule and the Loan Agreement, the terms of the Loan Agreement shall govern.

Dated: \_\_\_\_\_

**I. Adjusted Quick Ratio (Section 6.9(a))**

Required: 1.5:1.0

Actual: :1.0

A.	Borrower's and its Subsidiaries' consolidated world-wide cash and Cash Equivalents (maintained with Bank or subject to a Control Agreement, but in all cases excluding Excluded Real Estate Creditor Deposits)	\$
B.	Borrower's and its Subsidiaries' consolidated net billed accounts receivable	\$
C.	Quick Assets (line A plus line B)	\$
D.	Aggregate value of Obligations to Bank	\$
E.	Aggregate value of liabilities of Borrower and its Subsidiaries (including all Indebtedness) that matures within one (1) year (excluding Real Estate Debt)	\$
F.	Deferred Revenue	\$



G. Current Liabilities (the sum of lines D and E, minus line F) \$

H. Quick Ratio (line C divided by line G)

Is Line H equal to or greater than 1.50:1:00?

- No, not in compliance  Yes, in compliance

II. **Minimum Adjusted Net Income** (Section 6.9(b))

Required: at least (i) (\$1,500,000) for the trailing three (3) month period ending on the last day of the fiscal quarter ending September 30, 2013; (ii) \$1.00 for the trailing three (3) month period ending on the last day of the fiscal quarter ending December 31, 2013; and (iii) \$2,500,000 for the trailing six month period ending on (A) the last day of the fiscal quarter ending March 31, 2014, and (B) the last day of each fiscal quarter thereafter

Actual: \$

A. Net profit (or loss), of Borrower and its Subsidiaries \$

B. Interest Expense for Borrower and Subsidiaries \$

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C. Income Tax Expense of Borrower and Subsidiaries \$

D. Depreciation and Amortization Expense of Borrower and Subsidiaries \$

E. Non-cash stock compensation expense for Borrower and Subsidiaries \$

F. The amount of any non-realized non-cash losses associated with Borrower's foreign exchange transactions. \$

G. Other reasonable add-backs for non-cash items, which have been approved by Bank in writing in its sole and absolute discretion on a case-by-case basis\* \$

H. Capital Expenditures (as defined in the Agreement) of Borrower and Subsidiaries \$

I. Taxes paid in cash by Borrower and Subsidiaries \$

J. The amount of any non-realized non-cash gains associated with Borrower's foreign exchange transactions \$

K. Adjusted Net Income (Line A, plus the sum of Lines B-G, minus the sum of Lines H-J) \$

\*Please specify:

Is Line K less than or equal to the amount required above

- No, not in compliance  Yes, in compliance

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**Schedule 2 to Compliance Certificate**

**IP Applications**

**EXHIBIT C**

Transaction Report

[EXCEL spreadsheet to be provided separately by SVB.]

**EXHIBIT D**

Mortgage and Fixture Filing

The Mortgage and Fixture Filing dated as of July 5, 2013 by Axcelis Technologies, Inc. in favor of Northern Bank & Trust Company (the "Mortgage") attached as Exhibit D to this Loan and Security Agreement has been filed with the Securities and Exchange Commission as Exhibit 10.2 to the Company's report on Form 10-Q filed with the Commission on August 2, 2013.

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**EXHIBIT E**

Assignment of Rents

The Assignment of Assignment of Rents dated as of July 5, 2013 between Axcelis Technologies, Inc. and Northern Bank & Trust Company (the "Assignment of Rents") attached as Exhibit E to this Loan and Security Agreement has been omitted from this Conformed Copy filed with the Securities and Exchange Commission. The Assignment of Rents does not contain information which is material to an investment decision and which is not otherwise disclosed in the Mortgage and Fixture Filing referenced in Exhibit D hereto. Upon request of the Securities and Exchange Commission, Axcelis will supplementally furnish a copy of the Assignment of Rents.

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**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: November 8, 2013

/s/ MARY G. PUMA

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

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

I, Kevin J. Brewer, 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: November 8, 2013

/s/ KEVIN J. BREWER

Kevin J. Brewer,  
*Executive Vice President and Chief Financial Officer*

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**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 November 8, 2013.

/s/ MARY G. PUMA

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

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**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 November 8, 2013.

/s/ KEVIN J. BREWER

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Kevin J. Brewer  
*Executive Vice President and Chief Financial Officer of Axcelis  
Technologies, Inc.*

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