

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

<p>1. Name and Address of Reporting Person*</p> <p><u>Low Russell</u></p> <hr/> <p>(Last) (First) (Middle)</p> <p><u>C/O AXCELIS TECHNOLOGIES, INC.</u></p> <p><u>108 CHERRY HILL DRIVE</u></p> <hr/> <p>(Street)</p> <p><u>BEVERLY MA 01915</u></p> <hr/> <p>(City) (State) (Zip)</p>	<p>2. Issuer Name and Ticker or Trading Symbol</p> <p><u>AXCELIS TECHNOLOGIES INC [ ACLS ]</u></p>	<p>5. Relationship of Reporting Person(s) to Issuer (Check all applicable)</p> <p><input checked="" type="checkbox"/> Director 10% Owner</p> <p><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)</p> <p style="text-align: center;"><u>PRESIDENT AND CEO</u></p>
<p>3. Date of Earliest Transaction (Month/Day/Year)</p> <p><u>06/05/2024</u></p>		<p>6. Individual or Joint/Group Filing (Check Applicable Line)</p> <p><input checked="" type="checkbox"/> Form filed by One Reporting Person</p> <p><input type="checkbox"/> Form filed by More than One Reporting Person</p>
<p>4. If Amendment, Date of Original Filed (Month/Day/Year)</p>		
<p>Rule 10b5-1(c) Transaction Indication</p> <p><input type="checkbox"/> Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10.</p>		

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	06/05/2024		F		387	D <sup>(1)</sup>	\$111.29 <sup>(2)</sup>	81,566 <sup>(3)</sup>	D	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					(A)	(D)	Date Exercisable	Expiration Date					

**Explanation of Responses:**

1. This forfeiture of shares for tax withholding purposes relates to the vesting in May 2024 of 4 service vesting restricted stock units granted to the executive in May 2020, 2021, 2022 and 2023. As agreed with the executive, the shares issued to the executive on those vesting events were reduced by a number of shares to cover the executive's tax withholding obligation with respect to the vested restricted stock units. However, the number of shares withheld on the vesting dates was insufficient to cover a Massachusetts income tax surcharge applicable to the executive, so additional shares have been withheld to cover the shortfall, as reported herein.
2. Represents the closing price of the common stock on the date prior to the tax withholding.
3. Of the shares held after this forfeiture event on June 5, 2024, 50,594 were issuable on vesting of restricted stock units granted to the reporting person under the 2012 Equity Incentive Plan and are subject to forfeiture.

/s/ Lynnette C. Fallon,  
Attorney-in-Fact

06/05/2024

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.**