

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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

1. Name and Address of Reporting Person* <u>Thompson Chad</u> (Last) (First) (Middle) 8045 LAMON AVE SUITE 400 (Street) SKOKIE IL 60077 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 08/15/2023	3. Issuer Name and Ticker or Trading Symbol <u>LanzaTech Global, Inc. [LNZA]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Chief People Officer	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
Stock Options	(1)	01/27/2033	Common Stock	43,746	9.97	D
Stock Options	(2)	05/02/2033	Common Stock	57,251	3.28	D
Restricted Stock Units	(3)	(3)	Common Stock	75,000	(3)	D

Explanation of Responses:

- Subject to the terms of the Stock Option Agreement, the shares subject to the stock option will vest and become exercisable in approximately four equal annual installments, with such first installment vesting on October 17, 2023.
- Subject to the terms of the Stock Option Agreement, the shares subject to the stock option will vest and become exercisable in approximately three equal annual installments, with such first installment vesting on March 6, 2024.
- Each Restricted Stock Unit (RSU) represents a contingent right to receive one share of common stock of LanzaTech Global, Inc. (the "Company"). Subject to the terms of the RSU Agreement, the RSUs will vest in approximately three equal annual installments, with such first installment vesting on March 6, 2024.

Remarks:

Exhibit 24.1 - Power of Attorney

/s/ Joseph Blasko, as Attorney-in-Fact

08/24/2023

** 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 5 (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.

POWER OF ATTORNEY

Know all by these presents that the undersigned hereby constitutes and appoints Geoff Trukenbrod and Joseph Blasko as the undersigned's true and lawful attorneys-in-fact to:

- (1) execute for and on behalf of the undersigned, in the undersigned's capacity as a beneficial owner of LanzaTech Global, Inc. (the "Company"), Forms 3, 4, and 5 in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules thereunder and Schedules 13D and 13G in accordance with Section 13 of the Securities Exchange Act of 1934 and the rules thereunder;
- (2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4, or 5 or Schedules 13D or 13G, complete and execute any amendment or amendments thereto, and timely file such form with the U.S. Securities and Exchange Commission (the "SEC") and any securities exchange or similar authority; and
- (3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorneys-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorneys-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorneys-in-fact may approve in each such attorneys-in-fact's discretion.

The undersigned hereby grants to the attorneys-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorneys-in-fact, or such attorneys-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned also ratifies hereby any action previously taken by the attorneys-in-fact that would have been authorized by this power of attorney if it has been in effect at the time such action was taken. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, is not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Sections 13 and 16 of the Securities Exchange Act of 1934.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 and Schedules 13D and 13G with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 13th day of July, 2023.

Chad Thompson

/s/ Chad Thompson