

April 17, 2024

Jennifer Holmgren
Chief Executive Officer
LanzaTech Global, Inc.
8045 Lamon Avenue, Suite 400
Skokie, IL 60077

Re: LanzaTech Global,

Inc.

Post-Effective

Amendment No. 3 to Registration Statement on Form S-1

Filed April 5, 2024
File No. 333-269735

Dear Jennifer Holmgren:

We have reviewed your amended registration statement and have the following comments.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this letter, we may have additional comments. Unless we note otherwise, any references to prior comments are to comments in our March 27, 2024 letter.

Post-Effective Amendment No. 3 to the Registration Statement on Form S-1

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1. We note your response to comment 1 and reissue the comment in part. We note that references to "PRC" or "China" in your prospectus exclude Hong Kong and Macau. Please revise to clarify that the legal and operational risks associated with operating in China also apply to operations in Hong Kong and Macau. The requested disclosure may appear in the definition itself or in another appropriate discussion of legal and operational risks applicable to the company.

Jennifer Holmgren
FirstName
LanzaTechLastNameJennifer Holmgren
Global, Inc.

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April NameLanzaTech Global, Inc.
17, 2024

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FirstName LastName
Please contact Benjamin Richie at 202-551-7857 or Jessica Ansart at 202-551-4511 with any other questions.

Sincerely,

Division of

Corporation Finance

Office of Industrial

Applications and

Services

cc: Kerry Burke

