

April 5, 2024

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
Office of Industrial Applications and Services
100 F Street NE
Washington, D.C. 20549

Attn: Benjamin Richie and Jessica Ansart

Re: LanzaTech Global, Inc.
Post-Effective Amendment No. 2 to Registration Statement on Form S-1
Filed March 14, 2024
File No. 333-269735

Dear Ms. Nimitz and Ms. Park:

On behalf of our client, LanzaTech Global, Inc. (the “Company” or “LanzaTech”), we are writing to submit the Company’s responses to the comments of the staff of the Division of Corporation Finance (the “Staff”) of the United States Securities and Exchange Commission (the “Commission”) contained in the Staff’s letter dated March 27, 2024 (the “Comment Letter”), with respect to the above-referenced Post-Effective Amendment No. 2 to the Registration Statement on Form S-1, filed on March 14, 2024 (the “Post-Effective Amendment No. 2”).

The Company has filed via EDGAR Post-Effective Amendment No. 3 to Registration Statement on Form S-1 (“Post-Effective Amendment No. 3”), which reflects the Company’s responses to the comments received by the Staff and certain updated information. For ease of reference, each comment contained in the Comment Letter is printed below in bold and is followed by the Company’s response. All page references in the responses set forth below refer to page numbers in Post-Effective Amendment No. 3. Capitalized terms used but not defined herein have the meanings set forth in Post-Effective Amendment No. 3.

Post Effective Amendment on Form S-1, filed March 14, 2024

About This Prospectus, page ii

- 1. 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. Please also discuss the laws and regulations in Hong Kong, as applicable to your business, as well as the related risks and consequences. The requested disclosure may appear in the definition itself or in another appropriate discussion of legal and operational risks applicable to the company.**

Response to Comment 1: In response to the Staff's comment, the Company has revised the disclosure on page ii of Post-Effective Amendment No. 3 to indicate that it has no operations in Taiwan, Hong Kong or Macau.

General

2. We note that since the filing of the Post-Effective Amendment No. 1, filed on December 18, 2023, certain disclosure appearing in the Risk Factor section relating to legal and operational risks associated with operating in China and to PRC regulations has been removed. It is unclear to us that there have been changes in the regulatory environment in the PRC since the Post-Effective Amendment No. 1 filed on December 18, 2023, warranting revised disclosure to mitigate the challenges you face and related disclosures. The Sample Letters to China-Based Companies sought specific disclosure relating to the risk that the PRC government may intervene in or influence your operations at any time, or may exert control over operations of your business, which could result in a material change in your operations and/or the value of the securities you are registering for sale. We remind you that, pursuant to federal securities rules, the term "control" (including the terms "controlling," "controlled by," and "under common control with") as defined in Securities Act Rule 405 means "the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract, or otherwise." We do not believe that your revised disclosure conveys the same risk. Please restore your disclosures in these areas to the disclosures as they existed in prior filings. As examples, and without limitation, we note that your revised disclosure in your Post-Effective Amendment No. 2 does not address the following points from these previous amendments:

- Your disclosure on page 34 regarding your potential inability to protect existing or potential future joint ventures by nominating a non-Chinese director to the board of any such joint venture;
- Your disclosure on page 34 stating that regulations applicable to LanzaTech China Limited, a WFOE, may change as a result of the central Chinese government or local governments imposing new, stricter regulations, or interpretations of existing regulations;
- Your disclosure on page 35 providing further detail regarding the applicability of Chinese regulations and approvals necessary to comply with the DSL;
- Your disclosure on page 36 stating "The Chinese government also exercises significant control over China's economic growth through allocating resources, controlling payment of foreign currency-denominated obligations [...].";
- Your disclosure on page 36 suggesting that PRC policies and internal rules "may have a retroactive effect"; and
- Your disclosure on page 36 limiting the risk of Chinese government interference and influence at any time to certain locations.

Response to Comment 2: In response to the Staff's comment, the Company has revised the disclosure on pages 34, 35, and 36 of Post-Effective Amendment No. 3.

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Please contact me at (202) 662-5297 with any questions or further comments regarding our responses to your comments.

Sincerely,

/s/ Kerry S. Burke

Kerry S. Burke
Covington & Burling LLP

cc: Jennifer Holmgren, LanzaTech Global, Inc.