

December 12, 2022

**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: Dillon Hagius and Laura Crotty

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**Re: AMCI Acquisition Corp. II  
Amendment No. 2 to Registration Statement on Form S-4  
Filed November 14, 2022  
File No. 333-264811**

Dear Mr. Hagius and Ms. Crotty:

On behalf of our client, AMCI Acquisition Corp. II, a Delaware corporation (the “Company” or “AMCI”), 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 November 27, 2022 (the “Comment Letter”), with respect to the above-referenced Registration Statement on Form S-4, filed on November 14, 2022 (the “Registration Statement”).

The Company has filed via EDGAR Amendment No. 3 to the Registration Statement (“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 Amendment No. 3. Capitalized terms used but not defined herein have the meanings set forth in Amendment No. 3.

Amendment No. 2 to Registration Statement on Form S-4

Political and economic uncertainty, including changes in policies of the Chinese government. . . . page 69

- 1. We note your response to comment 10 and re-issue in part. Please revise to clarify the current relationship between Sinopec Capital and China Petroleum & Chemical Corporation. Your disclosure that Sinopec Capital is a Chinese investment platform that was jointly established in 2018 by Sinopec Group and Sinopec Corp. does not explain the current relationship between the parties.**

Response: Based on a Form 6-K filed by China Petroleum & Chemical Corporation in August 2022, China Petroleum & Chemical Corporation held, directly or indirectly, 49% of the equity/voting rights of Sinopec Capital. In response to the Staff’s comment, the Company has added disclosure on page [75] of Amendment No. 3. The Company has no additional information regarding the relationship between Sinopec Capital and China Petroleum & Chemical Corporation.

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Background of the Business Combination, page 110

2. **We note your response to comment 5 and re-issue in part. In the "Background of the Business Combination" section, please explain how you came to enter into the Brookfield Framework Agreement on October 2, 2022. We note that many of the details provided in your correspondence are not provided in the filing itself.**

Response: In response to the Staff's comment, the Company has added disclosure on pages 133-134 of Amendment No. 3.

Resignations and Fee Waivers of the Advisors, page 118

3. **We note your response to comment 7 and your revised disclosure on page 121 that, "[i]n general, no substantive disclosure comments were received on behalf of the Advisors after the last date of resignation." Please revise to clarify whether the Advisors provided any comments about this proxy statement/prospectus after their respective last dates of resignation. If so, please specify which Advisor(s) provided those comments and the nature and timing of those comments.**

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 133-134 of Amendment No. 3. The Company respectfully acknowledges the Staff's comment and, as set forth below, advises the Staff regarding the nature and timing of any comments received from counsel to the Advisors after the Company received Goldman Sachs's notice of resignation on May 6, 2022. The Company is setting forth such comments as of such date because these comments were provided by counsel to the Advisors on behalf of the Advisors as a whole, none of such comments were attributed to any particular Advisor, and neither the Company nor LanzaTech has any insight into whether any such comments were specifically provided by any particular Advisor (as opposed to counsel to the Advisors).

In addition to the comments from counsel to the Advisors clarifying the circumstances of Goldman Sachs's resignation and its disassociation with the disclosure in the Registration Statement as a result of its resignation, which comments are discussed on page 131 of Amendment No. 3, the Company received the following comments from counsel to the Advisors:

- On June 14, 2022, in preparation for the filing of amendment no. 1 to the Registration Statement, counsel to the Advisors provided comments to the "Information about LanzaTech" section of the Registration Statement on behalf of the Advisors aimed at enhancing the disclosure about LanzaTech's business after the Advisors and counsel conducted informational sessions with LanzaTech management.
- On June 24, 2022 and July 1, 2022, counsel to the Advisors provided further comments to the "Risk Factors" section of the Registration Statement on behalf of the Advisors aimed at clarifying the reliance of LanzaTech on the projects of its industry partners as a result of due diligence that Barclays and Evercore performed on LanzaTech.

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- On September 27, 2022 and September 28, 2022, counsel to the Advisors provided further comments to the Registration Statement regarding the disclosure relating to various redemption scenarios, the outside date in the Merger Agreement, LanzaTech's patents, the circumstances surrounding the Company's efforts to raise the "Proposed Additional Financing" (as disclosed in the Registration Statement) and COVID-19.

Except as set forth above, neither the Advisors nor counsel to the Advisors provided any comments to the disclosure set forth in the Registration Statement after Evercore provided the Company with its notice of resignation on September 27, 2022 or after Barclays resigned as an Advisor on September 30, 2022. However (and as set forth in Amendment No. 3), all drafts of the amendments to the Registration Statement have been provided to counsel to the Advisors, and counsel to the Advisors has not expressed any disagreement with the disclosure in the Registration Statement, as amended.

The list of comments received from counsel to the Advisors set forth above omits any comments provided for correction of typographical or grammatical errors, stylistic preferences and conforming changes to make the disclosure in the Registration Statement internally consistent.

Beneficial Ownership of Securities, page 267

4. **We reissue prior comment 11 with respect to two of your Anchor Investors, namely Shaolin Capital Management, LLC and Aristeia Capital, LLC.**

Response: In response to the Staff's comment, the Company has added disclosure on page 301 of Amendment No. 3.

LanzaJet Shareholder Loan, page 292

5. **We note your disclosure that you entered into a Note Purchase Agreement on November 9, 2022. Please file this Agreement as an exhibit to the registration statement. Alternatively, provide an analysis supporting your belief that such filing is not required. Refer to Item 601 of Regulation S-K. Moreover, please update the "Background of the Business Combination" section to explain how you came to enter into the Note Purchase Agreement.**

Response: The Company respectfully advises the Staff that it considered the provisions of Item 601 of Regulation S-K in evaluating whether the filing of the Note Purchase Agreement would be appropriate. Item 601(b)(10)(i)(A) of Regulation S-K requires the filing of "[e]very contract not made in the ordinary course of business that is material to the registrant" and that is to be performed in whole or in part after the applicable filing. LanzaTech does not believe the Note Purchase Agreement is material to it, and does not believe it will be material to New LanzaTech, based on the aggregate amount of notes that LanzaTech committed to purchase under the agreement and the fact that the terms of the agreement do not materially restrict or otherwise impact LanzaTech's operations. In light of the foregoing, the Company respectfully submits that the Note Purchase Agreement is not required to be filed as an exhibit to the Registration Statement.

In response to the Staff's comment, the Company has added disclosure on page 134 of Amendment No. 3 to explain how LanzaTech came to enter into the Note Purchase Agreement.

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General

6. **We note your response to prior comment 16. Based on your disclosures and responses, we are unable to conclude that a majority of LanzaTech's current commercial operations are located outside of China. Accordingly, please revise your registration statement to address each of the comments from the Division of Corporation Finance's Sample Letter to China-Based Companies issued by the Staff in December 2021. To the extent you do not believe one or more of the comments is applicable, please explain why such is the case in your response letter.**

Response: In response to the Staff's comment, the Company has added and amended disclosure in Amendment No. 3 as described below.

With respect to Comments 1–4 from the Division of Corporation Finance's Sample Letter to China-Based Companies issued by the Staff in December 2021 ("Sample Letter"), the Company has added disclosure on the cover page. With respect to Comments 5, 7–9, 12, 14 and 15 from the Sample Letter, the Company has added disclosure on pages 30-32, 45, and 76-77, respectively.

With respect to Comments 2, 11 and 13 from the Sample Letter, the Company further respectfully advises the Staff that LanzaTech's auditor is not subject to the determinations announced by the PCAOB on December 16, 2021, and that the Holding Foreign Companies Accountable Act and related regulations are not applicable to LanzaTech.

With respect to Comment 5 from the Sample Letter, the Company further respectfully advises the Staff that LanzaTech employs a licensing business model whereby its customers develop, fund, construct and operate commercial scale facilities that use LanzaTech's technology, and in return, LanzaTech is paid a royalty fee based on the revenue generated by the customer from the use of its technology. The VIE structure of the Shougang Joint Venture was implemented to effectuate the intellectual property licensing arrangement between LanzaTech and the Shougang Joint Venture, since the Shougang Joint Venture holds a controlling interest in the entities that operate, and sublicenses the intellectual property to, the three commercial scale facilities in China that use LanzaTech's technology. The VIE structure is not intended to provide investors with exposure to foreign investment in China-based companies where Chinese law prohibits direct foreign investment in the operating companies. Although LanzaTech has a minority ownership interest in the VIE, it does not desire to own or operate the underlying commercial scale facilities. LanzaTech's primary focus in connection with the Shougang Joint Venture is the contractual licensing arrangements and the royalties related thereto, rather than direct ownership of the underlying commercial scale facilities. This licensing model is not substantially different from the licensing arrangements used by LanzaTech in connection with the rest of its business model worldwide. As such, the Company respectfully advises the staff that disclosure regarding how and why contractual arrangements may be less effective than direct ownership would be inapplicable to LanzaTech. Additionally, and for clarity, the Shougang Joint Venture is an unconsolidated VIE, rather than a consolidated VIE.

With respect to Comment 6 from the Sample Letter, the Company respectfully advises the Staff that LanzaTech holds its equity interests in the Shougang Joint Venture, a VIE, through LanzaTech Hong Kong Limited, a limited liability company organized in Hong Kong. Because LanzaTech Hong Kong Limited is not a WFOE organized under the laws of the PRC, this comment is not applicable to LanzaTech as LanzaTech's interest in the VIE is not held by a WFOE. As noted above, the Shougang Joint Venture is also not a consolidated VIE.

With respect to Comments 7 and 14 from the Sample Letter, the Company respectfully advises the Staff that because LanzaTech is incorporated and headquartered in the United States and because the Business Combination does not involve an offer of LanzaTech's securities in China, LanzaTech does not believe that any actions by the Chinese government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers would significantly limit or completely hinder LanzaTech's ability to offer securities to investors or cause the value of such securities to significantly decline or be worthless.

With respect to Comment 10 from the Sample Letter, the Company respectfully advises the Staff that LanzaTech does not currently consolidate any VIEs and therefore that this comment is not applicable to LanzaTech.

\* \* \*

Please do not hesitate to contact Elliott Smith at (212) 819-7644 of White & Case LLP with any questions or comments regarding this letter.

Sincerely,

/s/ White & Case LLP

White & Case LLP

cc: Nimesh Patel, AMCI Acquisition Corp. II