

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

July 3, 2023

Shantanu Gaur Chief Executive Officer Allurion Technologies Holdings, Inc. 11 Huron Drive Natick, MA 01760

> Re: Allurion Technologies Holdings, Inc. Amendment No. 3 to Registration Statement on Form S-4 Filed June 27, 2023 File No. 333-271862

Dear Shantanu Gaur:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply 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 these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our June 22, 2023 letter.

Amendment No. 3 to Registration Statement on Form S-4

Non-Redemption Agreement, page 216

1. We note your response to prior comment 3. We disagree that the Sales Agency Agreement is not required to be filed as an exhibit to your registration statement. We note disclosure that in connection with the execution of the Business Combination Agreement, Compute Health entered into the Non-Redemption Agreement with New Allurion, Allurion and Medtronic. The Non-Redemption Agreement and Medtronic Sales Agency Agreement are substantially related to this Business Combination and the Non-Redemption Agreement refers to the Medtronic Sales Agency Agreement. Please file the Medtronic Sales Agency Agreement as an exhibit to your registration statement.

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General

2. Please fill in missing information that is not eligible to be omitted pursuant to Rule 430A of the Securities Act in a pre-effective amendment. Please revise throughout your registration statement to include all information required under Rule 430 of Regulation S-K in order for shareholders to receive a complete prospectus. Please note that this includes all information to be calculated as of the record date, since you have set the record date as July 3, 2023. Additionally, where applicable throughout your filing, revise to include the approximate amount of funds in the trust account and the stock trading price of the Compute Health shares as of a recent practicable date. Last, revise to disclose the fee to be paid to Morrow Sodali or tell us why you cannot reasonably calculate such fee.

You may contact Julie Sherman at 202-551-3640 or Brian Cascio at 202-551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Benjamin Richie at 202-551-7857 or Lauren Nguyen at 202-551-3642 with any other questions.

Sincerely,

Division of Corporation Finance Office of Industrial Applications and Services

cc: Danielle Lauzon