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

DIVISION OF
CORPORATION FINANCE

July 12, 2023

Michael P. Murphy
Chief Executive Officer
Rosecliff Acquisition Corp I
767 5th Avenue, 34th Floor
New York, New York 10153

Re: Rosecliff Acquisition Corp I
Amendment No. 1 to Registration Statement on Form S-4
Filed June 28, 2023
File No. 333-271566

Dear Michael P. Murphy:

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 May 26, 2023 letter.

Amendment No.1 to Registration Statement on Form S-4

Summary, page 25

1. We note your response to previous comment 4. Please revise to explain how the potential per share value of the shares owned by non-redeeming shareholders will be $10 and will also not change based on the redemption level.

Ownership of the Combined Company, page 26

2. In the graphic on page 30 you show the post-Business Combination ownership structure with a title that says "full redemptions." Directly below the table you state: "This level of ownership interest assumes: (a) no RCLF public stockholder exercises redemption rights with respect to his/her/its shares for a pro rata portion of the funds in RCLF's trust account…." Please revise to reconcile these statements.

Risk Factors, page 51

3. Where appropriate, please include a risk factor discussing the current state of artificial intelligence regulation within the United States and your other potential markets, the potential for new laws or rules to materially impact the company and whether these risks were included in your discussions and analysis of Spectral's projections and valuation.

4. We note your response to previous comment 7, which we reissue in part. Please tell us whether your sponsor has substantial ties with a non-U.S. person or is controlled by a person with substantial ties with a non-U.S. person, or has any members who are controlled by a non-U.S. person or that have substantial ties with a non-U.S. person. Please also tell us whether Spectral is, is controlled by, or has substantial ties with a non-U.S. person.

We may redeem unexpired public warrants prior to their exercise at a time that is disadvantageous..., page 97

5. We note the revised disclosure in response to previous comment 33 and reissue in part. Here, or elsewhere, please quantify the value of warrants, based on recent trading prices, that may be retained by redeeming stockholders assuming maximum redemptions and identify any material resulting risks.

Unaudited Pro Forma Condensed Combined Financial Information, page 117

6. We note on page 124 that $7.4 million in Spectral transaction costs were capitalized and offset against the proceeds of the Business Combination and reflected as a reduction to additional paid in capital. Please clarify your pro forma accounting for any Spectral transaction costs in excess of these proceeds. As part of your response, provide us your calculation of the proceeds of the Business Combination.

7. We note there are 45,645,354 stock options that are anti-dilutive in the table on page 127 and only 2,169,282 dilutive stock options in the table on page 126. Please provide us your calculation of how the 2,169,282 dilutive stock options was determined. In addition, reconcile for us the 45,645,354 shares of common stock equivalent on pages 127 and F-86 with the 35,964,000 on page F-85. Lastly, provide an additional or expanded table on page 119 to reflect ownership interests immediately after the Business Combination on a fully diluted basis, indicating by footnote average exercise prices, exercisability, etc.

8. Please provide us your analysis of whether pro forma information should be provided for the Private Placement.

Information about RCLF, page 153

9. We note your response to previous comment 11, which we reissue in part. Please revise page 302 to state whether the general provision requiring the Court of Chancery of the State of Delaware as the exclusive forum applies to any complaint asserting a cause of action arising under the Securities Act.

Legal Proceedings, page 156

10. We note that you have received a shareholder demand letter claiming that your registration statement "omits material information with respect to the transactions." Please clarify which "transactions" are referenced and revise to provide the current status and how you plan to respond to the demand.

Information About Spectral, page 173

11. We note your revised disclosure in response to previous comment 15 and reissue in part. Where you make a claim that is supported by "industry literature," please provide a citation to and, at each source's first instance, include language summarizing the material conclusions of such literature. Additionally, on page 183 you similarly state: “In the DFU indication, our accuracy is also above physician accuracy in head-to-head studies.” Please revise to state the physician accuracy rate in your cited head-to-head studies.

Business Focus and Milestones, page 180

12. We note your response to previous comment 16, which we reissue in part. You state that you plan to “further the DeepView System design, develop the AI algorithm, and take the necessary steps to obtain FDA approval for [y]our DeepView GEN 3 System.” Here, and throughout the document when referring to future regulatory approvals, please include a statement acknowledging that FDA, or other regulatory agency, foreign or domestic, approval is not guaranteed and may take longer than planned. Additionally, the figure on page 180 shows a footnote 1 in the title, but no corresponding footnote appears below the table. Please revise to provide the text of footnote 1.

13. We note your response to previous prior comment 20. With respect to the “Horizon applications” shown in the pipeline table on page 180, it appears these indications are not material enough to be included in your pipeline table. You state on page 179 that venous leg ulcers is a primary horizon indication for your DeepView System yet you will look to advance a proof-of-concept clinical study over the next few years. Additionally, you do not provide any disclosure concerning the current developmental status of your indications of tissue diagnosis for limb amputation and tissue diagnostics relating to critical limb ischemia. Please revise to remove the "Horizon applications" from the table or further revise to provide the basis that these applications are material enough to be included in your pipeline table at this time.

Clinical Validation and Regulatory Pathway, page 192

14. We note your response to previous comment 18, which we reissue in part. On page 52 you state that BARDA exercised its Option 1A and 1B expansions and may exercise further options to extend the term of the contract subject to contract milestones and decision gates. Please revise your disclosure to describe these milestones and decision gates and the options. In this regard please provide additional information or more detailed information than Figure 9 on page 193. Further, in your description of your MTEC grant on page 194 you state that MTEC will pay you a firm fixed fee based upon your achievement of certain milestones described in the agreement through April 5, 2025. Please revise to describe these milestones.

Spectral's Management's Discussion and Analysis of Financial Condition and Results of Operations
Sources of Liquidity, page 218

15. We note your contract with BARDA has a potential funding of up to $96.9 million and aggregate funding through March 31, 2023 was $47.6 million. Please revise your discussion to provide additional insight and analysis regarding the potential funding up to $96.9 million if future options are executed.

The RCLF Board's Reasons for the Approval of the Business Combination, page 243

16. We note your updated disclosure on page 34 regarding your commercialization potential in response to previous comment 3. Please revise your similar discussion on page 244 to also state that approval or clearance from the FDA and comparable regulatory bodies may never be obtained.

Certain Projected Information, page 245

17. We have reviewed your response to prior comment 29 but it does not appear that the correction to the operating expense line item on page 247 has been made. Please revise, accordingly.

Exhibits

18. Please ensure that all material agreements, to include the Sponsor Letter Agreement, are filed as exhibits to the registration statement. Refer to Item 601 of Regulation S-K.

General

19. We note that the information shown on slide 29 of your investor presentation dated as of June 22, 2023, filed as an attachment to your Form 8-K, filed June 22, 2023, appears to differ from the information included in the prospectus. For example, it appears the peer company analysis on slide 30 differs from that disclosed on page 242, the pro forma shares outstanding on page 119 is 18,338,716, whereas in the presentation it is 20.8 million and the sources and uses of funds on page 45 differs from slide 29 as well. Please revise to reconcile or advise.

You may contact Michael Fay at 202-551-3812 or Terence O'Brien at 202-551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Benjamin Richie at 202-551-7857 or Margaret Schwartz at 202-551-7153 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Industrial Applications and Services

cc: P. Michelle Gasaway, Esq.