



DIVISION OF  
CORPORATION FINANCE

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

April 25, 2023

Scott Honour  
Chairman of the Board  
Perception Capital Corp. II  
315 Lake Street East, Suite 301  
Wayzata, MN 55391

**Re: Perception Capital Corp. II**  
**Preliminary Proxy Statement on Schedule 14A**  
**Filed March 29, 2023**  
**File No. 001-40976**

Dear Scott Honour:

We have reviewed your filing 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Preliminary Proxy Statement on Schedule 14 A filed March 29, 2023

Q. What will be the relative equity stakes of public shareholders, the Sponsor, Meteora and the Spectaire Stockholders in NewCo upon . . . , page xiv

1. Please revise your post-Closing share ownership table on pages xiv and 7 to include interim redemption scenarios in your sensitivity analysis and to disclose all possible sources and extent of dilution that shareholders who elect not to redeem their shares may experience in connection with the business combination. Provide disclosure of the impact of each significant source of dilution, including the amount of equity held by Sponsor and Initial Shareholders, the Spectaire earn-out shares, convertible securities, including warrants retained by redeeming shareholders, at each of the redemption levels detailed in your sensitivity analysis, including any needed assumptions. Please also disclose the effective underwriting fee on a percentage basis for shares at each redemption level presented in your sensitivity analysis.

Q. Do any of PCCT's Directors or officers or the sponsor or its affiliates have interests in the business combination that may differ . . . , page xxiv

2. We note that footnote 1 to the post-business combination ownership table on page xxiv assumes that the Sponsor exercised its option to convert up to \$2,500,000 of the unpaid principal balance on the Working Capital Note into redeemable warrants. However, it appears that the 16,430,000 shares that will be owned by the Sponsor post-Business Combination only include the shares issuable upon the exercise of the 10,050,000 private placement warrants and the 720,000 Extension Warrants, and the 5,660,000 shares issuable upon conversion of the Class B Shares. Please revise to resolve this apparent discrepancy and to disclose how many redeemable warrants the Sponsor could receive if it exercises its option to convert the Working Capital Note and the conversion rate of the redeemable warrants.

Unaudited Pro Forma Condensed Combined Financial Information, page 68

3. We note based on adjustment (i) to the pro forma condensed combined balance sheet that the working capital note and extension note will be converted into warrants. Please discuss this conversion into warrants in your Description of the Business Combination. Please also disclose the terms of the warrants and how you intend to account for the warrants.
4. We note adjustment (l) regarding the Forward Purchase Agreement with Meteora and that you determined a liability should be recorded. Please expand your disclosures to address the key terms that led you to determine liability accounting was appropriate under ASC 480 and ASC 815. Please also further clarify how you are reflecting this agreement in your pro forma financial information. Specifically it appears for your balance sheet presentation you are not assuming Meteora purchases shares whereas for purposes of determining pro forma earnings per share amounts you are assuming that Meteora purchased the maximum 2,457,892 shares. Please disclose your basis for your assumptions and also your consideration of the guidance in Rule 11-02(a)(10) of Regulation S-X which indicates that additional pro forma presentations which give effect to the range of possible results may be necessary if the transaction is structured in such a manner that significantly different results may occur.
5. We note based on your disclosures on page 69 that outstanding options to purchase Spectaire common stock, restricted stock units relating to Spectaire common stock, and restricted shares of Spectaire Common stock will be converted as part of the merger terms. Please address your consideration of whether there will be any financial statement impact of these exchanges. In this regard, we note that there were significant amounts of unrecognized compensation expense at December 31, 2022 based on disclosures on page F-41.

6. We note adjustment (m) indicates that you have preliminarily determined that the Earnout Shares should be accounted for as a liability. Please further expand your disclosures to clarify the specific terms that resulted in this determination pursuant to your consideration of ASC 815-40-15. Please also disclose and discuss the potential impact of the shares on future results and provide a sensitivity analysis that quantifies the potential impact that changes in the per share market price of the post combination common stock could have on the pro forma financial statements. Refer to Article 11-02(b)(10) of Regulation S-X.
7. In note (1) on page 79, please state the share amount of any dilutive outstanding securities that were excluded from the computation of pro forma net loss per share because of their anti-dilutive effect.
8. Please expand Note (L) on page 74 to clarify why your current assets are 95% higher in the maximum redemption scenario relative to the minimum redemption scenario. Quantify the impact of each specific assumption impacting your Escrow cash adjustment. Disclose any known factors that could reasonably be expected to cause your actual Escrow cash balance in a maximum redemption scenario to materially differ from the amount presented. Disclose the restrictions on your ability to use the Escrow cash funds and what your strategy is to sustain operations with zero unrestricted cash available. Note also the guidance in Article 11-02(a)(10) of Regulation S-X.

Purchase of PCCT Ordinary Shares, page 90

9. We note the disclosure on page 90 that the Sponsor, Spectaire and its affiliates "may" purchase PCCT Ordinary Shares in the open market and vote the securities in favor of approval of the business combination transaction. Please provide your analysis on how such potential purchases would comply with Rule 14e-5.

Security Ownership of Certain Beneficial Owners and Management of PCCT and NewCo, page 131

10. Please also disclose the Sponsor and its affiliates' total potential ownership interest in the combined company, assuming the exercise and conversion of all securities, including warrants. We note that the 5,660,000 shares to be beneficially owned by your Sponsor after the business combination does not appear to assume the exercise of the Private Placement Warrants, the Extension Warrants or the redeemable warrants issuable upon conversion of the Working Capital Note.

Information About NewCo Following the Business Combination, page 134

11. Please revise to provide a supporting basis for the following statements:
- on page 134, "Our asset-light business model delivers a win-win-win for Spectaire, for our customers, and for the environment"; and "We believe that, prior to our introduction of AireCore™, there was no practical way to directly measure real-time transportation emissions";
  - on page 135, "We believe that AireCore™ is the world's first and only device able to address [the technology gap between emissions requirements and access to emissions management capabilities] by delivering real-time, accurate, and verifiable emissions measurements";
  - throughout your prospectus, that AireCore has "industry leading" accuracy;
  - on page 178, that Spectaire is part of a "Large and Growing Market with No Viable Competitors" and that "The PCCT Board also believed that Spectaire's micro-mass-spectrometer (MMS) device is the world's first and only MMS that can directly measure actual emissions in vehicular use and is a mobile, affordable and reliable emissions measurement product."

Spectaire's AireCore Solution, page 135

12. We note your disclosure that AireCore™ is protected by a robust patent portfolio. Please expand your disclosure to identify by patent family or otherwise the type of patent protection (such as composition of matter, use or process), the technology to which it relates, the relevant jurisdiction and the expiration date. Ensure that you segregate issued patents and patent applications.

Spectaire's Business Model, page 151

13. We note your disclosures regarding projected gross margin percentages. Given the limited historical operations of Spectaire including no revenues have been recorded, please provide disclosures in order for an investor to understand the reasonableness of the assumptions underlying the projected amounts as well as the inherent limitations of the projected amounts.

Executive and Director Compensation, page 166

14. Please revise to also provide executive compensation disclosure for the fiscal year ended December 31, 2020.

The Business Combination

Background to the Business Combination, page 171

15. Please revise the background section to provide additional detail regarding the target businesses other than Spectaire that you executed letters of intent with. Include, without limitation, the industries of the target businesses, proposed valuations, the date that the targets were identified, and the dates that discussions began and ceased. To the extent that any preliminary proposals were submitted, please disclose all material proposal terms, including transaction structure, valuation, and equity split distribution.
16. We note that after initially being introduced to Spectaire for a capital raising transaction, discussions stalled until September 7, and then again until late November 2022. Please clarify what consideration PCCT gave to participating in a capital raising transaction with Spectaire, why it chose to pursue a business combination with Spectaire instead, and at what point PCCT began to consider Spectaire a potential target for a business combination. Please also disclose who reinitiated the discussions regarding a potential business combination between PCCT and Spectaire and the date that these discussions resumed.
17. Please provide more insight into the reasons for and negotiations behind management's decision regarding the ultimate amount and form of consideration for the business combination, including (i) how you determined the valuation in the letter of intent submitted by PCCT on November 30, 2022; (ii) how the parties determined the structure of the transaction and whether any alternative structures were considered; (iii) how the parties determined the amount of the earn-out; and (iv) changes from letter of intent to the final merger agreement. Please include the methodology employed in reaching the valuation, the underlying assumptions and conclusions of the PCCT board.

18. Please expand your background discussion to provide more detailed disclosure regarding key negotiation considerations and how they changed over time. Currently the background disclosure generally references negotiation topics and terms of the proposed merger agreement, without providing details or explaining their significance, the parties' positions on the terms throughout the negotiations, or how the terms may have changed before being reflected in the proposed initial business combination. For each exchanged draft and discussion related to the terms of merger agreement, please elaborate on the terms discussed, including each material proposal, the proposing party, the reasons for the terms, each party's position on the issues, and how you reached agreement on the final terms. In addition, please expand the description of the transaction timeline to include any relevant disclosure to address:
- whether the sponsor and management and affiliates have a track record with SPACs and, if so, balanced disclosure about this record and the outcomes of the prior transactions;
  - whether the sponsor has other SPACs in the process of searching for a target company and whether the sponsor considered more than one active SPAC to be the potential acquirer and how the final decision was reached;
  - the negotiation of any arrangements for any shareholder to waive its redemption rights; and
  - any discussions involving continuing employment or involvement for any persons affiliated with PCCT before the merger.
19. We note that the Letter of Intent signed December 1, 2022 contemplated that PCCT would arrange an equity line of credit of at least \$50 million, a \$25 million forward share purchase agreement prior to signing of a definitive agreement and/or a PIPE of \$25 million or more between signing and closing. Please disclose the background and any discussions related to the need to obtain additional financing, including:
- why the option of a forward share purchase agreement was selected;
  - whether PCCT met with any potential PIPE investors or pursued any other financing arrangements;
  - who selected Meteora for the forward share purchase agreement;
  - what relationships did the Meteora have with PCCT, the Sponsor and its affiliates, and Jeffries;
  - how the terms of the Forward Purchase Agreement evolved in the drafts exchanged between December 13, 2022 and January 10, 2023; and
  - the parties' positions on these terms.

Please also clarify whether disclose whether there were any valuations or other material information about PCCT, Spectaire, or the de-SPAC transaction provided to Meteora or other potential PIPE investors that have not been disclosed publicly.

20. We note that at various meetings in December and January, representatives of PCCT and Spectaire discussed Spectaire's business model and certain related assumptions and variables, Spectaire's financial model and related assumptions, capital requirements, path to scale, customer pipeline and the capabilities of Spectaire products. Please revise your disclosure to discuss what in particular was discussed with respect to these topics, as well as the relevant positions of each party and how these topics influenced the terms of the transaction.
21. We note that representatives of PCCT reviewed and discussed Spectaire's financial model and its underlying assumptions in July 2022 and the December 14, 2022 due diligence session. Please elaborate upon the content of Spectaire's financial model and explain whether it relied upon financial projections of any kind. To the extent that PCCT's Board, officers and/or directors reviewed projected financial information provided by Spectaire, please revise to disclose such projections, how the board used any projections provided and discuss all material assumptions used to develop the projections. We note, for example, your statement on page 178 that "Spectaire expects to achieve positive EBITDA and cash flow by 2024." Also discuss the possible impact if the projections are not correct and clarify when the projections were provided.
22. We note that it does not appear that PCCT Board sought a third-party valuation and did not receive any valuation report or opinion from a third party in connection with the business combination. Please disclose any discussions related to obtaining a fairness opinion for the business combination and the basis for the PCCT board determining it was not necessary to obtain a fairness opinion for the business combination.

The PCCT Board's Reasons for Approval of the Merger, page 177

23. Please disclose whether and how the Board took into account the consideration to be paid for the transaction. If the Board did not take this factor into account, please explain why.

U.S. Federal Income Tax Considerations, page 203

24. We note that the merger agreement indicates that the parties intend for the merger to be treated as a reorganization under Section 368(a) of the Internal Revenue Code. If you believe the business combination will be tax free, please disclose an opinion of counsel that supports this conclusion. Furthermore, indicate whether the receipt of a tax opinion as to the tax free nature of the transaction is a condition to the merger

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Page 8

Certain Relationships and Related Party Transactions - NewCo  
Forward Purchase Agreement, page 231

25. We note that PCCT has entered into a forward stock purchase agreement with Meteora. Please provide your analysis demonstrating how this agreement complies with Rule 14e-5.

Financial Statements of Spectaire, Inc.  
Report of Independent Registered Public Accounting Firm, page F-27

26. The accountant's report is missing the accounting firm's signature. Please obtain and file a revised accountant's report that complies with Rule 2-02(a) of Regulation S-X.

Note 1. Organization and Business Operations, page F-32

27. We note that you determined that MircoMS was the accounting acquirer in the recapitalization transaction that took place in December 2022. Please expand your disclosures to address how you made this determination pursuant to ASC 805-10-25-5 as well as ASC 805-10-55-11 through 55-15. Please address the specific factors you considered including the relative voting rights that each entity held in the combined entity.
28. Please tell us what consideration you gave as to whether the financial statements of Spectaire Inc. prior to the merger needed to be provided pursuant to Rule 8-04 of Regulation S-X.

Note 13. Subsequent Events, page F-43, page F-43

29. Please complete the date through which subsequent events were evaluated.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Nudrat Salik at 202-551-3692 or Al Pavot at 202-551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Jordan Nimitz at 202-551-5831 or Celeste Murphy at 202-551-3257 with any other questions.

Sincerely,

Division of Corporation Finance  
Office of Industrial Applications and  
Services

cc: Michael Mies, Esq.