



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-3561

Mail Stop 3561

May 5, 2010

Mr. Timothy Carnahan
Chief Executive Officer
CYIOS Corporation
1300 Pennsylvania Avenue, Suite 700
Washington, D.C. 20004

Re: CYIOS Corporation
Registration Statement on Form S-1
Filed April 8, 2010
File No. 333-165941

Dear Mr. Carnahan:

We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter

General

1. Since it appears that you are conducting an indirect primary offering of shares that may be purchased by Auctus, the private placement under the equity financing agreement must be completed prior to the registration of the resale transaction, and the pricing mechanism must be set. We note your disclosure that Auctus shall immediately cease selling any shares of your common stock within a drawdown notice if the price of your common stock falls below a predefined floor price, but that you can waive this requirement. Since the equity financing agreement permits discretion regarding the price of the securities underlying the put, it appears that the transaction has not been completed and cannot be registered on an indirect primary basis. Please advise. If it is necessary to amend your agreement with Auctus, you must first withdraw the registration statement, renegotiate the necessary provisions, and then file a new registration statement.

2. Please note that the completion of our review of your registration statement is subject to the resolution of our outstanding comments on your December 31, 2009 Form 10-K and other periodic reports.

Prospectus Cover Page

3. Please clarify here and throughout the prospectus, as applicable, that although the equity financing agreement covers a \$7 million financing, the registration statement covers the offer and possible sale of only approximately \$200,000 of your shares at current market prices.

Item 3 – Summary Information and Risk Factors, page 1-1

4. Please briefly discuss the transaction with Auctus under a separate heading in the summary, and in greater detail under the Plan of Distribution section, including the following:
 - the material terms of the equity financing and registration rights agreements;
 - any potential liquidated damages or penalty payments, such as those set forth in Section 2.4 of the equity financing agreement;
 - the expenses, including commissions, you expect to incur in connection with the transaction, such as the \$15,000 payment to Auctus consisting of \$7,500 in cash and 100,000 in shares of common stock;
 - the likelihood that you will ever receive or will ever need, based on your business plans, the full amount of proceeds available under the equity financing agreement. If you are not likely to ever receive the full amount, please explain why you chose the particular dollar amount of the equity financing; and
 - explain why you elected to only register 3.5 million shares at this time.

Item 3 – Risk Factors page 1-4

5. Please delete the fifth sentence in the first paragraph where you state that other risks may affect you. All material risks should be described in your disclosure. If risks are not deemed material, you should not reference them.

We are registering an aggregate of 3,500,000 shares . . . , page 1-8.

6. Please disclose that under Sections 2.2(a) and 3.10 of the equity financing agreement, Auctus may engage in short selling activities during the pricing period, and that such sales could cause the price of your shares to fall substantially because your trading volume is generally low.

Auctus will pay less than the then-prevailing market price . . . , page 1-8

7. Please revise the heading to describe the resulting dilutive risk. Also revise your risk factor disclosure to describe the following:
- the dilutive effect of the equity financing pricing mechanism;
 - Auctus may make short sales during the pricing period, which could cause the price of the shares to fall substantially because your trading volume is generally low;
 - you may be required to issue a substantial number of additional shares with each Advance if your market price declines; and
 - there may be substantial dilution to existing shareholders in the event your stock price falls and you issue more shares in connection with the Advances.

Item 4 – Use of Proceeds, page 1-11

8. Please describe in greater detail how you plan to use the net proceeds reflected in the table. If you are repaying debt, please describe the material terms of the debt.

Item 6 – Dilution, page 1-11

9. We note that your table indicates the potential dilution of your outstanding shares if the full amount under the equity financing agreement is exercised at various market prices. Please revise this table to reflect the following:
- Account for the number of shares that you will need to issue at the price that Auctus will actually pay. In this regard, we note that pursuant to the drawdown agreement the number of shares you will issue to Auctus is determined by dividing the amount of the advance by the purchase price, which is 94% of the lowest closing bid price of common stock during the pricing period and not the market price.
 - Also disclose the information in the table assuming your stock price decreased 50% and 75% from the recent stock price.
 - Disclose the net cash payments to the company for the shares issued to Auctus.

Item 7 – Selling Security Holders, page 1-12

10. We note that you identify Al Sollami as a managing member of Auctus. Please clarify, if true, that Al Sollami has sole voting and/or investment control over the securities Auctus owns in the company or disclose the natural person or persons who have voting and/or investment control over the securities.

Item 8 – Plan of Distribution, page 1-13

11. Please revise to state that Auctus is subject to Regulation M.

12. You state that you cannot issue shares to Auctus under the drawdown agreement if it would result in their beneficial ownership equaling more than 4.99% of your outstanding common stock. However, Section 7.1(g) of the equity financing agreement indicates that Auctus and their affiliates cannot own more than 9.9% of your outstanding common stock. Please reconcile. Also, please disclose in your registration statement if this ownership limit includes Auctus and its affiliates.
13. Please revise your disclosure to state, if true, that Auctus intends to promptly sell any shares corresponding to the drawdown notices during the pricing period. Please describe any short selling and any other hedging activities that Auctus may engage or has engaged in with respect to the company's securities. Please also discuss how Auctus intends to distribute the securities they own or will acquire.

Management, page 1-21

14. Please update your disclosure to comply with the amendments to Item 401 of Regulation S-K that are effective February 28, 2010. For example, under Legal Proceedings, revise your disclosure to indicate a ten year period, and list all the proceedings set forth in Item 401(f). Refer to SEC Release No. 33-9089.

Where you can find more information, page 1-23

15. We note that you list the SEC's public reference room as being at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549 or Citicorp Center, 500 West Madison Street, Suite 1400 Chicago, Illinois, 60661. Please note that our public reference room is now located at 100 F. Street, N.W. Washington, D.C. 20549. Please revise your filing accordingly. Also, please remove your reference to the Chicago address.

Report of Independent Registered Public Accounting Firm, page 1-25

16. We note that Jewett, Schwartz, Wolfe & Associates' report only covers your financial statements for the period ended December 31, 2009. We also note that Exhibit 23.2 indicates that Baum & Company, PA audited your financial statements for the period ended December 31, 2008. However, we are unable to locate Baum & Company's report. Please amend your filing to provide the audit report of Baum & Company for the year ended December 31, 2008. Refer to Article 3 of Regulation S-X for instructions on the balance sheets and statements of income and cash flows to be included in disclosure documents prepared in accordance with Regulation S-X. Please also revise the consent of Baum & Company to reflect that they consent to the use of their report in the registration statement, and that they consent to the reference to their firm under the caption "Experts."

Item 15 – Recent Sales of Unregistered Securities, page 2-2

17. Please provide the Item 701 of Regulation S-K disclosure with respect to your issuance of 100,000 shares to Auctus and for any other unregistered sale of any securities. In this regard, we note that in “Note F-Equity,” on page 1-34 you issued shares to “investors,” among others, in 2009.

Signatures, page 2-4

18. We note that your registration statement is not signed as provided under Signatures and the related instructions to Form S-1. In this regard, your principal executive, financial and accounting officers and at least a majority of the board of directors or persons performing similar functions must sign the registration statement below the relevant language in the Form S-1 indicating that such persons are signing on behalf of the registrant and in the capacities indicated. Please amend your filing to provide for signatures as provided in the form.

Exhibit 5.1

19. We note that the legal opinion states in the first paragraph that the shares being registered are “to be sold to the public by the Company on a best efforts basis without the use of any underwriters.” Please revise to indicate that the shares are being offered by the selling security holder identified in the registration statement, who is an underwriter in connection with the resale of the company’s common stock under the equity financing agreement.
20. Please clarify in the fourth and fifth paragraphs that the 3,500,000 shares being registered have been duly authorized, and when sold pursuant to the terms described in the registration statement, will be legally issued, fully paid, and non-assessable.
21. We note your reference in the penultimate paragraph to the section captioned "Legal Representation" in the prospectus; however, this section is not included in the filing. Please revise the prospectus accordingly.
22. We do not object to you not admitting that you are an expert within the meaning of Section 7, but we do not believe it is appropriate to also include the general rules and regulations thereunder or the Section 11 language. Please revise.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

Mr. Timothy Carnahan
CYIOS Corporation
May 5, 2010
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We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Robert W. Errett, Staff Attorney, at (202) 551-3225, or Brigitte Lippmann, Special Counsel, at (202) 551-3713, or me at (202) 551-3720 with any questions.

Sincerely,

H. Christopher Owings
Assistant Director

Mr. Timothy Carnahan
CYIOS Corporation
May 5, 2010
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cc: Peter J. Gennuso, Esq.
Gersten Savage, LLP
Via facsimile