



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

October 4, 2006

Via U.S. mail and facsimile

Mr. Louis B. Bernstein
Interim Chief Executive Officer
Xethanol Corporation
1185 Avenue of the Americas, 20th Floor
New York, NY 10036

**Re: Xethanol Corporation
Amendment No. 1 to Registration Statement on Form SB-2
Filed September 15, 2006
File No. 333-135121**

Dear Mr. d'Arnaud-Taylor:

We have reviewed your amended filing and your response and have the following comments. 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.

Market, Ranking and Other Data, page ii

1. Please relocate this section to a more appropriate location in your prospectus, as the prospectus summary should immediately follow your table of contents.
2. We note the statement in the fifth sentence that you have not verified certain of the data used in your prospectus. Please be advised that you are responsible for the entire content of your prospectus and you cannot include language that may be interpreted as a disclaimer of that content. Please revise accordingly.

Summary, page 1

3. We note your response to comment 15 of our letter dated July 13, 2006 and we reissue this comment. In this regard, we note that the requested disclosure does not appear to be included in your prospectus.

Recent Developments, page 2

4. Please update this section or explain to us why you still consider each of these events to be recent given that it is now September. For example, we note that many of these events took place in April 2006.

Risk Affecting Us, page 3

5. Please revise to present your disclosure in accordance with plain English. For example, use bullet points for the risks you highlight in this section and be more specific in your description of each risk you include in your summary section.

Risk Factors, page 4

6. We note your response to comment 26 of our letter dated July 13, 2006 and we reissue this comment with respect to the second sentence. In this regard, please estimate the total number of issuable shares as of a recent date.
7. We note your response to comment 35 of our letter dated July 13, 2006 and we reissue this comment. In this regard, we note that the requested disclosure does not appear to be included in your prospectus.
8. We note your response to comment 37 of our letter dated July 13, 2006. Given your revised disclosure, this risk factor now appears generic. Please revise to clearly explain how this risk applies to your company. For example, disclose your historical compliance costs.

We have had a history of net losses, page 4

9. It appears that your accumulated deficit at June 30, 2006 was (\$23,471,703) and not (\$2,195,343) as disclosed in this risk factor. Please revise accordingly.

Description of Agreements with the Selling Stockholders, page 13

10. Please revise the first sentence of the first paragraph to clarify that this section summarizes the “material” provisions of the agreements, rather than “certain” provisions of the agreements.
11. Please delete your statement in the second sentence of the second paragraph that the summary is qualified by reference to the agreements filed as exhibits to your registration statement, as it is inconsistent with Rule 411 of Regulation C.

Write-off on Intangible Assets and Goodwill, page 21

12. We note the additional disclosures you provided in response to comment 44 of our letter dated July 13, 2006 here and on page F-38. Based on your disclosures regarding uncertainties in the timing of commercialization of the technologies you acquired and your inability to generate reliable or predictable cash flows, please address the following:

- It is not clear to us how and why these technologies were appropriately recorded as assets at the date of acquisition. Please clarify or revise.
- It is not clear to us how you determined the number of shares to issue to acquire these technologies (and hence their value) in light of your inability to generate reliable or predictable cash flows. Please clarify.
- It is not clear to us why your disclosures related to these technologies are in the notes to your interim financial statements rather than your audited financial statements. Please revise.

If you determine that these technologies would have been more appropriately recorded as in-process R&D at the date acquisition, please revise your financial statements and MD&A disclosures accordingly. Your revised disclosures should address: appraisal method(s); significant assumptions; the specific nature of the technologies; their stage of completion; projected costs to complete; projected timing to complete; current status; and risks and uncertainties regarding completion.

Three Months Ended March 31, 2006 Compared to Three Months Ended...., page 18

13. It appears that this section discusses the three months ended June 30, 2006 as compared to the three months ended June 30, 2005. Please revise the heading accordingly.

Liquidity and Capital Resources, page 21

14. We note your response to comment 46 of our letter dated July 13, 2006 and we reissue this comment. In this regard, we note that your liquidity is impacted by indebtedness regardless of whether you incurred the debt in the ordinary course of your business or otherwise.
15. We note that you pay and receive royalties and other payments pursuant to your various license agreements. Please discuss these royalties and other payments.

Virginia Polytechnic Institute and State University, page 40

16. We note the disclosure in the second paragraph. Please disclose the amount of royalties and other payments you are required to pay. Please also comply with this comment in the second paragraph under each of the following headings:
- “Queen’s University, Kingston, Ontario” on page 41;
 - “National Renewable Energy Laboratory” on page 41;
 - “U.S. Department of Agriculture’s Forestry Products...” on page 41; and
 - “University of North Dakota” on page 42.

DDS Technologies USA, Inc., page 44

17. Please revise the second paragraph to discuss the amount of the royalties and other amounts you are entitled to receive.

Sales and Marketing, page 44

18. It appears that you entered into a new agreement with Aventine in July 2006. Please disclose the material terms of this agreement and file it as an exhibit to your registration statement.

Selling Stockholders, page 62

19. We note that the numbers of shares listed in the line item “Selling Stockholders as a Group” do not equal the total amounts disclosed in their respective columns of the table. In this regard, we note that the total number of shares disclosed in the first column appears to be 9,862,996 shares and the total number of shares disclosed in the second column appears to be 9,250,325 shares. Please revise accordingly.
20. We note that the total number of shares disclosed in the second column is less than the number of registered shares. Please revise to disclose the information required by Item 507 of Regulation S-B for all registered shares.
21. We note your response to comment 63 of our letter dated July 13, 2006. If a selling stockholder is a broker-dealer, your prospectus should state that the selling stockholder is an underwriter. If a selling stockholder is an affiliate of a broker-dealer, please provide the following representations in your prospectus:

- the selling stockholder purchased the securities to be resold in the ordinary course of business; and
- at the time of the purchase of the securities to be resold, the selling stockholder had no agreements or understandings, directly or indirectly, with any person to distribute the securities.

If you are unable to make these representations, please state that the selling stockholder is an underwriter.

Registration Rights, page 71

22. Please delete all references in this section to the term “certain” and describe the material terms of the registration rights.

Description of Property, page 74

23. We note your response to comment 73 of our letter dated July 13, 2006 and we reissue this comment. In this regard, we note the disclosure in the first sentence of the fourth paragraph under the heading “Liquidity and Capital Resources” on page 21.

Consolidated Financial Statements

Note 1 – Description of Business and Organization – Recapitalization Transaction, page F-7

24. We note your response to comment 74 of our letter dated July 13, 2006. Please be advised that as a result of the recapitalization transaction, the historical equity disclosures for Old Xethanol should be retro-actively restated (based on the exchange ratio) so that as of the date the recapitalization the number of shares outstanding are equal to the number of shares that Zen issued to “acquire” Old Xethanol and no additional adjustment should be necessary.

Note 2 – Summary of Significant Accounting Policies – Marketable Securities, page F-28

25. Please provide the disclosures required by SFAS 115.

Note 2 – Summary of Significant Accounting Policies – Loss per Common Share, page F-28

26. Please provide the disclosures required by paragraph 40 of SFAS 128, including the number of potentially dilutive shares excluded from earnings per share during the interim period.

Note 3 – Restructuring of Permeate Refining Mortgage Note, page F30

27. We note your responses to comments 75 and 78 of our letter dated July 13, 2006. It remains unclear to us how you determined that the Permeate facility is not impaired. Please provide us the evidence you obtained to support your disclosure that the disposition value of this asset exceeds its carrying value.

Note 9 – Investment in H2Diesel, Inc, page F-33

28. We note your response to comment 17 of our letter dated July 13, 2006 and have the following additional comments:
- It is not clear to us why you believe it is appropriate to record and value the 3,250,000 shares of H2Diesel that you acquired from the Investors on April 14, 2006 at \$5,425,000 in light of the fact that the Investors acquired the shares on March 20, 2006 for \$2,000,000. Please clarify or revise.
 - It is not clear to us how you determined how many of the 2,600,000 shares of common stock that H2Diesel issued to you were issued as an inducement to enter into the Put and how many were issued as a management fee. Please clarify or revise.
 - We note that you allocated a significant portion of your purchase price to goodwill. In light of your contention that H2Diesel is not a business and has no operations, it is difficult for us to understand how and why this allocation is appropriate. Please clarify or revise.
 - Please clarify what the sublicense agreement relates to and how you valued it.
 - Based on H2Diesel's net loss, as disclosed on page F-34, and your 45% ownership interest, it is not clear to us how you determined the equity loss you recorded. Please clarify or revise.

- Please clarify when, how and from whom H2Diesel obtained the license agreement. Please help us understand how and why their accounting for this agreement complies with GAAP.

Note 12 – Organization of NewEnglandXethanol, LLC, page F-37

29. We note your response to comment 20 of our letter dated July 13, 2006. Please clarify why you believe this is a variable interest entity and why you believe you are not the primary beneficiary. Clarify who the primary beneficiary is and how the agreement is structured to support your conclusion.

Note 13 – Acquisition of Advanced Biomass Gasification Technologies, Inc., page F-37

30. Please clarify how you valued the license and research agreement from ABGT. Please help us understand what you obtained and why you believe your accounting is appropriate.

Note 17 – Subsequent Events, page F-39

31. Please disclose how much you anticipate you will need to spend to convert the former pharmaceutical facility to an ethanol facility.

Recent Acquisitions

32. We note that you have completed several significant acquisitions and also appear to have entered into a significant probable acquisition. Based on your responses to prior comments, it remains unclear to us how and why you don't believe that any additional financial statements are required under Item 310 of Regulation S-B. For each significant acquisition, please provide us a comprehensive explanation of what you acquired and whether there were any predecessor operations. Please be advised that just because an entity is recently formed or as nominal operations, does not mean that it's not a business or that additional financial statements wouldn't be relevant.

* * * *

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. Louis B. Bernstein
Xethanol Corporation
October 4, 2006
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You may contact Melinda Hooker, Staff Accountant, at (202) 551-3732 or, in her absence, Anne McConnell, Senior Staff Accountant, at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. Please contact Andrew Schoeffler, Staff Attorney, at (202) 551-3748 or, in his absence, Lesli Sheppard, Senior Staff Attorney, at (202) 551-3708, with any other questions.

Sincerely,

Pamela A. Long
Assistant Director

cc: Mr. Robert F. Mechur, Esq.
Boylan, Brown, Code, Vigdor & Wilson, LLP
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Rochester, NY 14604