



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

February 2, 2011

Mr. Chris Carlson
Chief Financial Officer
Vertex Energy, Inc.
1331 Gemini Street; Suite 250
Houston, TX 77058

**Re: Vertex Energy, Inc.
Form 10-K for the year ended December 31, 2009
Form 10-Q for the period ended September 30, 2010
File No. 0-53619**

Dear Mr. Carlson:

We have reviewed your response letter dated January 14, 2011 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 within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Use of Estimates, page 38

1. We note your response to comment five from our letter dated December 16, 2010. So that we may better understand your accounting treatment for the acquired thermal/chemical extraction technology, please provide us with the following:
 - A detailed analysis demonstrating you how considered ASC 350-30-35 to determine that 15 years was an appropriate useful life for this asset; and
 - The detailed impairment analysis you performed that resulted in your assessment that there was no impairment at September 30, 2010.

2. Your proposed framework for discussing how your business would be affected if you were unable to use the licensing agreement indicates that your income from operations would have been higher in both the year ended December 31, 2009 and the nine months ended September 30, 2010. Although we note your operations are currently negatively impacted by the costs associated with your production using this technology, it does not seem appropriate to indicate that your current operations and your operations for the period ended December 31, 2009 would be positively impacted if you were unable to use the licensing agreement. Your discussion should more fully expand upon your statement that the Company would be negatively impacted in the market place, as you believe that in order to compete with your competitors you may need your technology to produce higher valued products from Black Oil Streams. You should further expand this discussion to indicate how this would impact your revenue and cash flow trends as well.

Item 8. Financial Statements and Supplementary Data

Note 6 – Income Taxes, page F-12

3. We note your response to comment six from our letter dated December 16, 2010. The portion of your change in valuation allowance that was attributable to current year operations of Vertex Energy should be reflected in your reconciliation of statutory tax expense to book tax expense on page F-13. Please show us how you will revise your disclosures in future filings accordingly.

Note 11 – Licensing Agreement, page F-16

4. We note from your response to comment five from our letter dated December 16, 2010 that the \$1,400,000 initial valuation of the license agreement was based upon the cost to acquire the use of the thermal/chemical extraction technology and its processes and infrastructure. We note however that you acquired this technology from a related party that is majority owned and controlled by your Chief Executive Officer and Chairman, Benjamin P. Cowart, who is also your controlling shareholder. Please expand your disclosures to indicate how you determined that the \$1,400,000 was the fair value of the license agreement in light of the fact that this was not an arms-length transaction.

Item 15. Exhibits, Financial Statement Schedules, page 60

5. We note your response to comment 10 in our letter dated December 16, 2010. Please note that material agreements must be filed as exhibits pursuant to Item 601(b)(10) of Regulation S-K. As your agreement with KMTEx appears to be material, please file it as an exhibit to your annual report on Form 10-K. We are sensitive to your concern that the public disclosure of information contained within this agreement could cause you competitive harm. Please note that Rule 24b-2 under the Securities Exchange

Act of 1934, as amended, provides you with the ability to redact confidential provisions from the publicly filed version of the agreement. In order to utilize Rule 24b-2, you must file with the Commission an application requesting confidential treatment of the confidential provisions within the agreement. Please see Staff Legal Bulletin No. 1A, which is available on our website, for more information.

FORM 10-Q FOR THE PERIOD ENDED SEPTEMBER 30, 2010

Item 1. Financial Statements

Note 6 – Earnings (Loss) Per Share, page F-8

6. We note your response to comment 11 from our letter dated December 16, 2010. Please show us how you will revise your diluted earnings per share calculation for the nine month period ended September 30, 2009 in future filings to clarify that, as a result of your net loss for the period, the diluted weighted average number of shares outstanding and, therefore, your diluted earnings (loss) per share was the same as the amounts used in your basic earnings per share calculation. Your current proposed presentation gives the impression that the diluted weighted average number of shares outstanding used in your calculation was 12,765,324 shares which is not consistent with the amount presented on page F-3 of your financial statements.

Note 9 – Licensing Agreement, page F-10

7. We note your response to comment 12 from our letter dated December 16, 2010. Please tell us if your 15 year useful life for the licensing agreement assumed that you would perform these enhancements. If so, please tell us what the useful life of your licensing agreement would have been without performing these enhancements. Furthermore, please tell us if the enhancements described in your response involved replacing similar equipment that already existed at the time you initially acquired the technology. If so, please tell us what consideration you gave towards impairing the components of the technology that were replaced by the components that enhanced your technology. Please show us how you will revise your future filings to describe in detail the specific ways in which the enhancements you performed during the nine months ended September 30, 2010 provided an additional benefit or extended the life of the licensing agreement and therefore were eligible for capitalization.

Mr. Chris Carlson
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You may contact Lisa Etheredge, Staff Accountant at (202) 551-3424 or Jeanne Baker, Assistant Chief Accountant at (202) 551-3691 if you have questions regarding comments on the financial statements and related matters. Please contact Sherry Haywood, Staff Attorney at (202) 551-3345 or Dietrich King, Staff Attorney at (202) 551-3338 with any other questions.

Sincerely,

Rufus Decker
Accounting Branch Chief