

Mail Stop 6010

October 4, 2006

VIA U.S. MAIL AND FACSIMILE (718.228.2522)

Mr. Leo Ehrlich
Chief Financial Officer
StatSure Diagnostic Systems, Inc.
1 Clarks Hill Road
Framingham, Massachusetts 01702

**Re: StatSure Diagnostics Systems, Inc.
Form 10-KSB for the fiscal year ended December 31, 2005
Filed April 17, 2006
Forms 10-QSB for the Quarterly Periods Ended March 31, and
June 30, 2006
File No. 000-21284**

Dear Mr. Ehrlich:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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 or may not 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 filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

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From 10-KSB for the Fiscal Year Ended December 31, 2005

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 23

Overview and Outlook, page 23

1. Based upon information publicly available on the FDA website at www.fda.gov, we note that a warning letter was issued to the company by the FDA on August 25, 2005. Provide us with an update on the status of the issues raised in the letter and explain how you concluded that disclosure of the warning letter and the issues identified therein were not material to an investor's understanding of the status of your IDE and PMA requests filed with the FDA.

Liquidity and Capital Resources, page 27

2. With a view towards disclosure, please tell us the nature of the custom assembly machinery that you had built during 2004, 2005 and 2006. We note that you reflect a balance for this equipment of \$664,401, or 52% of total assets, as of December 31, 2005. Although you disclose on page F-12 that you expected the equipment to be placed in service by May 2006, we note from your June 30, 2006 Form 10-QSB that you still reflect this amount as equipment under construction. Please tell us the status of the equipment.

Critical Accounting Policies and Estimates – Allowance for Uncollectible Accounts Receivable, page 29

3. We note the brief discussion relating to the increase in your allowance for uncollectible accounts in 2005. In light of the material amount, tell us and revise future filings to include in MD&A a detailed discussion of the facts and circumstances that resulted in the increase in 2005. As we note that \$102,477, or approximately 95 percent, of the allowance at December 31, 2005 related to the receivables of one former customer, explain whether the increase in the allowance reflected the corresponding deterioration of that customer's credit quality and a change from partially to fully reserving for these receivables.

Item 8A. Controls and Procedures, page 33

4. We note your statement that the company's certifying officers have concluded "that the disclosure controls and procedures were effective as of December 31, 2005, to provide reasonable assurance of the achievement of these objectives." Please revise future filings, including the amended document, to state clearly, if true, that your disclosure controls and procedures are *designed to* provide reasonable assurance of achieving their objectives and that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, remove the reference to the level of assurance of your disclosure controls and procedures. Please refer to Section II.F.4 of Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, SEC Release No. 33-8238, available on our website at <http://www.sec.gov/rules/final/33-8238.htm>.
5. The language that is currently included after the word "effective" in your disclosure appears to be superfluous, since the meaning of "disclosure controls and procedures" is established by Rule 13a-15(e) of the Exchange Act. In future filings, including the amended document, please remove the language or revise the disclosure so that the language that appears after the word "effective" is substantially similar in all material respects to the language that appears in the entire two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e).

Signatures, page 44

6. The signature page does not include signatures of your executives and directors. That is, you have not provided the required conformed signatures consistent with the guidance in Item 302(a) of Regulation S-T. In addition we note a similar situation relating to the auditors' report on page F-1 and the certifications required by Items 601(b)(31) and (32). Please amend the Form 10-KSB to file a properly signed document, including a signed auditors' report and certifications.

Financial Statements, page F-1

Statements of Operations, page F-3

7. We note that you present "stock based compensation and employment recruiting expense – non-cash" as a separate line item on your statements of operations. In future filings, please revise the statement to present share-based compensation charges in the same captions as the ones in which you present cash compensation paid for the same services, i.e., by category of expense and not by method of payment. As indicated in SAB Topic 14-F, you may also disclose the amount of the related stock-based compensation charges in a parenthetical note to the appropriate statement of operations line items, on the statement of cash flows, in the notes to the financial statements, or within MD&A. This comment also applies to your quarterly filings on Form 10-QSB.

Note 9. Debenture Payable, page F-13

8. We note that you recorded a beneficial conversion feature of \$2,614,400 while the proceeds from the debt were \$1,510,000. Under paragraph 6 of EITF 98-5, the discount related to the beneficial conversion feature would be calculated based on its intrinsic value and is limited to the amount of the proceeds allocated to the convertible debt instrument. Please tell us how you calculated the amount of the beneficial conversion feature and explain how your calculations are consistent with EITF 98-5.

Note 10. Equity Transactions, page F-13

9. We note the disclosure relating to the 200,000 warrants issued for services in January 2005. Tell us and revise the note in future filings to disclose the method you used to determine the fair value of the warrants. If you did not use one of the option pricing-models called for in SFAS 123, then please tell us why. In addition, address your reasons for applying a 30% discount to the listed price of your common stock in arriving at the fair value used in your model.

10. Please tell us and revise future filings to provide all of the disclosures required by paragraphs 46 - 47 of SFAS 123 and, as applicable, paragraphs 64 and A240 – A241 of SFAS 123R, for the 1,100,000 variable plan options you issued to executives in March and May of 2005. Please note that separate disclosure for these variable plan options may be required under paragraph 47 of SFAS 123 and paragraph A240(f) of SFAS 123R.

Exhibit 32, page 47

11. We note that the Section 906 certification included in Exhibit 32 refers only to your chief executive officer and not your chief financial officer. Under Section 906 of the Sarbanes-Oxley Act of 2002, you should accompany each periodic report containing financial statements filed pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934 by a written statement by both your chief executive officer and chief financial officer. Under Section 906, the statement should certify that the periodic report containing the financial statements fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of the issuer. Please amend the filing to include the required certifications.

Form 10-QSB for the Quarterly Period Ended March 31, 2006

Financial Statements, page 3

12. The sum of certain columns in your March 31, 2006 and December 31, 2005 balance sheets and March 31, 2005 and 2006 statements of cash flows do not reconcile to the amounts shown as subtotals and totals for those columns. Please amend the filing to include complete and corrected interim financial statements or advise us.

Statements of Cash Flows, page 5

13. Please tell us why you do not include the 550,000 options granted in the three months ended March 31, 2005 in your supplemental disclosure of non-cash investing and financing activities. We note that you provided the disclosure in your March 31, 2005 Form 10-QSB as amended. Otherwise, disclose the information in the amended Form 10-QSB.

Note 4. Restatement, page 8

14. We note from your disclosure that prior to filing your Form 10-KSB for the fiscal year ended December 31, 2005 on April 14, 2006, you determined that your previously filed Form 10-QSB for the quarterly periods ended March 31, 2005, June 30, 2005 and September 30, 2005 were misstated for two errors. One of the errors related to the accounting for the beneficial conversion feature on your 9% convertible debentures that were issued on January 19, 2005 and the other error related to the accounting for options granted to an employee. We noted no discussion of these errors in your Form 10-KSB for the year ended December 31, 2005. Likewise, your Forms 10-QSB for the periods ended March 31, 2006 and June 30, 2006 have only included the restated amounts for the quarterly and year-to-date periods then ended. Please address the following:
 - File an amendment to your Form 10-QSB for the period ended September 30, 2005 to properly reflect the correction for these errors and include all of the disclosures required by SFAS 154 with respect to the restatement or tell us why an amendment is not required.

- File a Form 8-K to provide all the disclosure required by Item 4.02 of Form 8-K or tell us why you are not required to file this information. We note that Item 4.02 of Form 8-K requires you to disclose such information whenever you conclude that any previously issued financial statements, covering one or more years or interim periods for which you are required to provide financial statements under Regulation S-B, should no longer be relied upon because of an error in such financial statements. General Instruction B of Form 8-K states that the Item 4.02 Form 8-K should be filed within four business days after occurrence of the event. Refer also to the Frequently Asked Questions on Current Report on Form 8-K found on our website at <http://www.sec.gov/divisions/corpfin/form8kfaq.htm>.
- 15. We note no discussion of variable plan accounting on page F-13 of your December 31, 2005 Form 10-KSB where you disclose the stock options issued to employees in March and May of 2005. Please provide us with your accounting and valuation of these options as of March 31, June 30, September 30, and December 31, 2005 and March 31, and June 30, 2006. Please also discuss how you determined the appropriate amortization in each period.

Item 3. Controls and Procedures, page 22

- 16. We note your disclosure that your president and chief financial officer “concluded that as of the date of the evaluation [your] disclosure controls and procedures are effective to ensure that all material information required to be filed in [the] report has been made known to them.” The language that is currently included after the word "effective" in your disclosure appears to be superfluous, since the meaning of "disclosure controls and procedures" is established by Rule 13a-15(e) of the Exchange Act. Please remove the language in your future filings, including the amended document, or revise the disclosure so that the language that appears after the word "effective" is substantially similar in all material respects to the language that appears in the entire two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e).
- 17. We note that you refer to the evaluation performed by your president and chief financial officer of your disclosure controls and procedures and their conclusion on the effectiveness thereof. We also note that the certifications provided in Exhibits 31.1 and 31.2 were signed by your CEO and CFO and not your president. In future filings, including the amended document, consistent with Item 307 of Regulation S-B, please

disclose the conclusions of your “principal executive and principal financial officers” regarding the effectiveness of your disclosure controls and procedures. Confirm to us that your president was your “principal executive” during the periods.

Signatures, page 25

18. The signature page does not include signatures of your executives and directors. That is, you have not provided the required conformed signatures consistent with the guidance in Item 302(a) of Regulation S-T. Please amend the Form 10-QSB to file a properly signed document.

Exhibit 31.1 and 31.2

19. We note that your certifications are not in the exact form set out in Item 601(b)(31) of Regulation S-B. For example, we note that you have replaced the term “small business issuer” with “the registrant” and that you have eliminated the phrase “the small business issuer’s other certifying officer and I...” in paragraphs 4 and 5. In future filings, including the amended documents, please provide certifications that are in the exact form set out in Item 601(b)(31) of Regulation S-B. This comment also applies to your Form 10-QSB for the period ended June 30, 2006.

Form 10-QSB for the Quarterly Period Ended June 30, 2006

Financial Statements, page 3

Note 4. Restatement, page 8

20. We note that you restated the number of weighted average shares outstanding for the six months ended June 30, 2005 from 31,140,430 shares to 31,709,491 shares. Please tell us the reasons for this restatement and amend the filing to provide all of the disclosures required by SFAS 154 related to this change.

Note 6. Debentures Payable, page 9

21. We note that in May 2006 you issued 798,056 and 701,754 shares of common stock at \$0.90 and \$0.57 per share for the “induced conversion” of \$1,109,608 in convertible debentures with interest. To help us understand your accounting for these transactions, please respond to the following:
- Tell us the dates and significant terms of the conversion/inducement.
 - Explain how the conversion (a) occurred pursuant to changed conversion privileges that were exercisable only for a limited period of time and (b) included the issuance of all of the equity securities issuable pursuant to conversion privileges included in the terms of the debt at issuance for each debt instrument that is converted as required by paragraph 2 of SFAS 84 and as further discussed in paragraph 6 of EITF 02-15.
 - Tell us in sufficient detail how you measured the amount of the induced conversion expense.
 - Discuss how your measurement considered the guidance in paragraphs 3 and 4 of SFAS 84, which indicates you would recognize an expense equal to the fair value of all securities and other consideration transferred in the transaction in excess of the fair value of securities issuable pursuant to the original conversion terms and measure the fair value of the securities or other consideration as of the date the inducement offer is accepted by the convertible debt holder.
22. Please tell us whether and how the conversion price of the convertible debentures was lowered as a result of the issuance of preferred stock in June 2006. If applicable, please tell us how you accounted for any change in the conversion price and why.

Note 8. Shareholders’ Equity Transactions, page 10

23. Please tell us and revise the filing to disclose in summary form, consistent with paragraph 4 of SFAS 129, the conditions under which the exercise price of the warrants is subject to adjustment.

24. We note that your registration rights agreement requires you to file a registration statement that is declared effective by the SEC, or else you are required to pay a liquidated damages payment equal to 1% of the product of the original purchase price of the preferred stock per month until the event is cured. Please tell us and revise the filing to disclose whether there is a limit on the maximum penalty that could be incurred and whether you are also required to keep the registration statement continuously effective for a preset time period.

25. We note the EITF deliberated the impact of liquidated damages clauses and the effect on the accounting and classification of instruments subject to the scope of EITF 00-19 in EITF 05-4 *The Effect of a Liquidated Damages Clause on a Freestanding Financial Instrument Subject to Issue No. 00-19*. The EITF has not reached a consensus on this issue and has deferred deliberation until the FASB addresses certain questions which could impact a conclusion on this issue. However, in the meantime, please tell us how you considered the guidance in EITF 05-4 and the different views on this issue as outlined in Issue Summary No. 1 to EITF 05-4 in analyzing the registration rights agreement and in considering whether you are required to bifurcate the conversion option from the preferred stock and account for the warrants as liabilities. Please also revise the filing to disclose your accounting policy with respect to the accounting for the liquidated damages consistent with paragraph 8 of APB 22.

26. We note that you reflect the preferred stock in temporary equity. Please disclose the method you are using to value the preferred stock consistent with paragraphs 15 – 16 of EITF Topic D-98. Also note that if you believe it is not probable that the security will become redeemable, then consistent with paragraph 15 of EITF Topic D-98, disclose why it is not probable.

27. Please address the following relating to your accounting for your Series 2006-A Convertible Preferred Stock:
 - Tell us how you applied the guidance in SFAS 133 and EITF Issue 00-19 in determining that the conversion feature for the preferred stock is an embedded derivative that you should separate from the host and account for at fair value under SFAS 133, specifically addressing your consideration of paragraphs 12-32 of EITF 00-19.

- Discuss your similar analysis under SFAS 133 and EITF 00-19 for the free-standing warrant issued with the preferred stock.
 - Revise the note to also disclose in summary form why you have bifurcated the conversion feature of the preferred stock and accounted for it at fair value under SFAS 133 and why you are classifying the warrants as liabilities and recording them at fair value and provide any other applicable disclosures under paragraphs 50 -51 of EITF 00-19.
28. Please tell us and disclose, consistent with paragraph 10 of SFAS 107, the methods and significant assumptions used to estimate the fair value of the preferred stock and warrants at inception and as of June 30, 2006.
29. We note that at the date of issuance for the preferred stock your fair value calculation for the bifurcated embedded conversion feature of the preferred stock was \$3,698,316 and for the warrants the fair value was \$2,095,903, or a total of \$5,794,246. This calculated value exceeds the proceeds from the preferred stock and warrants of \$2.15 million by \$3,644,246, or 69% above the value of the proceeds. Since your valuations are significantly in excess of the proceeds received, please tell us how you considered the guidance in paragraph 540 of SFAS 133, footnote 3 of EITF 02-3, DIG Issue B6, and footnote 13 to paragraph 49 of SFAS 133 and why you believe that the calculated values are consistent with that guidance.
30. We note that you are classifying the gains and losses related to valuing the bifurcated conversion feature of your preferred stock and warrants as interest expense in your statement of operations. In light of the material amounts being recorded, tell us why you have not presented the amounts in a separate and clearly descriptive caption of the statements of operations.

Mr. Leo Ehrlich
StatSure Diagnostic Systems, Inc.
October 4, 2006
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As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. 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 responses to our comments.

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 Exchange Act of 1934 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments 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 our review of your filing or in response to our comments on your filing.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 or me at (202) 551-3671 if you have any questions regarding these comments.

Sincerely,

Martin James
Senior Assistant Chief Accountant