



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

Mail Stop 3030

February 26, 2009

VIA U.S. Mail and Facsimile (801) 407-1641

Dennis P. Gauger  
Chief Financial Officer  
BSD Medical Corporation  
2188 West 2200 South  
Salt Lake City, UT 84119

**Re: BSD Medical Corporation**  
**Form 10-K for the fiscal year ended August 31, 2008**  
**Filed November 14, 2008**  
**Form 10-Q for the quarterly period ended November 30, 2008**  
**File No. 001-32526**

Dear Mr. Gauger:

We have reviewed your filing and have the following 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.

Form 10-K for the fiscal year ended August 31, 2008

Cover Page

1. Your cover page indicates that you are an accelerated filer. Tell us how you determined your status as an accelerated filer. Include the calculation of the aggregate market value of the common stock held by non-affiliates as of the end of your second fiscal quarter in 2007. Refer to Rule 12b-2 of the Exchange Act.

Item 1. Business, page 3

Our Contributions to Cancer Therapy, page 5

2. We note your disclosure on page 7 that “Obtaining FDA approval for the BSD-20000 would greatly contribute to our sales efforts by providing the additional technology required for the treatment of solid tumors located virtually anywhere in the body.” In future filings, please update the status of the 2006 application made to the FDA regarding the BSD-2000 system.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 24

Overview, page 24

3. We note that you received your total payout, including contingency payments from the sale of TherMatrx by the close of fiscal year 2006, but that you received an additional \$202,223 in proceeds in April 2007. Please clarify whether you are entitled to or currently expect any further payments or proceeds from the sale of TherMatrx.

Results of Operations: Comparison of Fiscal Years ended August 31, 2008 and 2007, page 26

4. We see your disclosure that small changes in the number of systems sold can significantly impact reported revenues from period to period. In future filings please provide disclosure about the actual trends in systems sales to better explain the impact of changes in the number and mix of systems sales on revenues. For instance, to the extent important to an understanding of your revenues, you could disclose the average sale price of your systems and / or the number and mix of systems sales. As well, to the extent known, please provide disclosure about the underlying reasons for increases and decreases in systems sales.

Liquidity and Capital Resources, page 29

5. We see from footnote 3 to your financial statements for the fiscal year ended August 31, 2008 that your investments consisted primarily of a "managed portfolio of mutual funds." In your future filings, please clearly discuss the nature of the material components of those assets as necessary to provide your investors with sufficient information for a clear understanding of your balance sheet items and financial condition. For example, identify the asset classes in which the mutual funds invest and what asset allocation strategy you intend to implement by holding these investments. Also, if these investments are reasonably likely to affect your operating results or financial condition in a material way, please expand your discussion and analysis in applicable future filings to provide your investors with information necessary for a clear understanding of the trend or uncertainty. Refer to Item 303(a) of Regulation S-K. As appropriate, identify the percentage and nature of any investments where the return of principal is not guaranteed, indicate whether there are any limitations on your ability to redeem your investments, indicate what factors may affect the value of those investments, and disclose any material risks. Also add any appropriate disclosure required by Item 305 of Regulation S-K.

Item 8. Financial Statements and Supplementary Data, page 34

6. Given the proportion of BSD's assets comprised of investment securities and the proportion of BSD's income comprised of income from such investment securities, please explain why BSD should not be considered an "investment company" within the meaning of Section 3 of the Investment Company Act of 1940.

Statements of Stockholders' Equity, page F-7

7. Please revise future filings to display comprehensive income and its components in a financial statement that is displayed with the same prominence as other financial statements that constitute a full set of financial statements. Please refer to paragraphs 14 and 22 of SFAS 130. Please also refer to Appendix B of the Statement.

Statement of Cash Flows, page F-8

8. We see that you present cash flows from sales and purchases of available for sale securities on a net basis. Please tell us how net presentation complies with paragraph 18 of SFAS 115.

Note 1. Organization and Significant Accounting Policies, page F-9

Revenue Recognition, page F-11

9. We see from page 8 that sales of your systems include the sale of applicators. Please clarify in future filings how you account for sales of applicators, including whether the customer is required to purchase a minimum quantity of applicators and how this impacts your accounting.

Note 3. Investments, page F-14

10. In future filings please add disclosure describing the nature of the mutual funds in which you have invested. Please also expand to better comply with the disclosure guidance from paragraphs 19 and 21 of SFAS 115. In that regard, please disclose how you determine the fair value of available for sale securities and disclose how you determine the cost of securities sold. As applicable, please make disclosure about realized and unrealized gains and losses on a gross basis.
11. You disclose that your available for sale securities are primarily mutual funds. Tell us about and in future filings please describe the nature of the investments in other than mutual funds and quantify the carrying amount. Unless insignificant, please ensure that you make all necessary disclosure under SFAS 115.
12. We see that you have significant unrealized losses on available for sale securities as of August and November 2008. Tell us and in future filings disclose to investors the specific positive and negative factors you considered in concluding that there is no other than temporary impairment of available for sale securities as of those dates. Please also provide the disclosures required by paragraph 17 of FASB Staff Position Nos. FAS 115-1 and FAS 124-1.
13. As a related matter, the evaluation of available for sale securities for other than temporary impairment may involve complex and subjective considerations. Please provide critical accounting policy disclosure about the complexities and uncertainties involved in the evaluation, including disclosure about the susceptibility of the estimates to variability. As you have disclosed that your investments are primarily in mutual funds, please make disclosure specific to the nature of your actual investments.

Item 9A. Controls and Procedures, page 34

Management's Report on Internal Control Over Financial Reporting, page 35

14. We note management's conclusion that internal control over financial reporting was "effective to ensure that information required to be disclosed by [you] in

reports that [you] file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms.” Your current qualification appears to incorporate concepts from the definition of “disclosure controls and procedures” as defined in Rule 13a-15(e) of the Exchange Act. If you elect to include, in your future filings, any qualifying language as to the effectiveness conclusion regarding your internal control over financial reporting, such language should be consistent with the definition of “internal control over financial reporting” set forth in Rule 13a-15(f) of the Exchange Act. Alternatively, if true, your disclosure could simply indicate that your officers determined that your “internal control over financial reporting is effective” without any further qualifications or attempts to define the term.

Item 11. Executive Compensation, page 36

15. We refer to your disclosure under the caption “Annual Incentive Bonuses” on page 13 of the definitive proxy statement that you have incorporated by reference into your Form 10-K. We note that you awarded Mr. Turner and Mr. Mead an incentive bonus of 35% of annual salary “based upon an assessment of the progress of the company.” We further note that these bonuses represent an almost 40% increase from the prior year’s bonuses awarded to these named executive officers. In future filings, please expand your Compensation Discussion and Analysis to describe what specific items of corporate performance are taken into account in setting compensation policies and making compensation decisions. Refer to Item 402(b)(2)(v) of Regulation S-K. Please also provide discussion and analysis as to how the achievement of the corporate goals translated into the amounts of the bonuses that were awarded.
16. We refer to your disclosure under the caption “Stock-Based Compensation” on page 14 of the definitive proxy statement that you have incorporated by reference into your Form 10-K. We note minimal, if any, discussion and analysis as to how the annual stock option grants were determined. In your future filings, as applicable, please include substantive analysis and insight into how your Compensation Committee made its stock option grant determinations with respect to each named executive officer. Refer to subparagraphs (b)(1)(iii) and (v) of Item 402 of Regulation S-K. For example, please discuss and analyze how the Compensation Committee determined the actual number of shares underlying the stock options that were awarded to your named executive officers.

Item 15. Exhibits, page 37

17. We note your disclosure in your “Business” and “Management’s Discussion and Analysis” sections discussing the agreement with Medizin-Technik GmbH, a distributor controlled by one of your directors, and that sales under this agreement

represented more than half of your 2008 revenues. In future filings, please file the distributorship agreement with Medizin-Technik GmbH as an exhibit. Refer to Item 601(b)(10) of Regulation S-K.

Form 10-Q for the quarterly period ended November 30, 2008

Financial Statements

Note 9. Recent Accounting Pronouncements, page 10

18. We reference your statement that you adopted SFAS 157 with no material impact on your financial statements. We see that your balance sheet includes available for sale securities totaling \$10 million as of November 30, 2008. In your next Form 10-Q, please present the relevant disclosure under paragraph 32 of SFAS 157 or tell us why that disclosure is not required. We also refer you to paragraph 39 of SFAS 157.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 12

Results of Operations: Comparison of three-month periods ended November 30, 2008 and 2007

19. We see that you received FDS clearance to market the MicroThermX-100 thermal ablation system in the United States in September 2008. In future filings please discuss any material impact of sales of the MicroThermX-100 system on revenue.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response 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 Kristin Lochhead at (202) 551-3664 or me at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact Brian Cascio at (202) 551-3676 with any other questions. Please contact Mary Beth Breslin at (202) 551-3625 or Tim Buchmiller at (202) 551-3635 if you have any other questions.

Sincerely,

Gary Todd  
Reviewing Accountant