



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 3030

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

April 17, 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**  
**File No. 001-32526**

Dear Mr. Gauger:

We have reviewed your response dated March 20, 2009 and related filings 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

1. Please revise future filings to provide selected quarterly data in accordance with Item 302 of Regulation S-K.

Item 8. Financial Statements and Supplementary Data, page 34

2. In your response to prior comment 6, you indicate that: (1) the Company does not now, and has never held itself out as being engaged primarily in the business of investing, reinvesting, or trading in securities; and (2) the Company currently owns investment securities that comprise less than 40% of the value of its total assets (exclusive of Government securities and cash items) on an unconsolidated basis, and the Company does not intend to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of Government securities and cash items). In support of these conclusions, please provide further information needed to conduct an analysis under section 3(a)(1)(A) and 3(a)(1)(C) of the Investment Company Act of 1940 for the Company.

In particular, for each asset or class of assets currently owned or held by the Company, please explain why, in your view, such asset or asset class either meets or does not meet the definition of "investment securities" provided in Section 3(a)(2) of the Investment Company Act. Based on these determinations, please provide us with your calculation demonstrating how you reached the conclusion that the Company owns investment securities having a value less than 40% of the value of the Company's total assets, exclusive of Government securities and cash items. To the extent your analysis relies on other provisions of Section 3 or the rules thereunder, please explain. To the extent your analysis relies on prior Commission statements or staff pronouncements, please explain.

Note 3. Investments, page F-14

3. We reference prior comment 12 in our letter dated February 26, 2009. We note the impairment taken during the quarter ended February 28, 2009 for your equity income mutual funds. However, we also see that your corporate debt mutual funds also have been impaired for an extended period and currently have an unrealized loss of \$2.2 million. We also see that your financial statements report operating losses and operating cash flow deficits, and that you sold a portion of the investment portfolio in fiscal 2008 and now again in 2009 to fund your operations. Accordingly, please further explain to us why you believe there is no other-than-temporarily impairment of the corporate debt mutual fund investments at August 31, 2008 and February 28, 2009. In that regard please respond to the following:
- Provide us a schedule of the components of the debt mutual fund investments included in the portfolio. Please include a description of each fund and the nature of the investments included in each fund. Also, include the cost of the investment, fair value, unrealized loss and the length of time that the investment has been impaired.

- Tell us how you considered the length of time and severity of impairment in assessing the individual investments for other than temporary impairment. Describe to us the expected period for recovery and the basis for your assessment.
- Tell us why you believe you have the intent and ability to hold the investments for a period of time sufficient to allow for recovery of fair value. With respect to ability to hold the investments until recovery, please address your cash requirements and how you intend to fund those requirements. We see, for instance, that your cash balance is less than \$291,000 as of February 28, 2009 and that your operations are not cash flow positive.
- Provide us a description of your analysis of financial condition and prospects of the issuer for each corporate debt mutual fund included in the portfolio.
- Describe to us the substance of the recommendations of your investment advisor as referred to in your response.

Your response should fully address the considerations from SAB Topic 5M and paragraph 16 of SFAS 115 and should fully explain why management believes the investment portfolio is not other than temporarily impaired.

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.

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