



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

August 28, 2007

VIA U.S. MAIL and FACSIMILE

Timothy W. Baker
Cynosure, Inc.
Chief Financial Officer
5 Carlisle Road
Westford, MA 01886

RE: Cynosure, Inc.
Form 10-K for the fiscal year ended December 31, 2006
Filed March 12, 2007
Form 10-Q for the quarterly period ended June 30, 2007
Form 8-K dated August 7, 2007
File No. 000-51623

Dear Mr. Baker:

We have reviewed your response dated August 8, 2007 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-Q for the quarterly period ended June 30, 2007

Consolidated Financial Statements

Note 12. Income taxes, page 9

1. We note that as the result of an IRS audit, the company discovered in May 2007 that it erroneously claimed an intercompany bad-debt deduction from its German subsidiary of approx. \$1.7 million on its 2003 tax return. You state that the company assessed the materiality of the error under SAB 99 and 108 and determined that it was not material using both the roll-over method and iron-curtain method. The error was corrected in the second quarter of 2007 by increasing the provision for income taxes by 702,000 for the tax liability and related interest. It appears that the impact of this adjustment to the financial results for the quarter ended June 30, 2007 is significant. Please provide us with your materiality analysis under SAB 99 and SAB 108 and tell us why you believe that a restatement of prior year financial statements is not necessary.

Form 8-K dated August 7, 2007

Consolidated Statements of Income

2. It appears as though the presentation of the non-GAAP data for Non-GAAP Income from Operations, Non-GAAP income before income taxes, Non-GAAP provision for income taxes, Non-GAAP net income, and non-GAAP diluted net income per share is not reconciled to the most comparable GAAP measure. Instead, these items are presented in the form of an income statement. These formats may be confusing to investors. Please note that Instruction 2 to Item 2.02 of Form 8-K requires that when furnishing information under this item you must provide all the disclosures required by paragraph (e)(1)(i) of Item 10 of Regulation S-K, including a reconciliation to the directly comparable GAAP measure for **each** non-GAAP measure presented and explain why you believe the measures provide useful information to investors.
 - To eliminate investor confusion, please remove the presentation in the form of an income statement and instead disclose only those non-GAAP measures used by management that you wish to highlight for investors, with the appropriate reconciliations. Please apply in future filings.

Mr. Baker
Cynosure, Inc.
August 28, 2007
Page 3

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) 551-3676 if you have questions. In this regard, please do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any other questions.

Sincerely,

Brian Cascio
Accounting Branch Chief