



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

May 29, 2009

Via U.S. Mail and Fax (978) 256-6556

Timothy W. Baker
Executive Vice President, Chief Financial Officer and Treasurer
Cynosure, Inc.
5 Carlisle Road
Westford, Massachusetts 01886

Re: Cynosure, Inc.
Form 10-K for the fiscal year ended December 31, 2008
Filed March 13, 2009
Form 10-Q for the quarterly period ended March 31, 2009
File No. 000-51623

Dear Mr. Baker:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your future filings 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 on any other aspects 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 December 31, 2008

Consolidated Financial Statements

Note 2. Accounts Receivable and Concentration of Credit Risk, page F-8

1. Please tell us and revise future filings to disclose the specific reasons for the significant write-off of uncollectible accounts totaling approximately \$2.7 million in fiscal 2008. Please clarify your discussion that these write-offs were the “result of the overall economic environment.” Please indicate whether these write-offs relate to a few significant customers. MD&A should also discuss the expected impact of any increased credit risk or deterioration in customer accounts on future operations.

Note 4. Fair Value, page F-16

2. We note that you recorded other than temporary losses of \$4.3 million on your auction rate securities upon the transfer of these investments from available for sale to trading securities. Please tell us and disclose in future filings the specific events or circumstances that resulted in the other than temporary loss at the time that these investments were transferred to the trading classification. In addition, clarify how you determined the amount of this loss. Please indicate how you concluded that there was no impairment in the auction rate securities prior to the transfer of the securities to trading.
3. We also note that you carry the Auction Rate Security Rights at fair value. Please clarify in future filings your accounting for these rights and how you considered the guidance in SFAS 159.

Form 10-Q for the quarterly period ended March 31, 2009

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

Revenues, page 14

4. We note the significant reduction in your revenues for the three months ended March 31, 2009 compared to prior year. Please tell us and revise future filings to indicate the specific reasons for this significant decline and to better describe how your business and specific products are affected by the “adverse general business conditions.” Discuss if the decline is related to the loss of customers and how this is expected to impact future operations.

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 Praveen Kartholy at (202) 551-3778 or me at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters.

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Please contact Alan Morris at (202) 551-3601 or Tim Buchmiller at (202) 551- 3635 with any other questions. You may also contact Martin F. James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Brian Cascio
Accounting Branch Chief