



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

November 25, 2008

Via U.S. Mail and Facsimile

Mr. John T. Dahldorf
Chief Financial Officer
Volcano Corporation
11455 El Camino Real, Suite 460
San Diego, CA 92130

Re: Volcano Corporation
Form 10-K for the Year Ended December 31, 2007
Filed March 17, 2008
Form 10-Q for the Quarter Ended September 30, 2008
Form 8-K Dated November 5, 2008
File No. 000-52045

Dear Mr. Dahldorf:

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 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 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 Year Ended December 31, 2007

Index to Consolidated Financial Statements, page 65

Note 1. Summary of Significant Accounting Policies, page 72

-Stock-based Compensation, page 75

1. We note that you calculate your expected volatility utilized within the Black-Scholes model based upon your trading history and implied volatility of your common stock and the common stock of comparable medical device companies. Please revise your future filings to include a discussion of the basis for your conclusions regarding the extent to which you used historical volatility and implied volatility. In addition, discuss why you believe it is appropriate to rely on the implied volatility of the common stock of other medical device companies. Please also summarize your evaluation of the factors in Question 2, Question 3 and Question 6 of SAB Topic 14.D.1. Refer to Question 5 of SAB Topic 14.D.1.

Note 2. Acquisitions, page 80

2. We note that you have allocated \$26.1 million of the purchase price for CardioSpectra, Inc. to in-process research and development expense (IPR&D). We similarly note from page 9 within your June 30, 2008 Form 10-Q that you allocated \$12.2 million of the purchase for Novelis, Inc. to IPR&D. Please revise this note and MD&A in future filings to provide the following disclosures related to each IPR&D charge:
 - Describe each significant IPR&D project acquired;
 - Present in tabular format the fair value assigned to each project acquired and projected costs to complete by project;
 - For each project, disclose in MD&A the status of the development, stage of completion at acquisition date, the nature and timing of the remaining efforts for completion, anticipated completion date and the date you will begin benefiting from the projects, the risks and uncertainties associated with completing development within a reasonable period of time, and the risks involved if the IPR&D projects are not completed on a timely basis.

Note 5. Financial Instruments, page 84

3. We note that a significant amount of your short-term investments and cash and cash equivalents are in U.S. corporate securities. As applicable, please revise future filings to separately present amounts held in U.S. equity securities, corporate debt securities,

mortgage-backed securities, and other debt securities. Refer the guidance in paragraph 19(a) and (e)-(g) of SFAS 115.

Note 10. Stockholders' Equity, page 88

4. We note on page 91 that you present a non-GAAP measure entitled "adjusted earnings per share" for fiscal 2007 and 2006 and that you define this measure as earnings per share as if you had not adopted SFAS 123(R) on January 1, 2006. Please revise your future filings to only present GAAP measures within your notes to your audited financial statements. Refer to the guidance in Item (e)(1)(ii)(c) of Item 10 of Regulation S-K.

Note 12. Segment and Geographic Revenue, page 94

5. Please revise your future filings to include your revenues from external customers for each product and service or each group of similar products and services similar to your presentation included on page 52. Refer to the guidance in paragraph 37 of SFAS 131.

Form 10-Q for the Quarter Ended September 30, 2008

Note 1. Summary of Significant Accounting Policies, page 7

-Concentrations of Credit Risk, page 7

6. We note that you terminated your distribution agreement with Goodman Company, Ltd. during the six months ended June 30, 2008. Please tell us and revise your future filings to clearly disclose any material terms of this termination agreement, such as the amount of fees that you had to pay, if any, related to the termination of this agreement.

Form 8-K Dated November 5, 2008

7. We note that you present your non-GAAP measures in the form of a statement of operations. This format may be confusing to investors as it reflects several non-GAAP measures, including but not limited to, non-GAAP revenues, non-GAAP amortization of intangibles, non-GAAP interest income, etc. which have not been identified or described to investors. In fact, it appears that management does not use all of these non-GAAP measures but they are shown here as a result of the presentation format. 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 and FAQ 8 Regarding the Use of Non-GAAP Financial Measures dated June 13, 2003 for each non-GAAP measure presented. Specifically, you should provide a reconciliation of each non-GAAP measure to the most directly comparable GAAP measure and explain why you believe each measure provides useful information to investors. To eliminate investor confusion, please remove the non-GAAP statements of operations format from all future filings. Instead, only disclose those non-GAAP

measures used by management and which you intended to provide to investors with the appropriate reconciliations to the most directly comparable GAAP measure.

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 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.

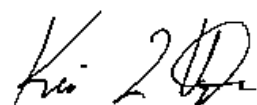
In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- 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 Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin L. Vaughn", with a stylized flourish at the end.

Kevin L. Vaughn
Accounting Branch Chief