



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

May 28, 2009

Via Facsimile and U.S. Mail

Thomas E. Klema
Vice President and Chief Financial Officer
Rockwell Medical Technologies, Inc.
30142 Wixom Road
Wixom, Michigan 48393

**Re: Rockwell Medical Technologies, Inc.
Form 10-K for the year ended December 31, 2008
Form 10-Q for the quarter ended March 31, 2009
File No. 0-23661**

Dear Mr. Klema :

We have reviewed your filing 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 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 comment 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 year ended December 31, 2008

General

1. We note from the cover of the Form 10-K that for the year ended December 31, 2008 you were an accelerated filer under Rule 12b-2. However, we do not see where you have provided all of the disclosures required by Regulations S-X and S-K applicable to accelerated filers. For example, we note you have not provided audited statements of income and cash flows for each of the three fiscal years preceding your most recent audited balance sheet as required by Rule 3-02 of Regulation S-X. We further note that you have not provided all of the disclosures required by Item 303(A) of Regulation S-K, including but not limited to, the contractual obligation table, disclosure of any off-balance sheet arrangements and discussion of the results of operations for each of the years required to be included in the financial statements. We also do not see where you have provided disclosure of selected quarterly financial data as required by Item 302 of Regulation S-K. Please amend the filing to include all of the disclosures required by Regulations S-K and S-X. In this regard, please note that the examples listed above are not intended to be a comprehensive list of all the additional disclosures that may be required.
2. Further to the above, to the extent that you conclude that you have not provided all of the disclosures required by Regulations S-K and S-X, please tell us how failure to provide the required information impacts each of your disclosure controls and procedures and your internal control over financial reporting. Specifically, please tell us whether you believe the failure to provide all of the required disclosures represents a material weakness and, if so, revise your disclosures on pages 24 and 25 to include additional disclosure as appropriate. Refer to Item 308(a) of Regulation S-K.

Item 9A. Controls and Procedures, page 24

Management's Report on Internal Control Over Financial Reporting, page 25

3. We note that you identified two material weaknesses in your internal controls over financial reporting. Please tell us and revise future filings, including any amendment to this filing, to clearly identify the nature of each of the material weaknesses, including a description of the actual control deficiency. Discuss the impact of the control deficiency on your financial reporting and your internal control over financial reporting. Finally, discuss in detail management's current plans, if any, or actions already undertaken, for remediating the material weaknesses. In this regard, your current disclosure that "management has taken certain steps to reduce this risk" appears vague and general.

Item 4. Controls and Procedures, page 12

Changes in Internal Control Over Financial Reporting, page 12

4. In the first paragraph here, you state that there were no changes in your internal control over financial reporting “except as described below.” Your current disclosure could be confusing as it appears to state that there were no changes except to the extent that there were changes. In future filings, please provide a clear statement as to whether there have been any changes in your internal control over financial reporting that materially affected, or are reasonably likely to materially affect, your internal control over financial reporting.

As appropriate, please amend your filing and 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 amendment 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 amendment and 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.

Thomas E. Klema
Rockwell Medical Technologies, Inc.
May 28, 2009
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You may contact Eric Atallah, Staff Accountant at (202) 551-3663 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 Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief