



DIVISION OF
CORPORATION FINANCE

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

August 19, 2011

Via E-mail

Ms. Simone Blank, Chief Financial Officer
Sirona Dental Systems, Inc.
30-30 47th Avenue
Suite 500
Long Island City
New York 11101

**Re: Sirona Dental Systems, Inc.
Form 10-K for the Fiscal Year Ended September 30, 2010
Filed November 18, 2010
Form 10-Q for the Fiscal Quarter Ended June 30, 2010
Filed August 5, 2011
File No. 0-22673**

Dear Ms. Blank:

We have reviewed your response letter and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended September 30, 2010

Item 7A. Quantitative and Qualitative Disclosures About Market Risk, page 44

Exchange Rate Sensitivity, page 44

1. We note your response to prior comment four in our letter dated July 15, 2011. In future filings, please disclose the following:

- for your receivables, a tabular disclosure clarifying the functional and transactional currency for each currency reported. Refer to Item 305(a)(1)(i)(A)(3) of Regulation S-K and the Appendix to Item 305 – Tabular Disclosures for Exchange Rate Sensitivity, and
 - for your forward exchange contracts, whether this is a long or short position. Refer to Instruction 2.B.ii of Instructions to Paragraph 305(a) of Regulation S-K.
2. We note your response to prior comment five in our letter dated July 15, 2011. In future filings, please disclose interest rate and exchange rate risk in the reporting currency for your non-U.S. dollar loans. Refer to Instruction 2.A.i, 2.B and 2.F.i of Instructions to Paragraph 305(a) of Regulation S-K and Appendix to Item 305 of Regulation S-K– Tabular Disclosures for Interest Rate Sensitivity and Exchange Rate Sensitivity.

Notes to the Consolidated Financial statements, page F-9

Note 2 – Basis of presentation and summary of significant accounting policies, page F-9

Warranty expense, page F-11

3. We note your response to prior comment six in our letter dated July 15, 2011. To further clarify your response, please tell us the following:
- how your warranty differs from the definition of warranty under Section 460-10-20 of the FASB Accounting Standards Codification,
 - what historical experience and other variables are considered to determine your warranty expense,
 - what do the settlements recorded to reduce the warranty accrual represent,
 - how you classify revenue and related costs of the extended warranties as disclosed on page F-10 in your statements of income,
 - what other types of expenses that you consider necessary in order to maintain customer satisfaction and secure future sales that are reported as selling, general and administrative expenses,
 - if known, how your warranty differs from warranties offered by your competition,
 - if known, how other companies within your industry classify warranty expense in their financial statements, and

- if known, what objective evidence is available to show the correlation between your warranty costs and future sales to specific customers.

Note 20 – Net Other Operating Income and Restructuring Costs, page F-31

4. We note your response to prior comment 11 in our letter dated July 15, 2011. Please further tell us your consideration of Rule 5-03(b)1.(e) of Regulation S-X in reporting these payments.

Note 23 – Segment Reporting, page F-33

5. We note your response to prior comment 12 in our letter dated July 15, 2011. We note that the disclosures required under Item 101(c)(1)(vii) of Regulation S-K are not identical to that required by paragraph 280-10-50-42 of the FASB Accounting Standards Codification. Please confirm that you will provide appropriate disclosure under both of these items in future filings.

Form 10-Q for the Fiscal Quarter Ended June 30, 2011

Note 7 – Intangible Assets and Goodwill, page 13

6. We note that you recorded \$40,382,000 of in-process research & development during the six months ended June 30, 2011 related to the acquisition of a development stage technology company. Please revise future filings to address the following comments:
- please disclose the fair value assigned to each project and the projected costs to complete by project; and
 - for each project, please disclose 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.

You may contact Gary Newberry at (202) 551-3761 or Lynn Dicker, Reviewing Accountant, at (202) 551-3616 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact me at (202) 551-3643.

Sincerely,

/s/ Lynn Dicker for

Kevin L. Vaughn
Accounting Branch Chief