



DIVISION OF
CORPORATION FINANCE

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

August 3, 2010

Fritz L. LaPorte
Chief Financial Officer
Mako Surgical Corporation
2555 Davie Road
Ft. Lauderdale, Florida 33317

Re: Mako Surgical Corporation
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed March 10, 2010
File No. 001-33966

Dear Mr. LaPorte:

We have reviewed your filings 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 amending your filing, 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 or do not believe an amendment is appropriate, please tell us why in your response.

Form 10-K for the year ended December 31, 2009

Financial Statements, page 75

Note 2. Summary of Significant Accounting Policies, page 83

Revenue Recognition, page 86

1. We noted from your discussion on page 43 that certain of your RIO systems are subject to a customer acceptance period. Please tell us how you considered the customer

acceptance period, as well as any return rights, as part of your revenue recognition policy. Please also revise future filings to disclose how your revenue recognition policies address the referenced matters.

2. We see that you provide a standard one year warranty in conjunction with the sale of your RIO System. Please revise future filings to provide the disclosures required by FASB ASC 460-10-50-8, as it relates to your product warranties.

Note 4. Selected Balance Sheet Components, page 93

Property and Equipment, page 93

3. We see that you have approximately \$2.6 million of consigned RIO systems and instruments. Please revise future filings to disclose the following:
 - The nature of the consigned systems, how they are used, and your accounting policies related to the systems, including why you consider the systems to be property, plant and equipment, rather than inventory;
 - The contractual terms through which you consign the systems, including the typical terms of the consignment, where the systems are located, use of the systems while they are on consignment, if any, etc.
4. We also note that you have approximately \$2.4 million of service and demonstration systems and instruments. Please revise future filings to disclose the following:
 - The nature of the demonstration systems, how they are used, and your accounting policies related to the systems;
 - The contractual terms through which you loan the systems, including the typical term of the loan, any associated requirements that the borrower purchase any disposable products or services; and
 - How your record related amortization expense.

Note 5. Related Parties, page 93

Restricted Stock and Note Receivable from Related Party, page 94

5. We see your disclosure that the fair values of (certain) common stock was initially determined by the board of directors and was validated as reasonable in a March 2007 valuation by an independent valuation firm. Please tell us and revise future filings to clarify the nature and extent of the third party appraiser's involvement and management's reliance on the work of the independent appraisers. Please refer to Question 141.02 of the Compliance and Disclosure Interpretations on Securities Act Sections, which can be found at <http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm> and which would be applicable to the extent your Form 10-K is incorporated by reference into any registration statement.

Securities Purchase Agreement, page 95

6. We see that you issued 6.5 million shares of common stock and warrants to purchase 1.3 million shares of common stock in connection with the Securities Purchase Agreement in October 2008. Please tell us how you valued and accounted for the warrants that were issued in conjunction with the shares. Cite the U.S. GAAP accounting guidance upon which you based your accounting.

Note 7. Commitments and Contingencies, page 96

Development Agreement, page 97

7. Please revise future filings to disclose the term of the development agreement and corresponding period over which you are recording the expense on a straight line basis.

Form 10-Q for the period ended March 31, 2010

Financial Statements, page 1

Notes to Condensed Financial Statements, page 4

Note 2. Summary of Significant Accounting Policies, page 4

Revenue Recognition, page 5

8. We see your disclosure that you have elected to early adopt FASB ASC Update 2009-13 regarding multiple deliverables. Please revise your future filings to include a more detailed description of your multiple-deliverable arrangements, the significant deliverables within your arrangement, general timing of delivery or performance of such deliverables and the related revenue recognition, and the significant factors and estimates used to determine vendor specific objective evidence, third party evidence or estimated selling prices. Please provide us with your proposed disclosure as part of your response.

Note 6. Related Party Transactions, page 10

9. We see you completed the acquisition of all of the intellectual property of Z-Kat in February 2010 for 230,458 shares of common stock. While we see that you disclose that this was treated as a related party transaction, your valuation of the stock issued and related accounting for the intellectual property remains unclear from your disclosure. Please clarify for us how you accounted for the acquisition and how you valued the related technology.

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 Julie Sherman, Staff Accountant, at (202) 551-3640 or Jay Webb at (202) 551-3603 if you have any questions regarding these comments. In this regard, do not hesitate to contact me at (202) 551-3212.

Sincerely,

Jeff Jaramillo
Branch Chief