



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

January 21, 2009

VIA U.S. MAIL AND FAX (781) 246-1167

Mr. Glenn D. Bolduc
Vice President and Chief Financial Officer
Implant Sciences Corporation
107 Audubon Road
Wakefield, Massachusetts 01880

Re: Implant Sciences Corporation
Form 10-K for the year ended June 30, 2008
Filed October 14, 2008
Form 10-Q for the quarter ended September 30, 2008
File No. 000-25839

Dear Mr. Bolduc:

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 documents 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 June 30, 2008

Management's Discussion and Analysis or Plan of Operation, page 22

Results of Operations, page 25

1. We see that your discussion regarding the change in security revenues in the current period as compared to the prior period includes a discussion of revenues related to security products and revenue from government funded projects. Please revise future filings, if material, to separately state revenues from products from revenues from services or other revenues on the face of the income statement. We refer you to Rule 5-03 of Regulation S-X.

Liquidity and Capital Resources, page 27

2. Your liquidity discussion does not appear to discuss the impact of your discontinued operations. Please revise in future filings to describe how cash flows from discontinued operations are reflected in your cash flows statements. In addition, you should describe how you expect the absence of cash flows, or absence of negative cash flows, related to the discontinued operations to impact the company's future liquidity and capital resources.

Item 9A. Controls and Procedures, page 29

3. We see from your disclosures that your management has concluded that your disclosure controls and procedures as well as your internal control over financial reporting are effective. However, we note your disclosure on page 16 that you "currently do not comply with all of the requirements imposed by Section 404." Please specifically tell us what requirements you do not yet comply with and tell us how this impacted your conclusions regarding your disclosure controls and procedures and your internal control over financial reporting.

Amendment Number 2 to Form 10-K filed October 30, 2008

4. It does not appear that you included new certifications with Amendment Number 2 to Form 10-K that you filed on October 30, 2008. Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934 require that the certifications be included as exhibits to each report, including transition reports, filed on Forms 10-K, 10-KSB, 20-F, 40-F, 10-Q and 10-QSB. Under Exchange Act Rule 12b-15, amendments to any report required to be accompanied by the certifications as specified in Exchange Act Rules 13a-14(a) and 15d-14(a) must include new certifications. Please amend your filing to include the appropriate certifications.

Form 10-Q for the period ended September 30, 2008

Financial Statements, page

Note 1. Description of Business, page 6

Acquisition of Ion Metrics, page 6

5. We noted your disclosure herein that the purchase price of Ion Metrics was approximately \$3.3 million, which included assumed liabilities of \$564,000. You refer to Note 17 for further information; however, Note 17 appears to discuss a purchase price excluding assumed liabilities of \$2.745 million and a purchase price allocation including liabilities of \$2.745 million as well. Please advise and revise future filings to clarify.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Liquidity and Capital Resources

6. We note that you were not in compliance with your loan covenants as of September 30, 2008. We also note that your lender has given you a waiver for the non-compliance. Revise MD&A in future filings to define all of the financial and other covenants that you are required to maintain under your loans and debt agreements and the company's ability to comply with future debt covenants. Explain what would happen if are unable to obtain a waiver or amendment from your lender on reasonable terms in the future. For explain, discuss what kind of interest rate increases could be imposed, penalties, etc.
7. In this regard, we note that pursuant to the amended loan agreement you issued warrants, which you valued using the Black Scholes model. Tell us and revise future filings to disclosure the assumption used to value these warrants.

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. You may wish to provide us with marked copies of the amendments to expedite our review. 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 amendments 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.

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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 me at (202) 551-3554 if you have any questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Angela Crane
Accounting Branch Chief