



DIVISION OF  
CORPORATION FINANCE

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

April 14, 2011

Mr. John J. Stuart, Jr.  
Chief Financial Officer  
Irvine Sensors Corporation  
3001 Red Hill Avenue, Bldg. 3, Suite 104  
Costa Mesa, California 92626

**RE: Irvine Sensors Corporation**  
**Form 10-K for the fiscal year ended October 3, 2010**  
**Filed December 17, 2010**  
**File No. 1-08402**

Dear Mr. Stuart:

We have reviewed your filing 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 October 3, 2010 filed December 17, 2010

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 23

1. We note that your inventory balances increased approximately \$1,275,000 or 289% in FY 2010 over the prior year while total revenues increased only about 2% during FY 2010. Based on information in Note 12 on page F-29 we also noted a significant decrease to your reserve for obsolete inventory at October 3, 2010. Please revise your Management's Discussion and Analysis disclosures in future filings to explain the reason for all significant changes to your financial statement line items, including your inventory and any related reserves.

Index to Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-6

Note 7 - Common Stock Warrants, page F21

2. It appears that certain warrants that were issued in FY 2009 and 2010 contain anti-dilution provisions. In future filings please revise this note to clearly describe these provisions and briefly summarize how you concluded that your current classification of the warrants as either equity or liabilities was appropriate.

Note 13 - Commitments and Contingencies, page F-31

Litigation, page F-31

3. Regarding the summary judgment granted to FirstMark III, L.P. due to alleged non-payment by the company of certain obligations, we note your disclosure indicating "At October 3, 2010, the Company has approximately \$1,269,600 of expense accrued reflecting these alleged obligations." Please reconcile this disclosure with disclosures in the table of accrued expenses presented in Note 12 on page F-30 that shows \$0 accrued for the "provision of litigation judgment".

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written statement from the company acknowledging that:

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- 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.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3212 with any other questions.

Sincerely,

Jeffrey Jaramillo  
Accounting Branch Chief