

Mail Stop 6010

August 29, 2006

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

**Re: Irvine Sensors Corporation
Amendment No. 2 to Registration Statement on Form S-3
Filed August 25, 2006
File No. 333-131770**

Dear Mr. Stuart:

We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Exhibit 5.1

1. Please file an updated opinion prior to effectiveness so that the opinion is dated the same as the date of effectiveness. We note the first sentence of the last paragraph of the opinion

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment 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 amendment and responses to our comments.

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You may contact Tom Jones at (202) 551-3602 or the undersigned at (202) 551-3800 if you have questions.

Sincerely,

Peggy Fisher
Assistant Director

cc: Ellen S. Bancroft, Esq.