



DIVISION OF
CORPORATION FINANCE

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

January 18, 2011

Mr. Gregory E. Hare
Chief Financial Officer
Applied Visual Sciences, Inc.
250 Exchange Place, Suite H
Herndon, Virginia 20170

**Re: Applied Visual Sciences, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed April 2, 2010
File No. 000-28238**

Dear Mr. Hare:

We have reviewed your letter dated December 22, 2010 in connection with the above-referenced filing and have the following comment. In our comment, 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 comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to this comment, we may have additional comments. Unless otherwise noted, where prior comments are referred to they refer to our letter dated October 29, 2010.

Form 10-K for the Fiscal Year Ended December 31, 2009

Consolidated Financial Statements

Notes to Consolidated Financial Statements

Note 6. Stockholders' Equity (Deficit)

Issuance of Common Stock and Related Common Stock Warrants

1. We note your response to prior comment 1. We continue to review your response, however, tell us why your materiality analysis only takes into account the fair value of the additional Series D warrants that were issued and not the fair value of all of your Series D warrants outstanding. Please provide a materiality analysis of all of those warrants or explain why the warrants outstanding should be excluded from the analysis.

Mr. Gregory E. Hare
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You may contact Laura Veator, Staff Accountant, at (202) 551-3716 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3730 with any other questions.

Sincerely,

Stephen Krikorian
Accounting Branch Chief