



DIVISION OF
CORPORATION FINANCE

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

June 7, 2012

Via E-mail

Brian Tuffin
Chief Executive Officer
Fuse Science, Inc.
6135 NW 167th Street, #E-21
Miami, Florida 33015

**Re: Fuse Science, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed May 25, 2012
File No. 333-179682**

Dear Mr. Tuffin:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. We note your response to comment 3 of our comment letter dated May 15, 2012 regarding your financial ability to make payments due with respect to the February 2012 notes. Please revise your disclosure, where applicable, to include the information and data provided in your response detailing your ability to make payments due with respect to the notes.
2. We note your response to comment 6 of our comment letter dated May 15, 2012. Considering the dates that the securities were sold and the amount being registered in relation to the number of shares outstanding held by non-affiliates, the nature of the offering and the selling security holders, we continue to believe that the transaction is a primary offering. Because you are not eligible to conduct a primary offering on

Form S-3, you are not eligible to conduct a primary at-the-market offering under Rule 415(a)(4). Accordingly, you should identify the selling shareholders as underwriters and include the price at which the underwriters will sell the securities.

Prior transactions with selling stockholders, page 17

3. We note your revised disclosure in response to comment 2 of our comment letter dated May 15, 2012. Please revise the table to make it legible and increase the font size.

Short Sales by Selling Shareholders, page 18

4. You state on page 18 that you have been advised by the selling stockholders that those selling stockholders who engage in the business of buying and selling securities (Capital Ventures International, Iroquois Master Fund Ltd., Hudson Bay Master Fund Ltd., Empery Asset Master, Ltd and Hartz Capital Investors, LLC), may enter into short sales in the ordinary course of their business of investing and trading securities. We further note the disclosure that no short sales were entered into by those selling stockholders or any other selling stockholder (based on advice to the Company from the other selling stockholder) from any time after each selling stockholder obtained knowledge that the Company was contemplating a private placement until after announcement of the private placement. Please revise to clarify whether any of the selling shareholders have an existing short position in your common stock and the date on which each selling shareholder entered into that short position.

Note 9. Stockholders' Equity

Warrants, page F-33

5. The information relating to the number of shares of common stock, and dollar amount, issued for detachable warrants appears to be inconsistent with the statement of changes in stockholders' deficit on pages F-22 to F-23. Please revise to correct this apparent conflict.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jorge Bonilla, Staff Accountant, at (202) 551-3414 or Daniel Gordon, Accounting Branch Chief, at (202) 551-3486 if you have questions regarding comments on the financial statements and related matters. Please contact Folake Ayoola, Attorney Advisor, at (202) 551-3673 or me at (202) 551-3401 with any other questions.

Sincerely,

/s/ Jennifer Gowetski

Jennifer Gowetski
Senior Counsel

cc: Dale S. Bergman, Esq.