

Mail Stop 6010

October 17, 2007

Bruce C. Galton  
President and Chief Executive Officer  
Senesco Technologies, Inc.  
303 George Street, Suite 420  
New Brunswick, New Jersey 08901

**Re: Senesco Technologies, Inc.  
Schedule 14A  
Filed October 10, 2007  
File No. 1-31326**

Dear Mr. Galton:

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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Proposal One

1. Please disclose YA Global Investments' and Stanford Venture Capital Holdings' potential ownership of the company after all securities anticipated by the agreements with these entities are issued. Provide this disclosure in the form of a percentage as well as the number of shares they could hold. Include this disclosure both in the discussion of Proposal 1 and in the "Notice of Special Meeting of Stockholders" page in the forepart of the document.

2. We note the proceeds from the transactions covered by proposal 1 “will be used for research and development and working capital purposes.” Please provide more detail by identifying the specific projects you plan to pursue and an approximate amount for each one. If you plan to use the proceeds to develop products, identify the products you plan to develop with the proceeds. For each product, you should state which clinical trials or other development activities you anticipate performing with the proceeds, and you should disclose an approximate amount of proceeds for each such project.

### Proposal 3

3. We note that “[a]s of the date of this proxy statement, [you] expect to issue additional equity pursuant to the private placement transaction described in Proposal 1 and potentially pursuant to the antidilution adjustment provisions and the milestone adjustment provision described in Proposal 2.”
  - Please state, in the discussion of Proposal 3, how many shares you may issue pursuant to these two potential uses of the shares.
  - Please discuss any other plans you currently have for the additional shares being authorized through Proposal 3, as well as the number of shares associated with each such plan.
  - It should be clear from your discussion how many shares you currently have authorized, outstanding, reserved for issuance, and available for issuance. It should also be clear, to the extent the company has determined, how many shares may be issued pursuant to plans the company currently has.
  - After discussing all plans you currently have to issue the additional securities, state that you have no other plans besides the ones that are described.

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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 a marked copy 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.

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

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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 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.

Please contact Greg Belliston at (202) 551-3861 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Emilio Ragosa, Esq.  
Morgan, Lewis & Bockius LLP  
502 Carnegie Center  
Princeton, New Jersey 08540