

Via Facsimile and U.S. Mail
Mail Stop 6010

June 4, 2005

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.
Registration Statement on Form S-3
Filed May 27, 2005
File Number 333-125299

Dear Mr. Galton:

We have limited our review of the above-referenced filing to only the matters addressed herein. The comment needs to be fully resolved before we take final action on the registration statement.

Where indicated, we think you should revise your document in response to our comment. 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 supplemental information so we may better understand your disclosure.

After reviewing this information, we may or may not 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.

1. Please provide the full name(s) of the natural persons having voting, dispositive or investment powers over the shares held by each

of the named entities in the selling stockholders table.

2. We note that some of the selling stockholders may be broker-dealers. If any of the selling stockholders are broker-dealers revise to identify them as underwriters. The only exception to this

position is if these entities obtained these securities as compensation for underwriting services.

3. If any of the selling stockholders are affiliates of broker-dealers, they should be so identified. In addition, please revise your disclosure to include the following representations:

* The selling stockholder purchased in the ordinary course of business; and

* At the time of the purchase, the selling stockholder had no agreements or understanding to distribute the securities.

If you are unable to make these statements in the prospectus, please revise the prospectus to state the seller is an underwriter.

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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 supplemental 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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. 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 the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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 this action 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a 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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Albert Lee at (202) 551-3654 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: David J. Sorin
Morgan, Lewis & Bockius LLP
502 Carnegie Center
Princeton, New Jersey 08540

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