

“ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c)).

ItemEntry into a Material Definitive Agreement, Item 3.02 Unregistered Sales of Equity Securities, and Item 8.01 1.01Other Events.

Transaction with Each of Robert and Tim Forbes

On July 29, 2009, Senesco Technologies, Inc. (the “Company”) entered into a Securities Purchase Agreement, (the “Forbes Securities Purchase Agreement”) with each of Robert Forbes and Timothy Forbes, each of whom is an accredited investor, pursuant to which, subject to stockholder approval, it is anticipated that the Company will issue and sell an aggregate of 444,444 shares of common stock at \$0.90 (the Shares”) per share and each of a Series A warrant, (the “Forbes Series A Warrants”), and a Series B warrant (the “Forbes Series B Warrants”). Each of Robert Forbes and Timothy Forbes are the brothers of Christopher Forbes who is a director of Senesco. Mr. Christopher Forbes will not be deemed to be the beneficial owner of, nor will he have a pecuniary interest in the Shares or Warrants issued to his brothers.

The Forbes Series A Warrants entitle the holders to purchase in the aggregate, up to 400,00 shares of the Company’s common stock at \$0.01 per warrant share. The Forbes Series A Warrants have a term of seven years and are exercisable immediately after the date of grant.

The Forbes Series B Warrants entitle the holders to purchase in the aggregate, up to 405,556 shares of the Company’s common stock at \$0.60 per warrant share. The Forbes Series B Warrants have a term of seven years and are not exercisable until after the six-month anniversary after the date of grant.

Transaction with Insiders and Affiliates

On July 29, 2009, the Company entered into a Securities Purchase Agreement, (the “Affiliate’s Securities Purchase Agreement”) with each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle, and the Thomas C. Quick Charitable Foundation (the “Affiliate Investors”) each of whom is an accredited investor, pursuant to which, subject to stockholder approval, it is anticipated that the Company will issue and sell an aggregate of 144,444 Shares of the Company’s common stock at \$0.90 per share and each of a Series A warrant, (the “Affiliate’s Series A Warrants”), and a Series B warrant (the “Affiliate’s Series B Warrants”). Each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst and Warren Isabelle serve on the Company’s board. The Thomas C. Quick Charitable Foundation is an affiliate of our board member Thomas C. Quick.

The Affiliate’s Series A Warrants entitle the holders to purchase in the aggregate, up to 130,000 shares of the Company’s common stock at \$0.01 per warrant share. The Affiliate’s Series A Warrants have a term of seven years and are exercisable immediately after the date of grant.

The Affiliate’s Series B Warrants entitle the holders to purchase, in the aggregate, up to 131,807 shares of the Company’s common stock at \$0.60 per warrant share. The Affiliates Series B Warrants have a term of seven years and are not exercisable until after the six-month anniversary after the date of grant.

Transaction with Cato Holding Company

On July 29, 2009, the Company entered into a Securities Agreement with Cato Holding Company (“Cato”), who is an accredited investor, pursuant to which, subject to stockholder approval, it is anticipated that the Company will issue an aggregate of 194,444 Shares of the Company’s common stock at \$0.90 per share and each of a Series A warrant (the “Cato Series A Warrant”) and a Series B warrant (the “Cato Series B Warrant”). The Shares will be issued to Cato in exchange for debt which is currently owed by us to Cato Research Ltd. in the amount of \$175,000. Cato Research Ltd. is an affiliate of Cato.

The Cato Series A Warrant entitles the holder to purchase in the aggregate, up to 175,000 shares of the Company's common stock at \$0.01 per warrant share. The Cato Series A Warrant has a term of seven years and is exercisable immediately after the date of grant.

The Cato Series B Warrant entitles the holder to purchase, in the aggregate, up to 177,431 shares of the Company's common stock at \$0.60 per warrant share. The Cato Series B Warrant has a term of seven years and is not exercisable until after the six-month anniversary after the date of grant.

The foregoing proceeds cannot be closed upon until the Company receives stockholder approval for certain aspects of the transactions and complies with other customary closing conditions. Assuming all of the proceeds of the private placements can be closed upon, the Company anticipates it will receive gross proceeds equal to \$705,000.

The private placement remains subject to the approval of the NYSE Amex Exchange.

A complete copy of each of the Warrants and the Securities Purchase Agreements are attached hereto as exhibits and such exhibits are incorporated herein by reference. The related press release of the Company is filed herewith as Exhibit 99.1 and is incorporated herein by reference. The foregoing descriptions of the Warrants, the Securities Purchase Agreements and the press release and any other documents or filings referenced herein are qualified in their entirety by reference to such exhibits, documents or filings.

Important Information

The securities sold or to be sold in the private placement have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), and may not be offered or sold in the United States in the absence of an effective registration statement or exemption from the registration requirements under the Securities Act.

In connection with the private placement, the Company will prepare a proxy statement for the Company's stockholders to be filed with the Securities and Exchange Commission (the "SEC"). The proxy statement will contain information about the Company, the private placement and related matters. **STOCKHOLDERS ARE URGED TO READ THE PROXY STATEMENT CAREFULLY WHEN IT IS AVAILABLE, AS IT WILL CONTAIN IMPORTANT INFORMATION THAT STOCKHOLDERS SHOULD CONSIDER BEFORE MAKING A DECISION ABOUT APPROVING AN AMENDMENT TO THE COMPANY'S CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF AUTHORIZED SHARES.**

In addition to receiving the proxy statement from the Company by mail, shareholders will be able to obtain the proxy statement, as well as other filings containing information about the Company, without charge, from the SEC's website (<http://www.sec.gov>) or, without charge, from the Company's website at www.senesco.com or by directing such request to Senesco Technologies, Inc. 303 George St., Suite 420, New Brunswick, New Jersey 08901 Attention: Joel Brooks.

The Company and its directors and executive officers and other members of management and employees may be deemed to be participants in the solicitation of proxies. Information concerning the Company and its directors and executive officers is set forth in the Company's proxy statement and Annual Report on Form 10-K previously filed with the SEC.

Item 9.01.

Financial Statements and Exhibits.

(d)

Exhibits.

Exhibit Description

No

4.1 Form of Series A Warrant to be issued to each of Robert Forbes, Timothy Forbes and the Affiliate Investors. (filed herewith)

4.2 Form of Series B Warrant to be issued to each of Robert Forbes, Timothy Forbes and the Affiliate Investors. (filed herewith)

4.3 Form of Series A Warrant to be issued to Cato. (filed herewith)

4.4 Form of Series B Warrant to be issued to Cato. (filed herewith)

10.1 Securities Purchase Agreement by and between the Company and each of Robert Forbes, Timothy Forbes, Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation dated as of July 29, 2009 (filed herewith)

10.2 Securities Agreement by and between the Company and Cato Holding Company dated as of July 29, 2009 (filed herewith)

99.1 Press Release of the Company dated July 30, 2009 (filed herewith).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

SENESCO TECHNOLOGIES, INC.

Dated: July 30, 2009

By: /s/ Bruce Galton

Name: Bruce Galton

Title: President and Chief Executive Officer
