

(908) 864-4444
(Registrant's telephone number,
including area code)

Not applicable

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425).

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12).

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)).

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

Item 3.01 Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing.

As previously reported, on October 20, 2011, Senesco Technologies, Inc. (the “Company”) received a notice from NYSE Regulation, Inc. on behalf of NYSE AMEX LLC (now known as NYSE MKT LLC) (the “NYSE MKT”) providing notification that the Company did not meet one of the NYSE MKT continued listing standards as set forth in Part 10 of the NYSE MKT Company Guide (the “Company Guide”), and therefore, the Company had become subject to the procedures and requirements of Section 1009 of the Company Guide. Specifically, the Company was not in compliance with Section 1003(a)(iii) of the Company Guide since it reported stockholders’ equity of less than \$6,000,000 at June 30, 2011 and had incurred losses from continuing operations and/or net losses in its five most recent fiscal years ended June 30, 2011. On December 8, 2011, the Company received further notice from NYSE MKT that the Company was not in compliance with Section 1003(a)(ii) of the Company Guide since it reported stockholders’ equity of less than \$4,000,000 at September 30, 2011 and had incurred losses from continuing operations and/or net losses in three of its four most recent fiscal years ended June 30, 2011. On December 22, 2011, the Company received notice from the NYSE MKT stating that the exchange had accepted the Company’s compliance plan and granted it an extension until July 20, 2012 to regain compliance with the NYSE’s continued listing standards.

On August 22, 2012, the Company received a notice from NYSE Regulation, Inc. on behalf of NYSE MKT stating that NYSE MKT has declined to grant the Company a plan period extension and that NYSE MKT intends to delist the Company’s common stock from the NYSE MKT by filing a delisting application with the Securities and Exchange Commission. The Company intends to appeal this determination in accordance with the Company’s rights as set forth in Sections 1203 and 1009(d) of the Company Guide.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release, dated August 27, 2012, relating to the receipt of the NYSE MKT notification of failure to satisfy continued listing standards.

SIGNATURES

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: August 27, 2012 By: /s/ Leslie J. Browne
Name: Leslie J.
Browne, Ph.D.
Title: President and
Chief Executive
Officer