

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 10, 2011

USEC Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

1-14287

(Commission File Number)

52-2107911

(I.R.S. Employer Identification No.)

**2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817
(301) 564-3200**

Check the appropriate box below if the Form 8-K filing 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))
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Item 3.02 Unregistered Sales of Equity Securities.

On January 10, 2011, USEC Inc. (the "Company") entered into an exchange agreement with an existing holder of the Company's 3.0% Convertible Senior Notes due 2014 (the "Notes") whereby the Company agreed to issue 6,952,500 shares of the Company's common stock, par value \$.10 per share ("Common Stock"), and deliver cash for any accrued but unpaid interest on the Notes, in exchange for a principal amount of \$45 million held by the holder of the Notes. The transaction contemplated by the exchange agreement is scheduled to close on January 14, 2011.

The issuance of Common Stock in connection with the exchange agreement will be made pursuant to an exemption from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"), contained in Section 3(a)(9) of the Securities Act, on the basis that the exchange constitutes an exchange with an existing holder exclusively where no commission or other remuneration is paid or given directly or indirectly for soliciting such exchange. The Company may, from time to time, conduct exchanges for additional Notes.

This current report on Form 8-K does not constitute an offer to exchange the Notes or other securities of the Company for Common Stock or other securities of the Company.

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 thereunto duly authorized.

USEC Inc.

January 10, 2011

By:

/s/ John C. Barpoulis

John C. Barpoulis

Senior Vice President and Chief Financial Officer
(Principal Financial Officer)
