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):

September 18, 2009

USEC Inc.

(Exact name of registrant as specified in its charter)

Delaware

1-14287

(Commission

File Number)

(State or other jurisdiction of incorporation)

2 Democracy Center, 6903 Rockledge Drive, Bethesda, Maryland

(Address of principal executive offices)

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 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))

52-2107911

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

20817

(Zip Code)

(301) 564-3200

Item 2.05 Costs Associated with Exit or Disposal Activities.

On August 4, 2009, the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC" or the "Company") announced an agreement to delay a final review of the Company's loan guarantee application for the American Centrifuge Plant in Piketon, Ohio until a series of specific technology and financial milestones have been met. Both DOE and USEC recognized that meeting those criteria would likely take six months or more. As a result, the Company initiated steps to demobilize the American Centrifuge project in order to preserve liquidity as the Company evaluates the strategic options for the future of the project. As part of this demobilization, on September 18, 2009, the Company provided notice that it would be terminating the employment of approximately 120 USEC employees involved in the American Centrifuge project. The Company expects that this workforce reduction will be substantially completed by September 23, 2009. This is in addition to the more than 750 jobs that have already been lost at the Company's suppliers and contractors as part of the demobilization.

The Company currently estimates that it will incur a charge of approximately \$2.7 million in the third quarter of 2009 for one-time termination benefits consisting of severance payments and short-term health care coverage. Related cash expenditures are expected primarily in the fourth quarter of 2009.

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.

USEC Inc.

By: /s/ John C. Barpoulis

Name: John C. Barpoulis Title: Senior Vice President and Chief Financial Officer (Principal Financial Officer)

September 18, 2009