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): December 9, 2010

USEC Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation)

1-14287

52-2107911

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

(Commission File Number)

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

| Check the provision | e 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 as: |
|---------------------|---|
| | 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 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(d) Election of M. Richard Smith to the Board of Directors

On December 9, 2010, Mr. M. Richard Smith was elected to the Board of Directors of USEC Inc. (the "Company"), effective January 1, 2011. Mr. Smith will serve on the Company's Regulatory and Government Affairs Committee and Technology and Competition Committee.

Mr. Smith, age 63, has been an independent consultant in the engineering field since 2007, when he retired from Bechtel, an engineering, construction and project management company. Since 2008, he has served as a consultant and director to Sithe Global Power LLC, a privately held international power development company. During 2010 he was interim Chief Executive Officer of SkyFuel Inc., a privately held solar thermal power technology and service provider, and currently serves as a director. Mr. Smith was Senior Vice President of Bechtel and President of Fossil Power from 2005 until the time of his retirement. During 2005, Mr. Smith was Chief Executive Officer of Intergen, a Bechtel joint venture. He has in excess of 36 years of experience in the global power industry and has held senior positions in engineering, construction, management and mergers and acquisitions. In addition to corporate management expertise, he has extensive experience in managing all facets of project development, design, financing, construction and operation. Mr. Smith is a Registered Professional Mechanical Engineer. Mr. Smith currently serves on the Board of Directors of Instituform Technologies, Inc. and McGrath RentCorp. He previously served on the Board of Directors of Evergreen Energy Inc.

For his services on the Board, Mr. Smith will receive the Company's standard compensation for non-employee / non-investor directors, pro rated from his effective date for the current term ending at the Company's 2011 annual meeting of shareholders. A description of such standard compensation arrangement is filed as Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 and incorporated herein by reference.

A copy of the press release announcing the election of Mr. Smith is filed as Exhibit 99.1 to this Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

| <u>Number</u> | <u>Description</u> |
|---------------|--|
| 99.1 | Press release, dated December 15, 2010, issued by USEC Inc. announcing the election of M. Richard Smith. |

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. |

December 15, 2010

By: /s/ John C. Barpoulis

John C. Barpoulis

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

EXHIBIT INDEX

| Exhibit <u>Number</u> | <u>Description</u> |
|--------------------------|--|
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December 15, 2010

Construction and Industry Project Management Veteran to Join USEC Board

BETHESDA, Md. – USEC Inc.'s board of directors (NYSE: USU) recently elected energy industry veteran M. Richard Smith to the board, effective January 1, 2011. Smith brings to USEC nearly 40 years of power industry engineering, construction, project management and M&A experience.

"Rick Smith is a true leader in the energy industry in every sense of the word," said Chairman James R. Mellor. "Rick has a successful history of overseeing the construction and operation of large energy projects and possesses a global view of the industry. We are honored to have someone of his stature join us, and we will look to him for strategic guidance and advice as the company moves forward in deploying the American Centrifuge Plant."

"I am excited to join a company on the cutting edge of an important and growing market," said Smith. "USEC is well positioned to benefit from the worldwide growth of nuclear power, and I look forward to helping the company succeed, grow and create shareholder value."

Smith, 63, retired as president of Bechtel Fossil Power in 2007. During his tenure, he managed Bechtel's global fossil power engineering and construction business and more than \$5 billion in new construction work. Before that, he was CEO of Intergen, a Bechtel-Shell joint venture that operated and eventually sold 17 power plants in Europe, Asia and the Americas through four transactions valued in excess of \$2 billion.

Smith served in various senior management roles during his 30 years with Bechtel. Over the course of his career, he managed multiple power and energy projects and transactions totaling more than \$10 billion.

USEC Inc., a global energy company, is a leading supplier of enriched uranium fuel for commercial nuclear power plants.

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