(301) 564-

January 18, 2011

VIA EDGAR AND FEDERAL EXPRESS

Mr. H. Roger Schwall Assistant Director Division of Corporation Finance Securities and Exchange Commission 100 F Street, NE Washington, DC 20549-4628

Re: Comments on USEC Inc. Periodic Reports

Dear Mr. Schwall:

By letter dated September 27, 2010 (the "Comment Letter"), the Staff of the Division of Corporation Finance (the "Staff") delivered to USEC Inc. ("USEC" or the "Company") the Staff's comments on USEC's Form 10-K for the fiscal year ended December 31, 2009 filed on March 1, 2010 (the "10-K") and definitive proxy statement on Schedule 14A filed on March 19, 2010 (the "Proxy Statement"). By letter dated October 7, 2010, USEC responded to these comments. By letter dated January 3, 2011, the Staff delivered to USEC its follow-up comments, which commented on USEC's Form 10-Q for the fiscal quarter ended September 30, 2010 filed November 3, 2011 (the "Third Quarter 10-Q"). USEC's response to the comments of the Staff is set forth below. The response has been keyed to correspond to the Comment Letter. The response references existing disclosure in our Third Quarter 10-Q.

Form 10-Q for the Fiscal Quarter Ended September 30, 2010

Risk Factors, page 50

We are required to meet certain milestones under the 2002 DOE-USEC Agreement..., page 58

1. We note your disclosure regarding the milestones under the 2002 DOE-USEC Agreement, and the remedies that the Department of Energy may exercise in the event of your failure to reach such milestones. With a view toward disclosure, please tell us the status of the milestones to (1) secure firm financing commitment(s) for the construction of the commercial American Centrifuge Plant (November 2010) and (2) begin commercial American Centrifuge Plant operations (August 2010). For example, please tell us whether you have renegotiated such milestones with the Department of Energy.

RESPONSE:

We disclosed on page 58 of our Third Quarter 10-Q that "we plan to have discussions with DOE regarding adjustments to the November 2010 milestone." In addition, we disclosed on page 58 of our Third Quarter 10-Q that "[i]n a January 2010 amendment to the 2002 DOE-USEC Agreement, DOE and USEC agreed to discuss adjustment of the August 2010, November 2011 and May 2013 milestones as may be appropriate based on, among other things, progress in achieving the November 2010 Financing Milestone and the technical progress of the program."

As anticipated, since the filing of our Third Quarter 10-Q, we have had discussions with the U.S. Department of Energy ("DOE") regarding adjustments to the milestones under the 2002 DOE-USEC Agreement. No agreement has yet been reached regarding an adjustment to the milestones and DOE is continuing to review the matter. Any adjustment to the milestones would likely be effected through an amendment to the 2002 DOE-USEC Agreement, which we would anticipate filing on a Form 8-K under Item 1.01. If no agreement is reached prior to the filing of our annual report on Form 10-K for the year ended December 31, 2010, we would anticipate updating our disclosure in our annual report on Form 10-K.

The Company hereby acknowledges that (i) the Company is responsible for the adequacy and accuracy of the disclosure in the filing; (ii) Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and (iii) the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any further questions or comments, please contact me at (301) 564-3327.

Sincerely,

/s/ Peter B. Saba

Peter B. Saba Senior Vice President, General Counsel and Secretary

