

N/A

(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))

Item 1.01

Entry into a Material Definitive Agreement.

On July 31, 2010, International Isotopes Inc. (the "Company") entered into a Work For Others Agreement (the "Agreement") with Battelle Energy Alliance, LLC ("BEA") under its Prime Contract No. DE-AC07-05ID14517 with the United States Department of Energy, pursuant to which BEA will provide certain irradiation services using the Advanced Test Reactor at the Idaho National Laboratory. BEA will perform the irradiation services under this Agreement on a full cost recovery basis. The cost to the Company is estimated to be \$1,500,000 and BEA does not have any obligation to perform services in excess of such estimated cost and will not exceed such estimated cost without the consent of the Company. The term of the Agreement will continue for an estimated performance period of thirty (30) months from the date of the Agreement.

A copy of the Agreement is filed as Exhibit 99.1 to this report and is incorporated herein by reference. The description of the Agreement is qualified in its entirety by reference to such document.

(d) Exhibits

99.1

Work For Others Agreement dated July 31, 2010

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.

International Isotopes Inc.

Date: August 3, 2010

By: /s/ Steve T. Laflin
Steve T. Laflin

President and Chief Executive
Officer

EXHIBIT INDEX

**Exhibit
Number**

Description of Document

99.1

Work For Others Agreement dated July 31, 2010