

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 August 4, 2010, International Isotopes Idaho, Inc. (III), a wholly owned subsidiary of International Isotopes Inc., entered into a Sales Agreement effective as of August 1, 2010 (the Agreement) with NTP Radioisotopes (Pty) Ltd., a company incorporated under the laws of the Republic of South Africa (NTP), pursuant to which NTP will supply III Fission Iodine-131 (I-131) for III's distribution in the U.S. The term of the Agreement extends to August 31, 2013. The price for the I-131 pursuant to the Agreement is fixed until August 31, 2011 and varies based on weekly purchase volumes. III and NTP will renegotiate the price for purchases after August 31, 2011 and each party has the right to terminate the Agreement in the event that the parties cannot agree to renewed pricing terms.

The Registrant expects to file the Agreement as an exhibit to its Quarterly Report on Form 10-Q for the three months ended June 30, 2010. The foregoing description is qualified in its entirety by reference to the complete text of the Agreement when filed.

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 9, 2010

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

President and Chief Executive
Officer