

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))
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Item 1.01.

Entry into a Material Definitive Agreement.

On October 2, 2014, International Isotopes Inc. (the Company) entered into an Isotope and Technical Service Order Form with the U.S. Department of Energy (the DOE) for the irradiation of cobalt targets for the production of cobalt-60 (the Agreement). Pursuant to the Agreement, the Company will receive cobalt irradiation services in certain target positions at the DOE s Advanced Test Reactor at the Idaho National Laboratory (the ATR) for the next 10 years at a fixed price for all cobalt material from the ATR, with an annual 5% escalation in price.

The term of the Agreement begins on October 1, 2014 and ends on September 30, 2024. The Company may terminate the Agreement at any time upon 180 days advanced written notice to the DOE. The DOE may terminate the Agreement upon failure of the Company to pay amounts due under the Agreement, if the Company no longer is licensed to receive cobalt-60, or if the DOE determines that termination of the Agreement is necessary for the national defense, security or environmental safety of the United States.

The foregoing description of the Agreement does not purport to be complete and is qualified in its entirety by the terms of the Agreement. The Company will file a copy of the Agreement as an exhibit to its Annual Report on Form 10-K for the fiscal year ending December 31, 2014.

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: October 6, 2014

By:

/s/ Steve T. Laflin
Steve T. Laflin

President and Chief Executive Officer