INTERNATIONAL ISOTOPES INC
Form 10-K
March 28, 2014

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2013

OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number: 000-22923

INTERNATIONAL ISOTOPES INC.

(Exact name of registrant as specified in its charter)

Texas	**74-2763837**
	(IRS Employer Identification Number)

(State or other jurisdiction of incorporation or origination)

4137 Commerce Circle

Idaho Falls, Idaho **83401**
(Address of principal executive offices) (Zip code)

(208) 524-5300

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Exchange Act: None.

Securities registered pursuant to Section 12(g) of the Exchange Act:

COMMON STOCK, $.01 PAR VALUE

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES o NO x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES o NO x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES x NO o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES x NO o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES o NO x

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the average bid and asked price of such common equity at June 28, 2013, the last business day of our second fiscal quarter, was $26,028,969. For purposes of this calculation, all directors and executive officers of the registrant and holders of 5% or more of the registrant s common stock are assumed to be affiliates. This determination of affiliate status is not necessarily conclusive for any other purpose.

As of March 3, 2014, the number of shares outstanding of the registrant s common stock, $.01 par value, was 369,178,724 shares.

Documents Incorporated by Reference

Certain information called for in Part III of this Annual Report on Form 10-K is incorporated by reference to the registrant s definitive proxy statement for the 2014 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission not later than 120 days after the registrant s fiscal year ended December 31, 2013.

ii

INTERNATIONAL ISOTOPES INC.

FORM 10-K

TABLE OF CONTENTS

PART I

This Annual Report on Form 10-K (the Annual Report) contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the Act). This Act provides a "safe harbor" for forward-looking statements to encourage companies to provide prospective information about themselves so long as they identify these statements as forward-looking and provide meaningful cautionary statements identifying important factors that could cause actual results to differ from the projected results. All statements, other than statements of historical fact, including statements regarding industry prospects and future results of operations or financial position, made in this Annual Report are forward looking. Words such as anticipates, believes, should, expects, future and intends and similar expressions identify forward-looking statements. In particular, statements regarding: the commercial opportunity of the depleted uranium and fluorine extraction processing facility, the expected rate of capital expenditure on the depleted uranium project, the estimated capital required to support the planned timeline for the project, the planned start of uranium facility construction, the expected growth in various business segment revenues, our expansion into new markets, the ability of our products to compete with several larger companies and products, the results of market studies used to support our business model, our anticipated improvement in economic conditions, our ability to resume cobalt-60 production and manage costs, and the sufficiency of our available cash and revenues from operations to meet our operating needs; are forward looking. Forward-looking statements reflect management s current expectations, plans or projections and are inherently uncertain. Actual results could differ materially from management's expectations, plans or projections. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. Certain risks and uncertainties that could cause actual results to differ significantly from management s expectations are described in the section entitled Risk Factors in this Annual Report. That section, along with other sections of this Annual Report, describes some, but not all, of the factors that could cause actual results to differ significantly from management s expectations. We do not intend to publicly release any revisions to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Readers are urged, however, to review the risks and other factors set forth in the other reports that we file from time to time with the Securities and Exchange Commission (the SEC).

Item 1. BUSINESS

General Business and Products Description

International Isotopes Inc. (the Company , we , us and our) was formed as a Texas corporation in 1995. Our wholly-owned subsidiaries are International Isotopes Idaho Inc., a Texas corporation; International Isotopes Fluorine Products, Inc. an Idaho corporation; and International Isotopes Transportation Services, Inc., an Idaho corporation.

Our core business consists of six reportable segments which include: Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, Radiological Services, and Transportation.

Beginning in 2004, we began a major undertaking to construct the first commercial uranium de-conversion facility in the U.S. At that time, it was our belief that such an undertaking would provide an excellent commercial opportunity to us in the future.

In October 2012, we received the Nuclear Regulatory Commission s (NRC) construction and operating license for the planned de-conversion facility. This is a forty (40) year operating license and is the first commercial license of this type issued in the U.S. There are no other companies with a similar license application under review by the NRC. Therefore, the NRC license represents a significant competitive barrier and we believe that it provides us with a very valuable asset now and when we are ready to resume formal design and engineering work on the plant.

However, there have been several changes in the nuclear industry that have caused us to place near-term engineering work on this de-conversion project on hold. When we began pursuing this project there were three companies planning for construction of new commercial uranium enrichment plants in the U.S. and a fourth company using Silex laser separation technology, and we were communicating with all of them for possible de-conversion agreements to process their tails. These facilities included AREVA Inc. s (AREVA) planned Eagle Rock Facility in Idaho Falls, Idaho, URENCO USA s (UUSA) (formerly known as Louisiana Energy Services or LES) Eunice, New Mexico, facility, United States Enrichment Corporation s (USEC) American Centrifuge project in Piketon, Ohio, and GE-Hitachi s use of a Silex laser separation technology in Wilmington, North Carolina. We were successful in executing a de-conversion service agreement with UUSA that would use approximately 50% of the installed processing capacity of our proposed de-conversion facility. However, plans to obtain additional contracts with the other enrichment companies in order to commit 100% of the planned facility s capacity have been delayed because of the slowdown in nuclear industry growth. Having contracts in place is necessary for us to obtain funding for the project. Both the Fukushima, Japan, disaster and low natural gas prices in the U.S. have negatively impacted the nuclear industry and there is no serious discussion of significant growth in nuclear capacity in the U.S. in the near term. However, we believe that the overseas outlook is quite different. For example, South Korea has announced plans to increase its nuclear capacity, China has completed safety and regulatory review of proposed new plants and is expected to add eleven plants in 2014, and two new plants were approved in 2014 for construction in the United Kingdom. And although the three other commercial enrichment companies that we were in discussions with to secure de-conversion contracts have not moved forward, neither have they cancelled construction plans. We believe that one or more of these companies will resume construction plans on their new enrichment facilities in the next few years and when they do, we will resume contract talks to commit the remaining capacity for our planned de-conversion facility and continue efforts to obtain project financing to proceed with the design and construction of the facility in Hobbs, New Mexico. We expect we will be able to revise our contract dates with URENCO once one of these other enrichment companies plans construction. In the meantime we will focus our efforts upon our other business segments and continue to work towards achieving profitability in those areas.

Although formal design work for the de-conversion facility is on hold, in 2013, we achieved several significant goals in our other business segments. During 2013 we:

.

made significant progress to restore cobalt product sales through completion of corrective actions necessary to resume shipments of cobalt targets to our Idaho Falls facility ;

.

funded additional engineering studies by the site contractor to evaluate continued irradiation of our cobalt targets;

.

obtained additional NRC licensing to carry out field services and as a result realized a significant increase in our Radiological Services revenue in the Radiological Services segment;

.

designed and built a portable hot cell that will facilitate a further expansion in our field service capabilities;

.

developed a new lightweight flood source in collaboration with RadQual, LLC (RadQual) that will have a product launch in 2014; and

.

were successful in further reducing overall Company operational expense.

During 2013, we made significant progress in several of our core business segments and during 2014, we plan to continue efforts to further expand and improve upon these operations. We will continue to invest in these segments and work to reduce production costs and expand sales in each of them. The following paragraphs provide a brief description of each of our business segments. Certain financial information with respect to each of our business segments, including revenues from external customers, a measure of profit or loss, and total assets, is set forth in Note 14 in the Notes to our Consolidated Financial Statements which begin on page F-6.

Nuclear Medicine Standards

This segment consists of the manufacture of sources and standards associated with SPECT (Single Photon Emission Computed Tomography) imaging, patient positioning, and calibration or operational testing of dose measuring equipment for the nuclear pharmacy industry. These items include flood sources, dose calibrators, rod sources, flexible and rigid rulers, spot markers, pen point markers, and a host of specialty design items. We manufacture these products for RadQual through an exclusive manufacturing agreement. The agreement provides that we will manufacture sources exclusively for RadQual and will not manufacture products that would directly compete with RadQual sources. The agreement also states that RadQual will only procure sources manufactured by us for distribution to RadQual customers. Should this agreement with RadQual terminate, we would be precluded from competing with RadQual in the nuclear medicine market. For this reason, we have worked to expand revenues from other segments to decrease our risk of dependency on one specific customer. The initial term of the agreement with RadQual expired on December 31, 2008, but the agreement automatically renews each January 1st thereafter unless otherwise terminated by either party with 60 days written notice. In 2007 and 2008, we acquired 24.5% of RadQual.

There are over 5,000 nuclear medicine centers in the U.S. that require these types of products on a regular repeat basis. We have been manufacturing these products for RadQual since 2001. The majority of these sales are to U.S. customers; however, recent years have seen an increase in foreign sales of many products. All of these products contain radioactive isotopes that decay at a predictable rate. Therefore, customers are required to periodically replace most of these products when they reach the end of their useful lives. Useful life varies from isotope to isotope and product to product but in most cases averages 18 months to two years. The isotopes used in manufacturing these nuclear medicine products are available from various sources world-wide. In addition to the products themselves, we have developed a complete line of specialty packaging for the safe transport and handling of these products.

RadQual has numerous distributors for direct sales of its products. Formerly, the largest distributor was Technology Imaging Services Inc. (TIS). In December 2010, we formed a 50/50 joint venture with RadQual to acquire the assets of TIS and to use those assets to create TI Services. We believed that this joint venture would provide growth opportunities in existing and future RadQual product lines both domestically and internationally. In both 2012 and 2013, however, TI Services, LLC experienced net losses due to reduced margins on certain non-nuclear medicine related products. During 2013, we were able to stem these losses and will continue those efforts in 2014. Also in collaboration with RadQual, we developed a new light weight imaging source, the Rad-Lite, that we believe will not only enhance our contract manufacturing role with RadQual, but will offer expanded sales opportunities for TI Services, LLC.

Cobalt Products

This segment includes the fabrication of cobalt capsules for teletherapy or irradiation devices, and recycling of expended cobalt sources. Although historically, bulk cobalt sales have accounted for a large percentage of the total revenue from this business segment, during the past two years we have not had any bulk sales because of our inability to pull cobalt material from the Advanced Test Reactor (ATR) which is under the direction of the U.S. Department of Energy (DOE) and its prime operating contractor which operates the ATR. This situation is discussed in further detail

below.

The year-over-year demand for cobalt has continued to increase as a result of the introduction of several new types of cobalt therapy units and we have continued to see robust growth in the demand for cobalt manufactured products for those devices. We continue to explore opportunities to further develop our Cobalt Products sales opportunities through increased production of finished source products. The production, use, transport, and import/export of these products are all heavily regulated, but we have developed an experienced staff of technicians, drivers, and supervisors to comply with the regulations and support cost effective and timely delivery of these products. One reason we established our Transportation segment was to support the delivery of cobalt products.

Historically, most of our cobalt production has been dependent upon the DOE and its prime operating contractor, which controls the ATR operations and, therefore, controls the continued production of cobalt in the government-funded ATR. In June 2012, a leak of a cobalt target belonging to another commercial business resulted in the curtailment of all further cobalt handling and production activities at the ATR pending completion of several corrective actions. The investigation into the leaking cobalt target identified three areas requiring corrective actions. Those areas were: (1) changes to cobalt target handling controls, (2) concerns with continued irradiation of in-process targets, and (3) enhancing the design of future cobalt targets. During 2013, we worked with the contractor to resolve these issues and in October 2013 we were able to resume shipments of cobalt material to our production facility in Idaho Falls, ID. During 2014, we will continue to work with the contractor to complete a new cobalt target design that will be used in the ATR, which should allow irradiation to resume in 2014. We expect that most of the existing in-process cobalt targets will also be able to resume irradiation later in 2014. However, because of the decayed state and physical condition of a few of those targets, we determined that it would be very unlikely that we would receive future value from them and we recorded a $193,000 inventory write-down of cobalt material in December 2013. Because cobalt takes approximately three years to produce, these past interruptions in irradiation will create a gap of approximately one year in our ability to manufacture cobalt products. To mitigate the impact of these delays and interruptions to our cobalt production activities we are investigating alternate sources of cobalt supply, evaluating possible sales of lower activity cobalt already in process, and identifying additional reactors for cobalt irradiation.

Radiochemical Product

This segment includes production and distribution of various isotopically pure radiochemicals for medical, industrial, or research applications. These products are either directly produced by us or are purchased in bulk from other producers and distributed by us in customized packages and chemical forms tailored to meet customer and market demands. Iodine-131 radiochemical accounts for the largest portion by far of revenue within this segment. Our iodine-131 is supplied through an agreement with NTP Radioisotopes (Pty) Ltd. (NTP) in South Africa and is imported as a radiochemical intended for medical applications. Although there are other manufacturers of iodine-131, in August 2010, we entered into a three-year agreement with NTP for the supply of iodine-131 that allows us to purchase iodine at a mutually agreeable pre-determined price and renewed this agreement in August of 2013. Either party may terminate the agreement by giving three months notice prior to the expiration of the term. During the fourth quarter of 2013, NTP experienced a shut-down in its facility in South Africa that produces iodine-131 which directly impacted our radiochemical manufacturing and sales. We were able to secure an alternate source of the product and were able to resume iodine production; however, the unexpected shutdown negatively impacted our iodine-131 sales in the fourth quarter.

Generally, iodine-131 is used in the treatment and diagnosis of various diseases of the thyroid gland such as Graves disease, thyroid cancer and hyperthyroidism. There are also several investigational and clinical trials underway to explore the use of iodine-131 for such applications as the treatment of breast, lung, prostate, and ovarian cancers. Other less significant sales of radiochemical in this segment consist of sales of isotopes such as Cobalt-57 (Co-57), Cesium-137 (Cs-137), Sodium-22 (Na-22), and Barium-133 (Ba-133).

Fluorine Products

We established the fluorine products business segment in 2004 to support production and sale of the gases produced using our Fluorine Extraction Process (FEP). The FEP is a process that produces ultra-high-purity fluoride gas products through a solid-to-solid reaction between depleted uranium tetrafluoride (DUF4) and various solid metal oxides such as silicon. High-purity fluoride gases are in ever-increasing demand for processes such as ion-implantation and chemical vapor deposition and also for the manufacture of organic complexes used in a host of industrial applications and manufacturing processes. The FEP products have very high purity, which makes them ideally suited to these specialty applications.

We acquired seven patents for the FEP in January 2004 and built a pilot production facility in Idaho that began operation in 2006. In 2010, we were granted an additional process patent on FEP based upon information gained through the operation of the pilot facility. Our pilot facility was not used for commercial gas production but instead focused upon production of high-purity products and examined methods of scaling up the size of the production operations in support of the proposed FEP facility in New Mexico. By the end of 2012, we had completed our testing of individual components and analytical processes and in April 2013 we shut down the pilot facility and terminated our lease on that property.

Radiological Services

This segment includes a wide variety of miscellaneous services such as processing gemstones, decommissioning disused irradiation units, and sealed source exchange in irradiation and therapy units. In May 2004, we entered into an exclusive contract with Quali-Tech, Inc., for gemstone processing and, historically, this contract has accounted for the majority of sales in this segment. In May 2012, we modified and renewed the contract, which remains in effect until either party gives a minimum of six months notice to the other that it does not intend to continue the contract. The contract provides that we shall act as the exclusive processor of gemstones for Quali-Tech, Inc., for the term of the contract and two years beyond.

In 2012, we obtained an amendment to our NRC license that allows the performance of certain field service activities in connection with the DOE s Orphan Source Recovery Program (OSRP). These activities include services to support recovery of disused sources under the DOE s OSRP and installation or removal of certain cobalt therapy units. During 2013, we also designed and built a mobile hot cell unit to use in this field service work.

In March 2012, we completed an agreement for exclusive sales of radioactive material transportation containers through a worldwide distributor agreement with Alpha-Omega Services, Inc. (AOS), of Bellflower, California, signed in August 2007. We had been awaiting Nuclear Regulatory Commission (NRC) approval as well as the NRC Certificate of Compliance for the containers in order to begin marketing efforts. The series of AOS model containers should address a wide range of needs for the transportation of radioactive materials and provide us with some expanded business opportunities in the Radiological Services and Cobalt Products segments. Sales of these containers are not expected to begin until sometime later in 2014 as the containers become available.

Transportation

This segment was established in 2006 through our subsidiary, International Isotopes Transportation Services (IITS). IITS was established to provide transportation of our products (such as cobalt sources) and to offer for hire transportation services of hazardous and non-hazardous cargo materials. A major factor in our determination to establish this subsidiary and business segment was the volume of regulations involving the security and tracking of shipments of cobalt. IITS provides us with considerable savings for the transportation of our own products and produces a small revenue stream through the transportation of products for other companies. We anticipate that this

segment will also provide some of the transportation services for our planned depleted uranium de-conversion facility in New Mexico.

Industry Overview, Target Markets, and Competition

The industries and markets that require or involve the use of radioactive material are diverse. Our current core business operations involve products that are used in a wide variety of applications and in various markets. The following provides an explanation of the markets and competitive factors affecting our current business segments.

Nuclear Medicine Standards

Calibration and Reference Standards are required for the daily operational checks and calibration of the measurement of SPECT imaging devices frequently used in nuclear medicine. Calibration and quality assurance testing is required as a routine part of the normal operations of this equipment to ensure its reliability and accuracy. We exclusively manufacture many of these products for RadQual, which in turn has several distributors who make direct sales around the U.S. We directly ship these products to all 50 states and several overseas locations. There is only one other producer of these products in the world that directly competes with us for these products. Most of the products manufactured by our competitor are similar in design to our products because all must meet Original Equipment Manufacturer (OEM) dimensional and performance standards. However, we attempt to differentiate our products from our competitor s products through increased levels of quality control and customer service. We received ISO-9000 and ISO-13485 quality program certifications in 2011 that have allowed us to start selling these products into several foreign countries that require this additional quality certification for manufacturers.

In December 2010, we formed TI Services, LLC, a joint venture with RadQual, which is expected to continue as a major distributor of products in the field of nuclear medicine and nuclear cardiology. TI Services, LLC experienced net losses in 2012 and in 2013. However, we have implemented some price changes and cost control measures which have decreased these losses. In 2013, in collaboration with RadQual, we developed a new flood source product that will be marketed by TI Services, LLC, which we believe will further improve its financial performance for 2014.

Cobalt Products

Historically, we have sold high-activity bulk cobalt to a customer that used it to fabricate several models of sealed sources for medical and industrial applications. However, with recent problems at the DOE s ATR, we have not been able to continue irradiation of our cobalt targets housed at that facility and so have been forced to halted bulk cobalt sales. We therefore recorded no bulk cobalt sales in 2012 or in 2013. With the cobalt material we were able to obtain in 2013 we manufactured a wide range of sealed source products. These products include applications such as radiation therapy, security examination, and blood sterilization. While there are other technologies available to provide external radiation therapy, there are several state-of-the-art devices that continue to depend on cobalt sources for several specialized applications. There are currently no other producers of high specific activity cobalt in the U.S. However, there are at least three significant producers in other parts of the world. There is only one other company in the U.S. currently licensed to handle large quantities of cobalt.

In addition to manufacturing cobalt sources, we recycle used cobalt sources by recovering the cobalt for re-use in the manufacture of new sealed sources for teletherapy devices, irradiators, and other source applications. We are the only company in the U.S. that provides this unique service. There has been a significant increase in regulation by the NRC in recent years that has created a significant barrier to any new entrants to this market. We expect growth in the demand for cobalt in several of the newer applications, coupled with an expected decline in reactors around the world that are capable of producing this type of high-activity material. to significantly increase the demand for our cobalt products in the next 5 years. Nonetheless, we are at present dependent upon our contract relationship with the DOE for access to its ATR in Idaho for continued cobalt production. The interruption to cobalt production experienced in

2012 has significantly impacted our Cobalt Products business segment. This impact continued to be felt during 2013 but will be improved significantly in 2014 as some processing and sales resume. However, the impact to cobalt production could be felt through 2016 depending upon our ability to resume irradiation of cobalt targets, start new irradiation cycles, and locate alternative sources of supply.

Radiochemical Products

We typically supply radioisotope products in bulk form. The markets for most radiochemicals are highly competitive. The target markets for these products are customers who (1) incorporate them into finished industrial or medical devices; (2) use radioisotope products in clinical trials for various medical applications; or (3) further process and include the radioisotope products into a pharmaceutical product for U.S. Food and Drug Administration (FDA)-approved therapy or imaging. We are the only U.S. company that supplies iodine-131 radiochemical directly to radiopharmacies. There is one major foreign company that produces a similar pharmaceutical product that competes with our sales. Continuation of business in this segment is highly dependent upon maintaining a low-cost, high-quality product meeting all of the current Good Manufacturing Practices (cGMP).

Fluorine Products

We are developing our Fluorine Products segment in conjunction with uranium de-conversion in order to take advantage of the anticipated need for depleted uranium de-conversion services. Our FEP patents provide a unique opportunity to provide certain high-purity fluoride compounds while also offering a for fee de-conversion service to the uranium enrichment industry. Although during 2013 we curtailed the formal engineering work on the planned de-conversion facility, we believe that there will be a resumption of nuclear growth overseas that will positively impact the front end of the nuclear fuel cycle. Once that occurs the ground work we have completed on the depleted uranium de-conversion and fluorine extraction project should put us in an excellent position to take advantage of our position in the industry and should serve to justify the financial investment in this uranium de-conversion project in the future. During 2012, we completed testing of certain process parameters and demonstrating the purity of the FEP products and in 2013 we closed our pilot facility and terminated our lease on that property.

Radiological Services

Historically, most of our radiological services have been performed in support of gemstone processing for Quali-Tech, Inc. Although we have reported a decline in gemstone processing in recent years, volumes increased significantly in 2013 as demand for luxury items such as jewelry increased. Although we do anticipate strong gemstone processing revenues in 2014, we expect that most of the revenue within this segment will be the result of field service work.

Starting in 2012, we obtained our first amendment to our NRC license to permit certain field service activities. In 2013 we were awarded several contracts for field service activities in connection with the OSRP. During 2013, we also designed and built a mobile hot cell unit for use in this field service work and we have requested an additional amendment to our NRC licenses to support a further expansion of these field service activities. In 2014 and beyond we will be working to further increase these field service opportunities in the U.S. and abroad and expect that field services will be the major source of revenue within this business segment.

While there are other companies that compete with us for field services, we believe the addition of the portable hot cell gives us a unique competitive advantage in this area.

Transportation

IITS was formed in order to support transportation of our own products and to provide for hire transportation services. IITS specializes in the transportation of hazardous, radioactive materials including large cobalt shipments. These types of shipments face a significant amount of increased new regulation and enhanced security requirements and IITS is well suited to meeting these requirements while significantly reducing the costs of transport to us. IITS has specially trained drivers and specially equipped vehicles intended to meet the new standards for transportation of large cobalt shipments. Therefore, IITS is capable of providing unique transportation services that we believe only one or two other commercial carriers in the U.S. can also provide. The transportation segment directly supports the sale and delivery of our cobalt products and the conduct of field service projects.

Government Regulation

Licensing

We have obtained two broad scope materials licenses from the NRC that permit use and possession of by-product material, as well as licenses that permit the exempt distribution of irradiated gemstones, import and export of certain radioactive materials, a wide range of field service activities, and Type B shipments of radioactive materials. The first broad scope material license covers calibration and reference standard manufacturing and distribution, radioisotope processing and distribution, large scale cobalt processing and recycle operations, radioactive gemstone processing, environmental sample analysis, certain field service activities, and research and development. The second broad scope materials license specifically covers FEP production under our subsidiary, International Isotopes Fluorine Products, Inc. This license is specific to the handling of fairly large quantities of depleted uranium in various chemical forms. The exempt distribution license permits the direct release of irradiated gemstones into the U.S. without export. All of our existing licenses and permits are adequate to allow current business operations. The planned uranium de-conversion facility will require a ground water permit from the state of New Mexico before operation. As a condition of our NRC licenses in Idaho, we are required to provide financial assurance for decommissioning activities. We currently fulfill this license requirement with a surety bond which names the NRC as beneficiary and which is supported with restricted certificates of deposit in an amount equaling one half of the face value of the bond. We do not handle special nuclear materials (i.e. nuclear fuels and weapons grade uranium, thorium or plutonium); therefore, our facility is not designated as a nuclear facility that would require additional licensing.

In October 2012, we were granted a Part 40 construction and operating license by the NRC for the proposed depleted uranium de-conversion and FEP production facility. The facility, which is to be located in Lea County, New Mexico, is proposed to initially de-convert up to approximately 11 million pounds of depleted uranium hexafluoride (DUF_6) annually into fluoride products and depleted uranium oxides (DUO). Further engineering work on this facility was placed on hold in 2013 until additional contracts for utilization of the facility can be obtained. There is no specific timeline required by the NRC for the start of construction on this project.

Regulation of Radioisotope Production Waste

All of our manufacturing processes generate some radioactive waste. We must handle this waste pursuant to the Low Level Radioactive Waste Policy Act of 1980, which requires the safe disposal of mildly radioactive materials. The estimated costs for storage and disposal of these materials have been included in the manufacturing and sales price of our products. However, actual disposal costs are subject to change at the discretion of the disposal site and are ultimately applied at the time of disposal. We have obtained all necessary permits and approvals for the disposal of our waste materials and we do not anticipate any negative changes in capacity or regulatory conditions that would limit or restrict our waste disposal capabilities.

A surety bond has been used to provide the financial assurance required by the NRC for our Idaho facility license for decommissioning upon termination of operations and a similar mechanism will be required to fund the decommissioning of the new facility.

Other Regulations

We are registered as a medical device manufacturer through the FDA for several of our nuclear medicine reference and calibration standards. We are registered with the U.S. Department of Transportation for the shipment of radioactive materials. We also have an NRC license for the import and export of radioactive materials. Because of increasing security controls and regulations, it is likely that we may encounter additional regulations affecting transportation, storage, sale, and import/export of radioactive materials. We are also subject to inspection by the FDA and are registered with the FDA as an Active Pharmaceutical Ingredient (API) manufacturer. Our Idaho Falls facility is also registered with the FDA as a Manufacturing facility.

We are subject to government regulation and intervention both in the United States and in all foreign jurisdictions in which we conduct business. Compliance with applicable laws and regulations results in higher capital expenditures and operating costs and changes to current regulations with which we must comply can necessitate further capital expenditures and increases in operating costs to enable continued compliance.

Employees

As of December 31, 2013, we had 22 full-time employees.

Distribution Methods for Products

We sell our products directly to our customers who, in some cases, are both end users and distributors. We use common commercial carriers and our own IITS subsidiary for delivery of our products. For smaller quantities of material, and overnight and next-day delivery, we utilize other commercial carriers. For our products that involve large quantities of radioactive material, most commonly cobalt-60, that invoke certain special transportation requirements, we use our IITS transportation subsidiary. The creation of the IITS subsidiary has produced additional revenue in for-hire operations and decreased costs by allowing us to transport our own products more cost-effectively than other commercial carriers.

Dependence on Customers

During 2013, one major customer, RadQual, accounted for 44% of our total gross revenue. This total includes both sales under an exclusive sales agreement with RadQual and its sales as a distributor of our products and also includes sales reported by TI Services, LLC, our joint venture with RadQual. We do not believe we are dependent upon the sales this customer makes as a distributor because we have the option of terminating the distributor relationship and assuming direct sales of the product. Sales under exclusive contract with RadQual represent, 25%, and 23% of our total gross revenues for the years ended December 31, 2013 and 2012, respectively. Combined sales, on which we are dependent, to our three largest customers, accounted for 55% of our total gross revenues in 2013 and accounted for 52% of our total gross revenues in 2012. We are making efforts to reduce our dependency on a small number of customers by expanding sales in both domestic and foreign markets and through our establishment of the joint venture, TI Services, LLC, to expand distribution of products. We have also put in place an additional sales agreement with one customer that we expect will expand the sale of cobalt products and create the additional opportunity for revenue from new radiological services.

Patents, Trademarks, Licenses and Royalty Agreements

In 2004, we obtained certain patents related to the FEP. In July 2010, we were granted a new patent on the FEP process which provides patent protection of this intellectual property through 2019. These patents will be important to our future plans to build upon FEP production capacity including our planned construction of the first commercial depleted uranium de-conversion and fluorine extraction facility in the U.S. We believe this will provide a commercial opportunity once companies resume planning and construction of new uranium enrichment facilities in the U.S. In 2009, patent applications were made in Brazil, Canada, China, Europe, Japan, Russia, and South Africa. In 2013, the FEP process patent was granted in Russia. The applications in all of the other countries mentioned are still in process.

Research and Development

We had research and development expenses totaling $706,048 in 2013, compared with $990,021 in 2012. These expenses were primarily associated with engineering, design, and licensing activities for our planned depleted uranium de-conversion and FEP facility.

In years prior to 2011, we expensed all costs related to the continued development of the uranium de-conversion facility project as research and development expenses. These expenses included all Idaho FEP facility operations as well as facility design, product market development, and NRC license application review costs. During 2011, when it was determined by management that the project had progressed to a point where it was considered very likely that the NRC license for the de-conversion facility would be issued in 2012, these research and development costs were capitalized. During 2013, all such expenses were capitalized and, once we resume further work on the project, we will continue to capitalize these expenses in the future.

Available Information

Our internet website address is http://www.internationalisotopes.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act) are available free of charge through our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information on our website is not incorporated by reference into this report or other reports filed with the SEC.

Item 1A. RISK FACTORS

Readers should carefully consider the following factors that may affect our business, future operating results and financial condition, as well as other information included in this Annual Report. The risks and uncertainties described below are not the only ones the Company faces. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. If any of the following risks actually occur, our business, financial condition and operating results could be materially adversely affected.

Risks Related to Our Proposed De-Conversion and FEP Produced Fluoride Gas Business

We will need to raise additional funds to complete the construction of our de-conversion and FEP facility. We need to secure more customer contracts and raise approximately $125 million in additional funds to complete the design and construction of a de-conversion facility with a production-scale FEP operation. We may not be able to raise the additional capital required to complete the facility on acceptable terms, or at all. In addition, the total funds required to complete this project have been based upon early preliminary estimates and, while we believe these estimates are conservative, there can be no assurance that unforeseen expenses will not be incurred and additional funding will not be required to complete the project.

We do not have an operating history with respect to our strategy to combine de-conversion services and FEP-produced fluoride gas products and this business may not succeed. We have no operating results with respect to providing de-conversion services or producing high volumes of fluoride gas products using FEP to date and, therefore, we do not have an operating history upon which you can evaluate this business or our prospects. Our prospects must be considered in light of the risks and uncertainties encountered in entering a new line of business. Some of these risks relate to our potential inability to:

construct our planned de-conversion and FEP production plant, including the effective management of the cost of the design and construction of the facility, and obtain the additional financing necessary for such construction;

maintain the necessary regulatory approvals for the facility and the ongoing operations of the facility;

obtain the groundwater permit from the state of New Mexico;

produce commercially economic volumes of high-purity fluoride gas using FEP;

effectively manage this new business and its operations;

successfully establish and maintain our intended low-cost structure;

successfully obtain disposal services for our depleted uranium waste stream; and

successfully address the other risks described throughout this Annual Report.

If we cannot successfully manage these risks, our business and results of operations and financial condition will suffer.

The market for our de-conversion services may be adversely affected if planned enrichment facilities that would create by-products suitable for our de-conversion services are not completed. We plan to build a de-conversion and FEP production plant, in part, to process the anticipated DUF_6 by-product from certain enrichment facilities being planned by several companies, including USEC, AREVA and GE-Hitachi Nuclear Energy's Global Laser Enrichment. While we have an agreement in place with UUSA and that facility is in operation, additional contracts will be required to utilize the full capacity of our planned facility. If none of the other anticipated enrichment facilities are completed, we may not have sufficient demand for our de-conversion services to realize the expected economic benefit from our planned de-conversion and FEP production plant.

We currently have only one contract to provide de-conversion services to an enrichment firm. We currently have only one effective de-conversion services agreement with UUSA. The agreement is conditional upon, among other things, each party obtaining necessary third party and government approvals, UUSA obtaining the approval of the NRC to the amendment of a provision in its materials license that prohibits shipments of depleted uranium to de-conversion facilities employing anhydrous hydrofluoric acid in the de-conversion process, and our meeting certain performance milestones in the construction and start-up of the planned facility. The initial term of the agreement extends for a period sufficient to cover five years of de-conversion services once our planned uranium de-conversion facility is operational, based on operations starting no later than January 1, 2014. UUSA has indicated they will amend the agreement commitment dates once we secure an additional de-conversion agreement and establish firm dates for start of construction. Because the start of construction of the project has been delayed, and we did not meet the January 1, 2014 deadline, we will need to renegotiate this term of the contract with UUSA. If we cannot demonstrate certain production capacities in accordance with the agreement, UUSA has the option to terminate the agreement and we would have no opportunity to cure pursuant to the terms of the agreement.

There is no history of large-scale commercial fluoride gas production utilizing FEP. We have successfully demonstrated the feasibility of using FEP to produce some fluoride gases and Starmet Corporation (Starmet), which originally developed and patented the technology, also used FEP to produce a fluoride gas. However, FEP has not been used for large-scale commercial production of the size and magnitude envisioned in conjunction with the de-conversion process and there may be technical issues and process challenges related to the utilization of FEP for large-scale commercial production. Unforeseen issues associated with constructing and scaling up these new FEP operations could significantly impact our proposed schedule and our overall ability to produce high-purity fluoride gas in the quantities anticipated.

Prior to the start of operations of the facility, we must obtain a Ground Water Permit from the State of New Mexico, and we cannot guarantee the amount of time required to obtain this permit from the State of New Mexico for operation of these facilities. The operation of the planned depleted uranium de-conversion facility requires a ground water permit from the State of New Mexico. There is no assurance that the ground water permit will be issued to us by the State of New Mexico. We also have no control over the actual time required by the State of New Mexico to review and approve the application for the ground water permit. Failure to obtain the permit, or any delay in obtaining the permit, could delay the construction of our planned depleted uranium de-conversion facility, thereby delaying revenue-generating operations at the facility.

The DOE is obligated to take depleted uranium from enrichment companies. The DOE has constructed two depleted uranium de-conversion facilities. These facilities are obligated to process depleted uranium produced from United States commercial uranium enrichment facilities. We cannot assure you that enrichment companies will not select the DOE as their de-conversion service provider. If we are unable to meet the milestones required by our de-conversion services agreement with UUSA and it terminates that agreement, and other enrichment companies select the DOE as their de-conversion services provider, we will not be able to realize the expected economic benefit from our planned de-conversion and FEP production plant.

We will be handling large quantities of DUF_6 and fluoride gases, which are radioactive and hazardous materials, respectively, and are subject to intense regulation. The hazardous nature of DUF_6 and fluoride gases affects the actions we are required to take for licensing, air permitting , environmental review, emergency response, liability insurance, personnel training, and generally increases the level of concern by the general public with respect to our handling of these materials. All of these factors complicate the licensing and operations processes and involve a host of additional regulatory factors that could affect the timeline for completing our de-conversion and FEP facility and cost estimates, and involve political pressures that could negatively influence operations. Additionally, the NRC is revising its regulations on the disposal of depleted uranium waste at Low Level Radioactive Waste (LLRW) disposal facilities that accept substantial quantities of depleted uranium. Any changes to the current regulations may result in increased disposal costs that we intend to pass through to our customers, which, depending on the significance of the increased cost, may cause potential customers to continue to store their DUF_6 rather than pay for de-conversion and disposal services.

We will be subject to competition from the DOE and other companies. While there are no currently operating commercial DUF_6 de-conversion facilities in the United States, the DOE is operating two de-conversion plants intended to process DUF_6 from the DOE s existing 1.5 billion-pound stockpile. Additionally, AREVA currently operates a de-conversion plant in France, UUSA is constructing a facility in the U.K., and the State Atomic Energy Corporation ROSATOM has constructed a facility in Russia. We cannot assure you that the operators of the existing DUF_6 de-conversion facilities will not build additional facilities to expand their operations and compete with us in providing de-conversion services or that commercial enrichment companies will not choose to ship their depleted DUF_6 overseas for processing in France, the U.K., or Russia.

We currently hold conditional title to the property in Lea County, New Mexico where the proposed plant is to be constructed. The property location for our planned facility is located in Lea County, New Mexico. Lea County, New Mexico has transferred the property to us under the provisions of the New Mexico Local Economic Development Act, Project Participation Agreement. We are obligated to meet certain performance objectives; namely starting Phase I construction no later than December 31, 2014, and completing Phase I and hiring at least 75 employees by December 31, 2015, in order to retain title to the property. We are currently in discussions with Lea County to extend the deadlines for these performance objectives and the county has indicated its willingness to do so. If the agreement is not revised, we would have an option to purchase the property at its appraised value or let ownership revert to the county. If we do not retain title to the property, it will have a material adverse impact on our planned de-conversion and FEP project.

After completing Phase I of our planned de-conversion and FEP production facility, we may not have sufficient earnings to complete additional planned phases of the facility. We plan to integrate the de-conversion of DUF_6 with FEP in multiple phases. After funding Phase I, we plan to fund additional phases through earnings. If we do not realize the earnings necessary to fund these additional phases, we may need to find other sources of capital. We cannot assure you that we will be able to raise the additional capital required to complete these phases on acceptable terms, or at all. In addition, the total funds required to complete these phases have been based upon early preliminary estimates and there can be no assurance that unforeseen expenses will not be incurred and any additional funding required to complete these phases will be obtained.

Our business may be harmed if we fail to protect our proprietary FEP technology utilized in our planned de-conversion and FEP production facility. We rely on patents to protect our intellectual property rights to the FEP technology to be used in our planned de-conversion and FEP production plant. Although we have filed international Patent Cooperation Treaty (PCT) applications to seek international protection for the FEP process in certain countries, we cannot be certain that our competitors will not be able to design around our patents and that the laws of some countries in which our FEP patents are or may be practiced will protect our products or intellectual property rights to the same extent as do the laws of the United States, increasing the possibility of piracy of our patents. Although we intend to vigorously defend our intellectual property rights, we may not be able to prevent misappropriation of our FEP technology. Our competitors may also independently develop technologies that are substantially equivalent or superior to our technology.

Risks Related To Our Current Business Operations

We are dependent on various third parties in connection with our business operations. The production of high-specific activity cobalt is dependent upon the DOE, and its prime-operating contractor, which controls the Idaho reactor. Current activity at the Idaho reactor may continue to affect the supply of cobalt material needed for the manufacture of cobalt sources. Loss of the ability to use, or cost-effectively use, these irradiation services would significantly impact our cobalt products business segment because there is not currently another reactor available in the United States that is capable of providing this type of service for us. Our nuclear medicine calibration and reference standard manufacturing is conducted under an exclusive contract with RadQual, which in turn has agreements in place with several companies for marketing and sales. Our radiochemical iodine is supplied through two supply sources. Unanticipated contract terminations by any of these suppliers and other third parties would have a material adverse impact on our operations, financial results, and cash flow.

We are dependent on a limited number of customers in connection with our current business operations. During 2012 and 2013 sales to RadQual represented 44% and 41% of our total gross revenues. Combined sales to our three largest customers accounted for 55% of our total gross revenues during 2013. Combined sales to these three customers accounted for 52% of gross revenue in 2012. Although we are making efforts to reduce our dependency on a small number of customers, the loss of any one of these customers could have a significant impact on our future results of operations and financial condition. Unanticipated contract terminations by any of these current customers could have a material adverse impact on operations, financial results, and cash flow.

We are subject to competition from other companies. Each of our existing business areas has direct competition from other businesses. High-specific activity cobalt is supplied by other reactor facilities around the world. Nuclear medicine calibration and reference standards are being produced by one other major manufacturer in the United States. Most of our radiochemicals are also manufactured by several other companies in the world, and there are other suppliers of high-purity fluoride products. Each of our competitors has significantly greater financial resources that could give them a competitive advantage over us.

Risks Related To Our Company Generally

We have incurred, and may continue to incur, losses. With the exception of 2002, we have incurred net losses for most fiscal periods since our inception. From inception through December 31, 2013, we have generated $76,076,885 in revenues and an accumulated deficit (including preferred stock dividends and returns) in the amount of $116,697,147. The negative cash flow we have sustained has materially reduced our working capital, which in turn could materially and negatively impact our ability to fund future operations and continue to operate as a going concern. Management has taken and continues to take actions to improve our results. The availability of necessary working capital, however, is subject to many factors beyond our control, including our ability to obtain favorable financing, economic cycles, market acceptance of our products, competitors' responses to our products, the intensity of competition in our markets, and the level of demand for our products.

Our operations expose us to the risk of material environmental liabilities. We are subject to potential material liabilities related to the remediation of environmental hazards and to personal injuries or property damages that may be caused by hazardous substance releases and exposures. The materials used in our operations subject us to risks of environmental contamination that subject us to liability, including remediation obligations that could be very costly. In addition, the discovery of previously unknown contamination could require us to incur costs in the future that would have a negative effect on our financial condition or results of operations. A surety bond has been used to provide the financial assurance required by the NRC for our Idaho facility license for decommissioning upon termination of operations and a similar mechanism will be required to fund the decommissioning of the new facility . However, if a contamination event occurred within, or outside, of our facility, we would be financially responsible to remediate such contamination and could have to borrow money or fund the remediation liability from our future revenue. We may not be able to borrow the funds, or have available revenue, sufficient to meet this potential liability, which could have a significant negative impact on our results of operations.

We are dependent upon key personnel. Our ongoing operations are dependent on Steve T. Laflin, President and Chief Executive Officer. The loss of Mr. Laflin could have a material adverse effect on our business. We have a $2 million key man life insurance policy on Mr. Laflin and an employment agreement that extends through February 28, 2017. However, there is no assurance that we will be able to retain Mr. Laflin or our existing personnel or attract additional qualified employees. The loss of any of our key personnel or an inability to attract additional qualified employees could result in a significant decline in revenue.

General economic conditions in markets in which we do business can impact the demand for our goods and services. Decreased demand for our products and services can have a negative impact on our financial performance and cash flow. Demand for our products and services, in part, depends on the general economic conditions affecting the countries and industries in which we do business. A downturn in economic conditions in the U.S. or industry that we serve may negatively impact demand for our products and services, in turn negatively impacting our operations and financial results. Further, changes in demand for our products and services can magnify the impact of economic cycles on our businesses. For instance, our topaz gemstone processing is affected by the demand for luxury items such as jewelry as well as by the instability of foreign markets which are key in the manufacture of products using irradiated gemstones.

Volatility in raw material and energy costs, interruption in ordinary sources of supply and an inability to recover unanticipated increases in energy and raw material costs from customers could result in lost sales or significantly increase the cost of doing business. Market and economic conditions affecting the costs of raw materials, utilities, energy costs, and infrastructure required to provide for delivery of our goods and services are beyond our control and any disruption or halt in supplies, or rapid escalations in costs could affect our ability to manufacture products or to competitively price our products in the marketplace. For instance, an interruption in the supply of isotopes such as cobalt-57, cobalt-60, or iodine-131 could result in lost sales of nuclear medicine and calibration standards sales and radiochemical products.

We are subject to extensive government regulation in jurisdictions around the globe in which we do business. Regulations address, among other things, environmental compliance, import/export restrictions, healthcare services, taxes and financial reporting, and can significantly increase the cost of doing business, which in turn can negatively impact our operations, financial results and cash flow. We are subject to government regulation and intervention both in the United States and in all foreign jurisdictions in which we conduct business. Compliance with applicable laws and regulations results in higher capital expenditures and operating costs and changes to current regulations with which we must comply can necessitate further capital expenditures and increases in operating costs to enable continued compliance. Additionally, from time to time, we may be involved in legal or administrative proceedings under certain of these laws and regulations. Significant areas of regulation and intervention include the following:

Radioactive Waste. All of our manufacturing processes generate some radioactive waste. We must handle this waste pursuant to the Low Level Radioactive Waste Policy Act of 1980, which requires the safe disposal of mildly radioactive materials. The estimated costs for storage and disposal of these materials have been included in the manufacturing and sales price of our products. However, actual disposal costs are subject to change at the discretion of the disposal site and are ultimately applied at the time of disposal. The NRC is revising its regulations on the disposal of depleted uranium waste at LLRW disposal facilities that accept substantial quantities of depleted uranium. If

commercial LLRW disposal facilities are not readily available to us, we may not be able to provide the de-conversion services at the level assumed by our business model.

***Health Compliance*.** Health regulations, dictated by the United States Occupational Safety and Health Administration and NRC are extensive in our business. There is no assurance that our activities will not at times result in liability under health regulations. Costs and expenses resulting from such liability may materially negatively impact our operations and financial condition. Overall, health laws and regulations will continue to affect our business worldwide.

Environmental Regulation. We are subject to various federal, state, local and foreign government requirements regulating the discharge of materials into the environment or otherwise relating to the protection of the environment. These laws and regulations include, but are not limited to the Comprehensive Environmental Response, Compensation, and Liability Act, the Resource Conservation and Recovery Act and state statutes such as the Idaho Hazardous Waste Management Act, the Low Level Radioactive Waste Policy Act of 1980, NRC regulations concerning various irradiated, radioactive, and depleted uranium materials, and United States Department of Transportation regulations concerning shipment of radioactive materials. Certain of these laws and regulations can impose substantial fines and criminal sanctions for violations, and require installation of costly equipment or operational changes to limit emissions and/or decrease the likelihood of accidental hazardous substance releases. We incur, and expect to continue to incur, capital and operating costs to comply with these laws and regulations. In addition, changes in laws, regulations and enforcement of policies, or the imposition of new clean-up requirements or remedial techniques, could require us to incur costs in the future that would have a negative effect on our financial condition or results of operations.

Import/Export Regulation. We are subject to significant regulatory oversight of our import and export operations due to the nature of our product offerings. Penalties for non-compliance can be significant and violations can result in adverse publicity. We also have an NRC license for the import and export of radioactive materials. Because of increasing security controls and regulations, it is likely that we may encounter additional regulations affecting transportation, storage, sale, and import/export of radioactive materials.

Taxes. We structure our operations to be tax efficient and to make use of tax credits and other incentives. Nevertheless, changes in tax laws, actual results of operations, final audit of tax returns by taxing authorities, and the timing and rate at which tax credits can be utilized can change the rate at which we are taxed, thereby affecting our financial results and cash flow.

Financial Accounting Standards. Our financial results can be impacted by new or modified financial accounting standards.

We may incur material losses and costs as a result of product liability claims that may be brought against us. We face an inherent business risk of exposure to product liability claims in the event that products supplied by us fail to perform as expected or such failures result, or are alleged to result, in bodily injury. Although we have purchased insurance with coverage and in amounts that we believe to be adequate and reasonable in light of our current and planned operations, including our new uranium de-conversion and fluoride gas production business, if a successful product liability claim were brought against us in excess of our available insurance coverage or established reserves, it would have a material adverse effect on our business and financial results.

We may need additional financing to continue operations. Because we may continue to experience negative cash flow, we may need to obtain additional financing to continue operations. Management will continue to plan and take actions to improve our financial results which could enhance our ability to obtain debt financing. However, obtaining additional financing is subject to many factors beyond our control and may not be available to us on acceptable terms or at all.

Our earnings, cash flow and financial position are exposed to financial market risks worldwide, including interest rates. Fluctuations in domestic and world markets could adversely affect interest rates and impact our ability to obtain credit or attract investors. Such market risk could have a negative impact on future business opportunities including our ability to raise additional capital for planned business expansion. We also purchase some of our radiochemical products from overseas suppliers and the price of those products could be adversely affected through changes in currency exchange rates.

Catastrophic events such as natural disasters, pandemics, war and acts of terrorism could disrupt our business or the business of our suppliers or customers, and any such disruptions could have a negative impact on our operations, financial results and cash flow. Our operations are at all times subject to the occurrence of catastrophic events outside our control, ranging from severe weather conditions such as hurricanes, floods, earthquakes and storms, to health epidemics and pandemics, to acts of war and terrorism. Any such event could cause a serious business disruption that could affect our ability to produce and distribute our products and possibly expose us to third-party liability claims. Additionally, such events could impact our suppliers, thereby causing energy and raw materials to become unavailable to us, and our customers, who may be unable to purchase or accept our products and services. Any such occurrence could have a negative impact on our operations and financial condition.

Our future growth is largely dependent upon our ability to develop new technologies that achieve market acceptance with acceptable margins. Our businesses operate in global markets that are characterized by rapidly changing technologies and evolving industry standards. Accordingly, our future growth rate depends upon a number of factors, including our ability to (i) identify emerging technological trends in our target end-markets, (ii) develop and maintain competitive products, (iii) enhance our products by adding innovative features that differentiate our products from those of our competitors, and (iv) develop, manufacture, and bring products to market quickly and cost-effectively. Our ability to develop new products based on technological innovation can affect our competitive position and requires the investment of significant resources. These development efforts divert resources from other potential investments in our businesses, and they may not lead to the development of new technologies or products on a timely basis or that meet the needs of our customers as fully as competitive offerings. In addition, the markets for our products may not develop or grow as we currently anticipate. The failure of our technologies or products to gain market acceptance due to more attractive offerings by our competitors could significantly reduce our revenues and adversely affect our competitive standing and prospects.

Risks Related To Our Common Stock

Trading in our common stock is limited and the price of our common stock may be subject to substantial volatility. Our common stock has historically been quoted on the Over The Counter Bulletin Board® (OTCBB) under the ticker symbol INIS.OB. The market for our securities is limited, the price of our stock is volatile, and the risk to investors in our common stock is greater than the risk associated with stock trading on other markets. These factors may reduce the potential market for our common stock by reducing the number of potential investors. This may make it more difficult for investors in our common stock to sell shares to third parties or to otherwise dispose of their shares. This could cause our stock price to decline.

We currently do not intend to pay dividends on our common stock. We do not plan to pay dividends on shares of our common stock in the near future. Consequently, an investor in our common stock can only achieve a return on its investment in us if the market price of our common stock appreciates.

We are contractually obligated to issue shares in the future, which will dilute your interest in us. As of December 31, 2013, there were approximately 14,200,000 shares of common stock issuable upon exercise of vested stock options outstanding, at a weighted-average exercise price of $.09 per share. An additional 13,275,396 shares were reserved for issuance under our 2006 Equity Incentive Plan and our International Isotopes Inc. Employee Stock Purchase Plan as of December 31, 2013. We expect to issue additional options to purchase shares of our common stock to compensate employees, consultants and directors, and we may issue additional shares to raise capital to fund design, licensing and construction of our planned uranium de-conversion plant. Any such issuances will have the effect of further diluting the interest of the holders of our securities. Also outstanding as of December 31, 2013, are Series H Warrants for the issuance of 1,913,892 shares of common stock, Series I Warrants for the issuance of 12,924,887 shares of common stock, Series K warrants for the issuance of 2,419,172 shares of common stock, and Series L warrants for the issuance of 10,000,000 shares of common stock.

Item 1B. UNRESOLVED STAFF COMMENTS

We are a smaller reporting company, as defined by Item 10(f)(1) of Regulation S-K, and therefore are not required to provide the information required by this item.

Item 2. PROPERTIES

During 2013 we leased two properties in Idaho Falls, Idaho. However, one of these leases was terminated in April of 2013. We hold the conditional title to 640 acres of land in Lea County, New Mexico. The following paragraphs provide a brief summary of these properties.

4137 Commerce Circle, Idaho Falls, ID The facility located on this property houses our main corporate headquarters and all of our current manufacturing operations. We hold this property pursuant to a lease that extends through April 2021. The facility was new when leased in March 2001 and remains in excellent condition. We have a purchase option and a right of first refusal on this property that allows us to purchase this property at any time for a stated amount.

1359 Commerce Way, Idaho Falls, ID The facility located on this property housed our FEP pilot production operations. The facility was first leased in February 2004 and we held this property pursuant to a lease that extended through April 2013. The lease included an option for us to extend the lease for one additional year upon the April 30, 2013 expiration date; however, we declined to exercise the option and terminated the lease at that time.

Land - Lea County New Mexico In August 2011, we received land from Lea County, New Mexico, pursuant to a Project Participation Agreement whereby the land was deeded to us for no monetary consideration. In return, we committed to construct a uranium de-conversion and FEP facility on the land. In order to retain title to the property, we must begin construction of the uranium de-conversion facility no later than December 31, 2014, and complete Phase I of the project and have hired at least 75 persons to operate the facility no later than December 31, 2015, although commercial operations need not have begun by that date. We are currently in discussions with Lea County to extend the deadlines for these performance objectives. If we do not succeed in modifying the dates in the agreement then we may, at our sole option, either purchase or re-convey the property to Lea County, New Mexico. The purchase price of the property would be $776,078, plus interest at the annual rate of 5.25% from the date of the closing to the date of payment. If we timely perform the project commencement requirements by a modified date, Lea County, New Mexico will execute a full and complete release of the mortgage on the property. We have not recorded the value of this property as an asset and will not do so until such time that sufficient progress on the project has been made to meet our obligations under the agreements for permanent transfer of the title.

Item 3. LEGAL PROCEEDINGS

We are not party to any material pending legal proceedings.

Item 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

Item 5.

MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is quoted on the OTCBB under the trading symbol INIS.OB. High asked prices and low bid prices reported by the OTCBB during the periods indicated are shown below, which reflect inter-dealer prices, without retail mark-up, mark-down, or commission and may not reflect actual transactions:

Fiscal Year	Quarter	High	Low
2013	1st	$0.20	$0.12
2013	2nd	$0.16	$0.11
2013	3rd	$0.16	$0.09
2013	4th	$0.11	$0.02
2012	1st	$0.32	$0.09
2012			