INTERNATIONAL ISOTOPES INC
Form 10-K
March 28, 2012

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, 2011

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**
(State of incorporation)	(IRS Employer Identification Number)

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 15(d) of the Exchange 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 in response 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	Smaller reporting company x
(Do not check if a smaller reporting company)	

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 be the average bid and asked price of such common equity at June 30, 2011 was $28,670,376. 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 9, 2012 the number of shares outstanding of the registrant s common stock, $.01 par value was 359,932,954 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 2012 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, 2011.

INTERNATIONAL ISOTOPES INC.

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PART I

This Annual Report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. 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 pre-licensing construction, Nuclear Regulatory Commission estimates of the schedule for license review and approval, 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, the Company s ability to manage cobalt-60 production 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. 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 factors set forth in the other reports that we file from time to time with the Securities and Exchange Commission.

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. There are four reasons for our belief that this will provide an excellent commercial opportunity. First, there is a significant effort underway by several companies to construct new domestic uranium enrichment facilities in the U.S. These facilities include AREVA Inc. s (AREVA) planned Eagle Rock Facility in Idaho Falls, ID, 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, OH, and GE-Hitachi s use of a Silex laser separation technology in Wilmington, NC. We anticipate that the operation of one or more of these new commercial enrichment facilities could produce more than 80 million pounds of depleted uranium hexafluoride (UF_6) annually by 2018, and all of that material must eventually be processed (or de-converted) for disposal. Second, we entered into a contract with UUSA to provide de-conversion services which obligates UUSA to pay us to provide de-conversion of depleted uranium amounting to at least 50% of our initial planned plant capacity. Third, we hold the patents that give us exclusive rights for the Fluorine Extraction Process (FEP), a process that allows us to extract high-value, high-purity fluoride gases in conjunction with the uranium de-conversion process. And fourth, we should be able to obtain profitable sales agreements for the commercial sale of the various fluoride products we can produce from the planned de-conversion facility.

We have made significant progress to continue to advance the uranium de-conversion project and business plan. During 2011 we have:

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Made significant progress on the Nuclear Regulatory Commission (NRC) licensing for the project,specifically including completion of all NRC requests for additional information which has allowed NRC to complete drafts of both the Safety Evaluation Report and Environmental Impact Statement for the project;

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Completed the selection process to identify the engineering team for the design and build contract for the depleted uranium project;

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Completed the part 2 application to the Department of Energy Loan program to apply for debt financing of the project;

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Completed the land transfer for the 640 acres granted to us under the New Mexico Project Participation agreement and completed a $72 million industrial revenue bond for the project;

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Completed the application with the State of New Mexico for the Air Quality permit for the depleted uranium project;

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Completed the inventory, removal, and storage of all equipment in the DUF6-DUF4 conversion facility that we acquired in 2008. This material is now staged for movement to New Mexico when construction is ready to start on the depleted uranium project; and

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Initiated formal design activities for the depleted uranium project.

While our progress in 2011 was significant, a substantial amount of work and additional capital will be required in order to complete this facility. The total estimated cost for the project is estimated to be approximately $125 million. During 2011, we were able to raise more than $1.5 million through a discounted warrant exercise offering. During 2011, we spent approximately $3.8 million on the project. During 2012, we intend to control the rate of capital expenditure on the project and address our highest priority, namely working with the NRC on its license review activities. In conjunction with supporting the completion of the NRC license process we anticipate incurring additional expenses on initial formal engineering design and New Mexico state permitting. We will, however, control the rate of spending to be in line with the remaining cash reserves of the Company.

Major facility construction cannot begin until after receipt of the NRC license. However, even if we do receive the NRC license, the start of construction is dependent on our obtaining additional equity capital or other financing for the project. We expect that the NRC licensing process will be complete by the latter part of 2012 and we believe that our ability to obtain capital will be greatly enhanced as we approach this major milestone. Based upon the expected timeline for receipt of the NRC license and anticipated concurrent receipt of capital financing, along with completion of facility design and construction, we do not expect any revenue to be generated from this project until the end of 2013 at the earliest.

While the commercial uranium de-conversion business represents a significant opportunity for us, that opportunity does not change our commitment to our current core business segments. Over the course of the past several years we have continued to invest in these segments and worked 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 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), 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, LLC, through an exclusive manufacturing agreement. The agreement provides that we will manufacture sources exclusively for RadQual, LLC and will not manufacture products that would directly compete with RadQual, LLC sources. The agreement also states that RadQual, LLC will only procure sources manufactured by us for distribution to RadQual, LLC customers. Should this agreement with RadQual, LLC terminate, we are precluded from competing with RadQual, LLC 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, LLC expired on December 31, 2008, but 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, LLC.

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, LLC 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, LLC has numerous distributors for direct sales of its products. The largest distributor was Technology Imaging Services Inc. (TIS). In December 2010, we formed a 50/50 joint venture with RadQual, LLC to acquire the assets of TIS and to use those assets to create TI Services, LLC. We intended that this joint venture would provide growth opportunities in existing and future RadQual, LLC product lines both domestically and internationally. In 2011, however, TI Services, LLC experienced a net loss due to reduced margins on certain non-nuclear medicine related products. We have implemented certain management changes and changes in cost control analyses that are intended to reduce or eliminate those losses in 2012. In addition, we continue to work closely with RadQual, LLC to examine several new products that could be added to our contract manufacturing role with RadQual, LLC and that would expand sales opportunities for TI Services, LLC as well. We expect TI Services, LLC to operate profitably in 2012.

Cobalt Products

This segment includes the production of bulk cobalt (cobalt-60), fabrication of cobalt capsules for teletherapy or irradiation devices, and recycling of expended cobalt sources. We are currently the only production source in the U.S. for the type of high activity cobalt used in most therapy devices. The sale of bulk cobalt has typically accounted for a large percentage of the total revenue from this business segment and because those sales run in non-annual cycles there are large variations in revenues for bulk sales in period-to-period comparisons.

The year-over-year demand for bulk 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 Product 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 for our establishing our Transportation segment was in support of the delivery of cobalt products.

The production of cobalt is dependent upon the U.S. Department of Energy (DOE) and its prime operating contractor, which controls the Advanced Test Reactor (ATR) operations and, therefore, controls the continued production of cobalt in the government funded ATR. For more than 10 years our agreement with the prime operating contractor had been on a reactor cycle-by-cycle contract basis. In July 2010, we entered into a new a three-year Work For Others (WFO) agreement with the DOE prime operating contractor to continue cobalt production and cask handling. However, in January 2011, we were informed that the DOE intended to terminate this existing agreement and we would be required to establish a new contract with the National Isotope Development Center (NIDC) which is a subprogram of the DOE Office of Science. Negotiations on this process took place during most of 2011 and in December 2011 we were notified that the site contractor was unilaterally terminating the WFO agreement. At that point we had no other option than to contract with NIDC in order to continue cobalt production. We have three major concerns with this change in contract control. First, the contract with NIDC only covers certain specific activities and if any cobalt production requires additional activities it must be separately contracted which will cause interruptions in production. Second, the NIDC has significantly increased the cost of all charges for their activities associated with cobalt production. And third, the NIDC is only contracting for one year time periods which are not compatible with the production cycle of cobalt. We are continuing to argue against these NIDC contracting methods and plans to use all reasonable means to reduce the impact of these new charging practices and contract terms. However, if we are unable to gain relief from the NIDC contract pricing and terms and are unable to pass along significant price increases to our customers it may become cost prohibitive within several years to continue cobalt production in the DOE reactor. Should that happen we would be forced to either terminate cobalt production in the U.S. or attempt to locate an alternate source of supply of cobalt-60 from outside the U.S.

Radiochemical Products

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 requirements. Iodine-131 radiochemical by far accounts for the largest portion of revenue within this segment. The 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, we have 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. Either party may terminate the agreement by giving three months notice prior to the expiration of the term.

Generally, iodine-131 is used in the treatment and diagnosis of various diseases of the thyroid 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 things 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. We acquired seven patents for the FEP in January 2004. 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. During 2011, our Idaho FEP pilot facility was not used for commercial gas production but instead focused upon production of a high purity products and examined methods of scaling up the size of the production operations in support of the new FEP facility in New Mexico. In 2012, we plan to continue to use our Idaho pilot facility to carry out additional testing of key components required for the planned uranium de-conversion and FEP facility in New Mexico. No revenue is expected to be produced in the fluorine products segment during 2012.

Radiological Services

This segment includes a wide variety of miscellaneous services, the largest of which is processing gemstones that have undergone irradiation for color enhancement. In May 2004 we entered into an exclusive contract with one customer, Quali-Tech, Inc., for gemstone processing and this contract accounts for most of our sales in this segment. This contract 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. Should we lose this customer, our sales in this segment would be negatively impacted. During 2007, we obtained an additional license from the NRC for exempt distribution of gemstones and we are now one of only three companies in the U.S. licensed for this activity. Other services in this segment consist of radiological engineering consultant services, contract shipping services for large quantities of radioactive materials, research and development activities, and Type A package certification testing.

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 many 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 by providing transportation of products for other companies. It is anticipated that this segment will also provide some of the transportation services for our planned depleted uranium de-conversion facility.

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 some 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, LLC, 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. With the exception of 2009 and 2010, we have historically seen a relatively constant annual growth rate of between 2% to 13% in this business segment. We also received ISO-9000 and ISO-13485 quality program certifications in 2011 that will allow 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, LLC, that is expected to be a major distributor of products in the field of nuclear medicine and nuclear cardiology. TI Services, LLC experienced a net loss in 2011, however, by implementing some price changes, cost control measures, and expanding into new markets, we hope to be able to improve its financial performance in 2012.

Cobalt Products

We sell high activity bulk cobalt to a customer that uses it to fabricate several models of sealed sources for medical and industrial applications. We also manufacture a wide range of sealed source products utilizing our cobalt. 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 use multiple cobalt sources in a highly focused manner for several specialized treatment methods. There are currently no other producers of 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 also recycle used cobalt sources 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. 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 is expected to significantly increase the demand for our cobalt products in the next 5 years. Nonetheless, we continue to remain dependent upon our contract relationship with the Department of Energy for access to its reactor in Idaho for continued cobalt production. 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.

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 FDA approved therapy or imaging. We are the only U.S. company supplying iodine-131 radiochemical directly to radiopharmacies. Our radiochemical sales compete directly against not only other radiochemical suppliers but also against pharmaceutical grade kits and products that are mass produced by Food and Drug Administration (FDA) approved pharmaceutical manufacturers. Continuation of business in this segment is highly dependent upon maintaining low cost. While the annual growth in sales of these products has been in the range of 2-30%, there were some factors occurring in 2011 that had an adverse impact on iodine-131 sales. These factors included some consolidation of pharmacy chains and corporate decisions made in regard to purchasing radiochemical, as opposed to finished pharmaceutical products. We expect to continue to face these market challenges in 2012 and beyond.

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. We believe the results of our marketing study and discussions with prospective customers support the business model we seek to pursue and adequately justify the financial investment in this uranium de-conversion project. During 2011, our existing Idaho FEP pilot facility was used for testing certain process parameters and demonstrating the purity of the FEP products. During 2012, we expect to use this pilot facility for testing of individual components for the planned depleted uranium de-conversion facility in New Mexico. Therefore, the fluorine products segment is not projected to generate any revenue unless and until the full commercial facility comes on line in late 2013.

Radiological Services

Most of our radiological services are performed in support of gemstone processing for Quali-Tech, Inc. There are very few companies in the U.S. that possess the mix of qualifications and licensing necessary to provide this type of service. In the U.S., for example, there is only a single reactor capable of providing irradiation services for gemstone processing. On a global scale, however, the gemstone industry is a highly competitive industry and there are several alternatives to irradiation treatment. There are also other reactors located outside the U.S. that offer irradiation service. In the current economic market, sales of luxury items such as jewelry have declined significantly. As a result of these market factors, revenue from this segment fell far below historic levels in 2010 and only recovered to a limited extent in 2011. We expect that economic conditions will improve which should result in improved retail sales of gemstones in 2012. In addition, we have identified at least one major additional service we plan to offer in the later portion of 2012 that could significantly contribute to the revenue within this segment. During 2011 we continued to work with Alpha Omega Services (AOS) on its development of a new family of Type B shipping containers, which will be used to transport hazardous materials. We have contracted with AOS to act as its exclusive worldwide distributor for these containers that are intended to replace a significant number of containers that have lost their regulatory approval for use in the U.S. There are very few alternatives for other type B packages in the U.S. and we feel that the distributor arrangement should provide significant financial opportunities for additional revenues through sales and leases of these containers in the coming years. These containers have been

undergoing development for several years and were approved by the U.S. Nuclear Regulatory Commission in February 2012. We will be working to promote the sales of these containers in 2012.

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 quantity cobalt shipments. These types of shipments are under 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 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 primary purpose of this segment is to support the sale and delivery of our cobalt products. The increase in sales expected for cobalt products in 2012 should result in a corresponding increase in transportation services revenue.

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, and our Type B shipments of radioactive materials. One 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, and various research and development activities. The second broad scope materials license specifically covers FEP production and 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. 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 an irrevocable letter of credit which names the NRC as beneficiary and which is supported with restricted certificates of deposit in an amount equaling our estimated decommissioning and disposal costs for our facilities. 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 December 2009, we submitted a license application to the NRC, including an Environmental Report and Integrated Safety Analysis Summary, to possess and use source and by-product material at the proposed depleted uranium de-conversion and FEP production facility to be operated by International Isotopes Fluorine Products, Inc. facility. The facility, which is to be located in Lea County, New Mexico, is proposed to de-convert up to approximately 11

million pounds of depleted uranium hexafluoride (DUF_6) annually into fluoride products and depleted uranium oxides (DUO). The NRC has completed its review of the application materials and has issued its draft Safety Evaluation Report and Environmental Impact Statement. These draft documents are undergoing further internal reviews at the NRC and the NRC estimates that it will issue the license for the facility by September 2012. While major construction of the facility must wait until the receipt of the actual NRC license, the NRC does permit some limited pre-license building and site preparation work such as preparing roadways, site civil work, and building non-safety significant structures such as warehouses. The timing of any pre-license construction request and activity, however, is limited at present by our available capital resources.

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.

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 were inspected by the FDA in 2011 for our repackaging of iodine-131. During this inspection the FDA determined that we were being considered as a Drug Manufacturer and we were subsequently issued a Warning Letter for violations of Current Good Manufacturing Practices (CGMP), a requirement for Drug Manufacturers. We have responded to this FDA Warning Letter and expressed our intent of correcting all CGMP violations. However, we have disagreed with the FDA s determination that we are manufacturing a Drug Product. Continued dialogue is expected with the FDA on this topic in 2012.

Employees

As of December 31, 2011, we had 25 full-time employees and 1 part-time employee.

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 transporting our own products more cost effectively than other commercial carriers.

Dependence on Customers

During 2011, one major customer accounted for 54% of our total gross revenue. This total includes both sales under an exclusive sales agreement with that customer and its sales as a distributor of our products and excludes sales reported by TI Services, LLC our joint venture with this customer. 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 this customer represent, 30%, and 29% of our total gross revenues for the years ended December 31, 2011 and 2010, respectively. Combined sales, on which we

are dependent, to our three largest customers, excluding TI Services, LLC sales, accounted for 75% of our total gross revenues in 2011 and accounted for 53% of our total gross revenues including sales generated by TI Services, LLC. 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 and we are in the process of seeking international protection on this intellectual property. 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 because there are several companies constructing, or planning to construct, new uranium enrichment facilities in the U.S.

Research and Development

We had research and development expenses totaling $1,695,315 in 2011, compared with $5,230,564 in 2010. These expenses were primarily associated with engineering, design, production testing, and licensing activities for our planned depleted uranium de-conversion and FEP facility.

In 2010, 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 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. Therefore, certain qualifying expenditures made during 2011 were capitalized and similar qualifying future expenditures will be capitalized as well.

We expect to continue to expend significant resources on this project for several years as the project total cost is expected to be approximately $125 million over the course of the next several years.

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 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 Securities and Exchange Commission. Information on our website is not incorporated by reference into this report or other reports filed with the Securities and Exchange Commission.

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 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 and obtain the additional financing necessary for such construction;

obtain the necessary regulatory approvals;

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 on Form 10-K.

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

We will need to raise additional funds to complete the construction of our de-conversion and FEP facility. We need to raise approximately $125 million additional funds to complete the design, license 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 expense will not be incurred and additional funding required to complete the project.

We may be unsuccessful in obtaining a loan from the DOE to complete construction of our de-conversion and FEP facility. We have submitted an application to the DOE Loan Guarantee Office for a loan for the construction of our de-conversion and FEP facility. The DOE loan program provides low cost loans for up to 80% of the capital cost of qualifying projects in the fields of energy and energy efficiency. The DOE loan program is currently deferring loan application reviews. When the DOE resumes the process, there can be no guarantee that the DOE will determine our project to be a qualifying project or that the DOE will award us a loan. If the loan application is unsuccessful, we will have to raise the balance of the funds required for the planned facility through additional equity or debt financing. There can be no assurance that we will be able to secure additional equity or debt financing on acceptable terms, or at all, if the DOE loan is not available.

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 UF_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. 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), that 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.

The licensing and environmental permitting process with respect to the construction of our planned depleted UF_6 de-conversion and FEP facility is ongoing and we cannot guarantee the amount of time required to obtain approval from the NRC and the State of New Mexico for operation of these facilities. We have no control over the actual time required by the NRC to complete its review, determine whether it will issue a license, and then issue such license. Several federal, state and local environmental permits will also be required prior to commencement of construction and/or operations. We have submitted the New Mexico Air Quality permit application and the State issued a draft permit. We are just beginning to complete the application for the groundwater permit. At this point, we cannot assure you that we will receive all the required permits or that there will not be permitting related delays, or that permits will be obtained with favorable terms.

The DOE is obligated to take depleted uranium from enrichment companies. The DOE has constructed two depleted uranium de-conversion facilities. These facilities will be 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 depleted UF_6 and fluoride gases, which are radioactive and hazardous materials respectively, and are subject to intense regulation. The hazardous nature of depleted UF_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 depleted UF_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 depleted UF_6 de-conversion facilities in the United States, the DOE is starting up two de-conversion plants intended to process depleted UF_6 from the DOE s existing 1.5 billion pound stockpile. Additionally, AREVA currently operates a de-conversion plant in France, URENCO plans to construct a facility in the U.K., and Rosatom has constructed a facility in Russia. We cannot assure you that the existing UF_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 UF_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 contained in Lea County, New Mexico. Lea County 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 1 construction no later than December 31, 2014, and hiring at least 75 employees by December 31, 2015, in order to retain title to the property. 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 depleted UF_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 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 a corresponding international Patent Cooperation Treaty (PCT) application to seek international protection for the FEP process, we currently have no international protection for our FEP process. We cannot be certain that the FEP-related patents will be issued in all countries where our patents can be practiced. Further, our competitors may also be able to design around our patents. The laws of some countries in which our FEP patents are or may be practiced may not 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. 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, LLC, which in turn has agreements in place with several companies for marketing and sales. Our radiochemical iodine is supplied through a contract with a single supply source. Unanticipated contract terminations by any of these suppliers and other third parties can have a material adverse impact on operations, financial results, and cash flow.

We are dependent on a limited number of customers in connection with our current business operations. During 2011, sales to one major customer accounted for 54% of our total gross revenue, excluding consolidated revenue reported by our joint venture, TI Services, LLC. Sales under exclusive contract with this customer represented 30% and 29% of our total gross revenues for the years ended December 31, 2011, and 2010, respectively. Combined sales to our three largest customers accounted for 75% of our total gross revenues during 2011, excluding consolidated revenue reported by our joint venture, TI Services, LLC. Combined sales to these three customers accounted for 52% of gross revenue in 2010. Although we are making efforts to reduce our dependency on a small number of customers, the loss of any one of these significant 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 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, 2011, we have generated $61,605,801 in revenues and accumulated deficit (including preferred stock dividends and returns) in the amount of $111,994,492. 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 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 potentially 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. An irrevocable, automatically renewable letter of credit against a certificate of deposit at Wells Fargo Bank N.A. 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 from the spread of uranium occurs within, or outside, of our facility, we would be financially responsible to remediate such spills 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. 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 a country 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 the 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 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.

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 if 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 will need additional financing to continue operations. Because we may continue to experience negative cash flow, we will 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, in which event energy and raw materials may be 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 OTC Bulletin Board® 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 currently 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, 2011, there were approximately 21,370,000 shares of common stock issuable upon exercise of vested stock options outstanding, at a weighted average exercise price of $0.13 per share. An additional 8,640,989 shares are reserved for issuance under our 2006 Equity Incentive and our Employee Stock Purchase Plan as of December 31, 2011. We expect to issue additional options to purchase shares of our common stock to compensate employees, consultants and directors, and may issue additional shares to raise capital to fund design, licensing and construction of a 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, 2011, are Series F warrants for the issuance of 7,700,000 shares of common stock, , Series H Warrants for the issuance of 7,714,451 shares of common stock, and Series I Warrants for the issuance of 18,142,333 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

We lease two properties in Idaho Falls, Idaho, and we hold the conditional title to 640 acres of land in 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 manufacturing operations except our FEP 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 houses our FEP pilot production operations. The facility was first leased in February 2004 and is in excellent overall condition. We hold this property pursuant to a lease that extends through April 2013. Our lease includes an option for us to extend the lease for an additional one-year term at the expiration of the current term. We also 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.

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, complete 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. If we do not timely perform the construction and hiring by those dates then we may, at our sole option, either purchase or re-convey the property to Lea County. 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 Lea County 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 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

None.

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 reported on the Over-the-Counter Bulletin Board (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 markup, mark-down, or commission and may not reflect actual transactions:

Fiscal Year	Quarter	High	Low
2011	1st	$0.31	$0.10
2011	2nd	$0.24	$0.12
2011	3rd	$0.17	$0.08
2011	4th	$0.14	$0.06
2010	1st	$0.59	$0.38
2010	2nd	$0.53	$0.35
2010	3rd	$0.45	$0.28
2010	4th	$0.34	$0.24

On March 9, 2012, there were 527 holders of record of our common stock. On this date, the closing price of our common stock was $0.23 per share as reported on the OTCBB. We have never paid any cash dividends on our common stock. In the future, and based upon our profit performance, our Board of Directors will evaluate and determine whether to issue dividends or retain funds for research and development and expansion of our business. We do not anticipate paying any dividends to shareholders for the foreseeable future.

Item 6. SELECTED FINANCIAL DATA

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

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of the results of the company's operations and financial condition should be read in conjunction with the accompanying financial statements and related Notes thereto included in Item 8, Financial Statements and Supplementary Data, within this report.

Our belief is that transparency and clarity are key goals of responsible financial reporting. We are committed to these goals which we believe will provide our shareholders with informative financial disclosures and present an accurate overview of our financial position and operating results.

Management s Discussion and Analysis of Financial Condition and Results of Operations is intended to provide readers of our financial statements with a clear explanation, from the perspective of our management, of our financial condition, results of operations, liquidity, and certain other factors that may affect our future results. The following information is presented in six sections:

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Overview

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Business Strategy and Core Philosophies

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Results of Operations

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Liquidity and Capital Resources

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New Accounting Standards

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Outlook for 2012

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Overview

We manufacture a full range of nuclear medicine calibration and reference standards, a wide range of products including cobalt teletherapy sources, and a varied selection of radioisotopes and radiochemicals for medical research, and clinical devices. We hold several patents for a fluorine extraction process that we are planning to use in conjunction with a new planned commercial depleted uranium de-conversion facility, and provide a host of transportation, recycling, and processing services on a contract basis for clients. A more detailed description of each of these product lines and services can be found in Item 1, under General Business and Products Description, within this report.

In 2011, we continued to build our various business segments, make investments into facilities and infrastructure, launch new products, and enter into new agreements that we believe will increase our future revenues. Although a detailed description of segment performance can be found in the Results of Operations section of this report, the following list highlights some of our more significant accomplishments in 2011:

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In August 2011, we received certification under both ISO-9001 and ISO-13485 standards for the design and manufacture of many of our nuclear medicine and cobal-60 products.

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In August 2011, we completed the land transfer for 640 acres conditionally granted to us under the New Mexico Project Participation Agreement and completed a $72 million industrial revenue bond for the de-conversion facility project.

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In September 2011, we raised approximately $1,500,000 in cash through a discounted warrant offering intended to primarily support continued engineering and licensing efforts on the planned uranium de-conversion facility.

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On September 12, 2011, we submitted our final formal responses to the NRC s Request for Additional Information regarding the de-conversion license application, a key milestone in the licensing of our proposed de-conversion facility.

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On September 13, 2011, we submitted a Universal Air Quality Permit Application for a New Source Review (NSR) authority to construct permit to the State of New Mexico Environmental Department, a major milestone necessary to commence construction of the de-conversion facility.

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In November 2011, we entered into an agreement in principle with Idaho State University to jointly develop processes for the production of Copper-67.

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On December 23, 2011, we entered into a service agreement with the U.S. Department of Energy that will enable us to continue to use irradiation services using the ATR at the Idaho National Laboratory.

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In December 2011, the NRC completed the draft Environmental Impact Statement (EIS) and draft Safety Evaluation Report (SER), another significant milestone in the licensing process for the planned uranium de-conversion facility.

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We completed the selection process to identify the preferred engineering team for the design and build contract for the depleted uranium project and initiated project formal design activities.

Business Strategy and Core Philosophies

Broadly defined, our business strategy is to continue to build our reputation as a leader in the nuclear medicine and nuclear products industries, as well as seek ways to improve our customer service, and expand our market share with the ultimate goal of providing greater returns to our shareholders. Specifically, we are continuously working with our customers to improve and develop products to better serve the needs of the end user which, ultimately, will boost product sales. A key part of our near and long range business strategy is to continue work on building the nation s first commercial depleted uranium de-conversion and fluorine extraction process facility.

Our core philosophy is to strive to provide high quality products and services as a profitable and environmentally conscious business, while offering excellent customer service and the highest quality working environment to our employees. We operate under an ISO Quality Management System under which we seek to continuously improve our product manufacturing processes.

Results of Operations

Summary for 2011:

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Revenue in 2011 was approximately $9.5 million.

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Net loss for 2011 decreased by approximately 13% compared to 2010. This decrease was driven by our reduction of expenses related to the consulting and licensing activities for the proposed uranium de-conversion and fluorine extraction facility as well as capitalizing rather than expensing, a significant amount of costs related to the project.

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Our total gross profit rate decreased from 41% in 2010 to 36% in 2011. This comparison includes sales and cost of sales from our joint venture investment in TI Services LLC. Excluding TI Services, LLC which did not exist for 2010, our gross profit percentage increased to 44% for 2011. A period-to-period comparison is discussed in the Cost of Revenue and Gross Profit section below.

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Our operating costs, exclusive of research and development expense, increased approximately 42% in 2011. Including research and development expense in total operating expense, overall operating costs decreased by approximately 23%, which is the result of capitalizing qualifying de-conversion project costs rather than expensing them.

Year ended December 31, 2011 compared to year ended December 31, 2010

The following table presents comparative Sale of Product for the years 2011 and 2010:

	For the year ended December 31, 2011	For the year ended December 31, 2010
Sale of Product		
Radiochemical Products	$ 1,811,935	$ 1,746,735
Cobalt Products	2,339,154	2,250,049
Nuclear Medicine Standards	1,994,260	1,757,564
TI Services LLC	2,801,109	-
Radiological Services	228,631	195,917
Flourine Products	-	-
Transportation	286,923	157,016
Total Segments	9,462,012	6,107,281
Corporate revenue	-	-
Total Consolidated	$ 9,462,012	$ 6,107,281

Revenues

Total revenues in 2011 were $9,462,012, compared to $6,107,281 in 2010, which represents an increase of $3,354,731 or approximately 55%. These sales figures include $2,801,109 of revenue generated by our joint venture, TI Services, LLC which we formed with RadQual, LLC in December 2010. We reported no revenue from this joint venture for the year ended December 31, 2010. Excluding TI Services, LLC sales from this comparison, total revenue increased by approximately 9% with all business segments reporting increased sales. For 2011, Cobalt Products sales (which includes bulk cobalt sales) accounts for approximately 25% of total revenue, as compared to 37% in 2010. Bulk cobalt sales account for approximately 40% of total 2011 Cobalt Products sales. Fluctuations in bulk cobalt sales can create large variations in period to period comparisons. The following table presents a year-to-year comparison of total revenue by segment as well as a year-to-year comparison of total revenue by segment excluding bulk cobalt sales. We believe that the total revenue excluding bulk cobalt sales provides meaningful information to investors because of the large period-to-period fluctuations in bulk cobalt sales. However, this information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue including bulk cobalt sales.

		For the year ended December 31, 2011	**% of Total Sales 2011**		**For the year ended December 31, 2010**	**% of Total Sales 2010**
Sale of Product						
Radiochemical Products	$	1,811,935	19%	$	1,746,735	29%
Cobalt Products **(including bulk cobalt sales)**		2,339,154	25%		2,250,049	37%
Nuclear Medicine Standards		4,795,369	51%		1,757,564	29%
Radiological Services		228,631	2%		195,917	3%
Flourine Products		-	0%		-	0%
Transportation		286,923	3%		157,016	3%
Corporate revenue		-	0%		-	0%
Total Segments	$	9,462,012	100%	$	6,107,281	100%
Radiochemical Products		$1,811,935	21%		$1,746,735	35%
Cobalt Products **(excluding bulk cobalt sales)**		1,409,256	17%		1,169,881	23%
Nuclear Medicine Standards		4,795,369	56%		1,757,564	35%
Radiological Services		228,631	3%		195,917	4%
Flourine Products		-	0%		-	0%
Transportation		286,923	3%		157,016	3%
Corporate revenue		-	0%		-	0%
Total Segments	$	8,532,114	100%	$	5,027,113	100%

Radiochemical Products

Sales of radiochemical products accounted for approximately 19% of our total sales revenue in 2011 and increased by $65,200, or approximately 4% to $1,811,935, as compared to $1,746,735 in 2010. Sales performance in this segment was largely driven by the increase in our sales of iodine-131.

Of our total iodine-131 sales for 2011, approximately 88% of those sales were made through one distributor, RadQual, LLC, of which we own a 24.5% share. Should RadQual, LLC discontinue sales of iodine-131, or if we terminate their distributor role, we have the option to market and sell this product directly to customers.

At our request, in July 2011 the FDA conducted an inspection of our radiochemical manufacturing processes. We requested the inspection in order to establish our status as a registered FDA facility for the re-packaging and distribution of iodine-131as an Active Pharmaceutical Ingredient (API). During the inspection, the FDA made the determination that it considered us to be a drug product manufacturer and not a re-packager and therefore evaluated our processes against a higher compliance standard than we had in place. As a result of this inspection we were issued a Warning Letter by the FDA for Current Good Manufacturing Practices (CGMP) deficiencies related to our iodine-131 production processing. Although we are in continued discussions with the FDA regarding its decision to categorize us as a manufacturer we, nevertheless, committed to incorporate CGMP requirements into our radiochemical production processes to ensure that our products meet specific quality requirements. We also provided the FDA with a timely response to its Warning Letter and have completed nearly all CGMP compliance issues that were identified. Regardless of the outcome of our discussions with the FDA regarding the manufacturer versus re-packager status, the FDA has confirmed that it will allow us to continue manufacturing and distributing this product in its present form without interruption.

Cobalt Products

Total cobalt products sales accounted for approximately 25% of our total sales revenue in 2011, while sales of cobalt products excluding bulk cobalt sales accounted for approximately 17% of total sales revenue for the same period. Please refer to the previous table which presents this comparative data.

The following table presents sales of each of our cobalt product lines for 2011 as compared to 2010:

Cobalt Products	**For the year Ended December 31, 2011**	**For the year Ended December 31, 2010**	**% change**
HSA Cobalt Sales (bulk cobalt)	$ 929,898	$ 1,080,168	-14%
Cobalt Recycle	211,480	185,230	14%
Sealed Source Manufacturing	1,197,776	984,651	22%
	$ 2,339,154	$ 2,250,049	4%

Sales of total Cobalt Products increased by 4% to $2,339,154 in 2011, as compared to $2,250,049 in 2010. Bulk cobalt sales decreased by $150,270, or approximately 14%, from 2010 to 2011. Sales of cobalt products excluding bulk cobalt sales increased by approximately 21% to $1,409,256, as compared to $1,169,881 in 2010. Cobalt Recycle increased by 14% in 2011, as compared to 2010, which was the result of increased gamma knife unit source replacements.

Sales of sealed source products increased 22% in 2011, as compared to 2010, and can be attributed to increased sales of sealed sources in foreign markets, particularly South America. Although world economic conditions will

potentially have a significant impact on foreign sales, we believe, that with continued marketing efforts and the availability of our new transportation containers, we will be able to sustain growth in this area. In February 2012, the NRC issued a Certificate of Compliance for three sizes and five different models of the AOS model containers. These containers are the newest Type B (U) package designed in the United States and meet all of the most current International Atomic Energy Agency (IAEA) regulations for the safe transport of radioactive material. The AOS model containers are suitable to replace many models of radioactive material containers used by the United States Government and commercial interests that lost their approval for use in October 2008. We have an agreement with AOS to be the exclusive worldwide distributor of this new family of containers and anticipate that our role as exclusive distributor will enhance our cobalt products business segment.

The production of cobalt, which we use in both bulk cobalt sales and sealed source sales, is dependent on the U.S. Department of Energy and its prime-operating contractor, which manages the U.S. government s Advanced Test Reactor in Idaho Falls, Idaho. Loss of the ability to use these irradiation services would significantly impact our cobalt products business segment because there is not currently another reactor available in the U.S. that is capable of providing this type of service for us.

In January 2011, we were informed that the DOE intended to transfer the existing WFO agreement to the National Isotope Development Center (NIDC). After extended negotiations, in December 2011, we entered into an Isotope and Technical Services Order Form with the U.S. Department of Energy (DOE) pursuant to which the DOE will provide certain cobalt target fabrication and irradiation services using the Advanced Test Reactor (ATR) at the Idaho National Laboratory (INL) which is operated by Battelle Energy Alliance, LLC (BEA). The agreement became effective January 20, 2012 and expires December 30, 2012. Previously, our agreement had been directly with the prime-operating contractor, BEA, however, this agreement with BEA, by written direction from the DOE, was terminated on January 20, 2012. We have three major concerns with this change in contract control. First, the contract with NIDC only covers certain specific activities and if any cobalt production requires additional activities it must be separately contracted which will cause interruptions in production. Second, the NIDC has significantly increased the cost of all charges for their activities associated with cobalt production. And third, the NIDC is only contracting for one year time periods which are not compatible with the production cycle of cobalt. We are continuing to argue against these NIDC contracting methods and plans to use all reasonable means to reduce the impact of these new charging practices and contract terms. However, if we are unable to gain relief from the NIDC contract pricing and terms and are unable to pass along significant price increases to our customers it may become cost prohibitive within several years to continue cobalt production in the DOE reactor. Should that happen we would be forced to either terminate cobalt production in the U.S. or attempt to locate an alternate source of supply of cobalt-60 from outside the U.S.

Nuclear Medicine Standards

Sales of nuclear medicine standards accounted for approximately 51% of our total sales revenue in 2011.

Sales in this segment increased by approximately 173% to $4,795,369 in 2011, as compared to $1,757,564 in 2010. This year-to-year comparison includes sales from TI Services, LLC, a 50/50 joint venture that we formed with RadQual, LLC in December 2010, to distribute products and services for nuclear medicine, nuclear cardiology and Positron Emission Tomography (PET) imaging. We reported no sales from TI Services, LLC for 2010 and we reported $2,801,109 in sales for 2011. Excluding TI Services, LLC from this comparison, sales increased approximately 13%, to $1,994,260 in 2011 as compared to $1,757,564 in 2010.

Excluding TI Services, LLC sales, numerous products in the nuclear medicine reference and calibration standard segment account for approximately 83% of all sales in this segment for 2011 and those sales increased approximately 20% to $1,650,485 in 2011, from $1,378,335 in 2010. We believe that the increase in sales in this segment is the result of medical clinics periodic source replacement, improving economic conditions including reimbursement rates for imaging, and marketing efforts of TI Services, LLC. We anticipate that, as the economy stabilizes, we will continue to see further growth in 2012. We are also gaining additional quality certifications for these products that will enable us to sell our nuclear medicine products into several foreign nations in 2012.

Radiological Services

Revenues from our Radiological Services segment accounted for approximately 2% of our total sales revenue in 2011. Sales in this segment increased by approximately 17% to $228,631 in 2011, as compared to $195,017 in 2010. This increase is due to the stronger revenues in topaz gemstone processing which accounts for approximately 78% of Radiological Services sales in 2011 and approximately 85% of Radiological Services sales in 2010. As the economy stabilizes we expect to see continued growth in this segment as sales of luxury items, such as jewelry, continue to

grow and the company expands the services being offered within this segment.

Miscellaneous Radiological Services revenue increased by approximately 66% in 2011, as compared to 2010. This increase is the result of revenue generated by radiological service consulting work which is performed in conjunction with our sealed source sales and expended source disposal services. We anticipate that the NRC s certification of the five different models of the AOS model containers will likely have a positive impact on revenues in our Radiological Services business due to our role as exclusive worldwide distributor.

Fluorine Products

There were no revenues to report from the fluorine products segment for 2011. We are developing our fluorine products 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. During 2011, we incurred $4,428,799 of planning and other expenses related to the de-conversion project, as compared to $5,625,345 in 2010. This decrease of approximately $1,200,000 is the result of reduced project spending due to a decrease in available funds for the project during 2011, as well as capitalizing certain expenditures on the project versus expensing them as research and development cost, as had been done in prior periods. Although funding was limited in 2011, we made excellent progress with the NRC licensing process which is of prime importance to our de-conversion project. During 2012, and as funding permits, we will continue to use our existing FEP pilot facility in Idaho for testing individual components and analytical processes required for the planned uranium de-conversion facility in New Mexico. We do not anticipate any revenue from the sale of fluoride products in 2012.

Transportation

Revenues from our Transportation segment accounted for approximately 3% of our total revenues in 2011. Sales in this segment increased by approximately 83% to $286,923 in 2011, as compared to $157,016 in 2010. We believe that the continued expansion of cobalt product sales will increase revenues in this business segment because of our unique qualifications and expertise in the transport and handling of radioactive material and the cost savings we are able to offer our customers by combining this service with source sales. In addition, we have also increased the amount of for hire transportation service provide by our transportation segment. There are numerous regulations that apply to, and agencies which monitor, the security and tracking of cobalt shipments and our Transportation segment specializes in the transport of hazardous, radioactive materials including large quantity cobalt shipments.

Cost of Revenues and Gross Profit

Cost of revenue for 2011 was $6,045,471, as compared to $3,619,759 in 2010, an increase of $2,425,713 or approximately 67%. Total cost of revenue for 2011 includes $2,314,841 attributable to TI Services, LLC. There was no similar cost to report in 2010. Excluding TI Services, LLC cost of sales from this comparison, cost of revenue for 2011 was $3,730,630, an increase of $110,871, or approximately 3%.

Gross profit percentage decreased 5% overall to 36% in 2011, from 41% in 2010. In order to provide a more accurate period-to-period comparison we have provided the tables below which present total sales, cost of sales and gross profit, including and excluding sales and cost of sales for TI Services, LLC. However, the table has limitations as an analytical tool.

The following table presents sales and cost of sales data including TI Services, LLC:

	For the year Ended December 31, 2011	% of Total Sales 2011	For the year Ended December 31, 2010	% of Total Sales 2010
Total Sales Including TI Services LLC	$ 9,462,012		$ 6,107,281	
Cost of Sales				
Radiochemical Products	$ 1,520,890	16%	$ 1,469,473	24%
Cobalt Products	989,759	10%	1,112,919	18%
Nuclear Medicine Standards	1,076,051	11%	903,760	15%
TI Services LLC	2,314,841	24%	-	-
Radiological Services	72,663	1%	80,302	1%
Flourine Products	-	-	-	-
Transportation	71,267	1%	53,304	1%
Total Segments	$ 6,045,471	63%	$ 3,619,759	59%
Gross Profit	$ 3,416,541		$ 2,487,522	
Gross Profit %	36%		41%	

The following table presents sales and cost of sales data excluding TI Services, LLC:

	For the year Ended December 31, 2011	% of Total Sales 2011	For the year Ended December 31, 2010	% of Total Sales 2010
Total Sales Excluding TI Services LLC	$ 6,660,904		$ 6,107,281	
Cost of Sales				
Radiochemical Products	$ 1,520,891	16%	$ 1,469,472	24%
Cobalt Products	989,759	10%	1,112,920	18%
Nuclear Medicine Standards	1,076,051	11%	903,760	15%
Radiological Services	72,663	1%	80,302	1%
Flourine Products	-	-	-	-
Transportation	71,267	1%	53,304	1%
Total Segments	$ 3,730,630	39%	$ 3,619,759	59%
Gross Profit	$ 2,930,273		$ 2,487,522	
Gross Profit %	44%		41%	

During 2011, we took steps to recover increased freight and shipping costs by making sales price adjustments and by pursuing alternate shipping methods. We were also able to cut some freight costs by using our own transportation vehicles for some higher cost, cross-country shipments of material. We will continue to monitor and adjust the timing our purchases as economically as possible.

Operating Costs and Expenses

Total operating costs and expenses for 2011 were $6,786,991, as compared to $8,821,498 in 2010, a decrease of $2,034,507 or 23%.

The following table presents Operating Costs and Expenses for 2011 as compared to 2010:

	For the year Ended December 31,	For the year Ended December 31,

	2011	2010	% change
Operating Costs and Expenses:			
Salaries and Contract Labor	$ 3,059,814	$ 1,847,242	66%
General, Administrative and Consulting	2,031,862	1,743,692	17%
Research and Development	1,695,315	5,230,564	-68%
Total operating expenses	$ 6,786,991	$ 8,821,498	-23%

Salaries and Contract Labor increased 66% in 2011, as compared to 2010. Salaries and Contract Labor included approximately $1,400,000 in equity based compensation in 2011, as compared to approximately $739,000 in 2010. This increase was the result of recording a significant amount of non-cash, equity based compensation expense resulting from modification to the terms of several classes of Warrants, in which we offered holders a discounted exercise price, as well as non-cash compensation expense recorded for stock options and restricted stock awards outstanding. These transactions are discussed in detail in the Notes to Consolidated Financial Statements for the Years Ending December 31, 2011 and 2010. General, Administrative and Consulting expenses increased 17% to $2,031,862 in 2011, as compared to $1,743,692 in 2010. This increase is primarily the result of consulting and training expenses incurred to enhance and develop our quality assurance program and to address FDA comments with regard to our radiochemical product production processes.

In 2011 we capitalized certain costs related to the planning, licensing, and construction of the proposed de-conversion facility we plan to build in New Mexico. In previous years these costs were recorded as research and development costs. The significant decrease in Research and Development expense of approximately 68% is due to this change. Once it became reasonably certain to us that the NRC would likely issue our license to build and operate the de-conversion facility, according to ASC 730, Accounting for Research and Development Costs, we began to capitalize these costs rather than expensing them as we had done in previous years. We anticipate that the NRC will issue our operating license during the latter part of 2012. The license will be valid for 40 years and the capitalized costs associated with obtaining the license will be amortized over that time period. We will continue to incur capital costs associated with this project in 2012 based on our ability to raise funds.

Other Income (Expense)

Other Income (Expense) in 2011 was ($2,656,472) compared to Other Income (Expense) of ($468,038) in 2010.

	For the year Ended December 31, 2011	For the year Ended December 31, 2010
Other income (expense)	$ 6,339	$ (14,359)
Equity in net income of affiliate	141,642	39,649
Interest income	4,724	3,449
Interest expense	(2,809,177)	(496,777)
	$ (2,656,472)	$ (468,038)

Interest Income for 2011 was $4,724 as compared to $3,449 for 2010. This is an increase of $1,275 and is the result of interest generated on interest bearing cash accounts. Interest Expense for 2011 was $2,809,177 as compared to $496,777 for 2010. The increase in Interest Expense of approximately $2,300,000 was due to non-cash interest expense recorded in August 2011 upon maturity of convertible debentures. The convertible debentures were issued in February 2010 to various institutional and private investors and contained a beneficial conversion feature. This feature was recorded as a contra-liability and simultaneously recorded as interest expense over the 18-month life of the convertible debentures, with the final amount of approximately $2,300,000 recorded as interest expense upon maturity in August 2011. Total Other Expense increased by approximately $2,200,000 which again, was primarily the result of the interest expense recorded pursuant to the maturity of the convertible debenture.

Net Loss

Our Net Loss was $5,950,438 in 2011, compared to a Net Loss of $6,802,014 in 2010. The decrease of $851,576, or approximately 13%, was the result of research and development expense related to the proposed de-conversion facility which was capitalized in 2011 rather than being expensed as was done in prior periods. These costs totaled approximately $3,300,000.

Liquidity and Capital Resources

On December 31, 2011, we had cash and cash equivalents of $2,102,696, compared to $4,237,303 at December 31, 2010, and cash provided by operating activities was $66,919.

The decrease of cash and cash equivalents of $2,134,607 is primarily due to the use of cash for expenses related to the licensing, planning and engineering of the planned de-conversion facility.

Accounts receivable at December 31, 2011 were $803,350 as compared to $844,258 at December 31, 2010.

Inventories at December 31, 2011 were $1,465,293 as compared to $1,681,840 at December 31, 2010. The majority of our inventory consists of irradiated material held at the site of the U.S. Department of Energy s prime-operating contractor, which controls the Idaho test reactor. The typical operating cycle for the irradiation of this material is greater than one year and this inventory is expected to remain at similar levels in future years.

We incurred a loss of $5,950,438 for the year ended December 31, 2011, and have an accumulated deficit of $111,994,492 since inception. To date, our operations and plant and equipment expenditures have been funded principally from proceeds from public and private sales of equity as well as through asset sales.

Net cash used in investing activities was $3,315,710 for 2011. We used $3,528,707 to purchase property and equipment and intangible assets. Additionally, we used cash in the net amount of $20,000 as additional investment in TI Services, LLC and received $87,500 in re-payment of a short-term note payable at 6% interest, to RadQual LLC to facilitate its 50% initial investment interest in TI Services LLC. We received member distributions from our investment in RadQual, LLC, in the amount of $84,738 and also received proceeds from the sale of equipment in the amount of $21,280.

Financing activities provided cash of $1,134,183 for the year ended December 31, 2011. We received proceeds from the issuance of warrants in the amount of $1,543,750 and proceeds from the sale of stock in the amount of $12,197. We also received proceeds from the issuance of a short-term note payable to RadQual, LLC, in the amount of $45,000. The funds were borrowed from RadQual, LLC, in June 2011, to purchase of a gamma camera for use in the quality assurance processes related to the manufacture of flood source products which are manufactured by our nuclear medicine products business segment. The loan is for one year and bears an interest rate of 8.5%.

In August 2011, we paid in full one of two outstanding loans with Compass Bank. The loan had an outstanding balance of $362,534 (the Term Loan) and was paid with existing cash. The Term Loan matured April 20, 2011, and in June 2011, we received a notice of non-renewal with an extension to August 29, 2011. A second loan with Compass Bank matured on September 15, 2011 and was paid in full at that time. We also have an unsecured note payable totaling $500,000 which is payable to the former Chairman of the Board. The loan requires annual interest payments on the principal balance at 7% per year, payable each April 1st, and the note matures on April 1, 2012. On March 23, 2012, we renegotiated the terms of this loan to extend the maturity date from April 1, 2012 to November 1, 2012. Additionally, we agreed to pay accrued interest in the amount of $35,000 in cash on April 1, 2012, and we agreed to issue 204,167 shares of our common stock to our former Chairman on April 1, 2012 in lieu of the interest to be paid in cash on the loan from April 1, 2012 to November 1, 2012, based on an annual interest rate of 14% and the closing price of our common stock of $0.20 per share on the OTCBB on March 23, 2012. We may seek additional debt financing for our projects and operations in the future. There is no assurance that we will be able to secure additional debt financing on acceptable terms to us, or at all.

In September 2011, in an effort to raise capital to support our ongoing planned uranium de-conversion project, we authorized an offer to our current warrant holders to encourage them to exercise outstanding warrants. The offer allowed holders of our outstanding warrants to purchase our common stock at a discounted warrant exercise price of $0.10 per share until close of business on September 30, 2011. We discounted the exercise price of (i) our Class F Warrants, which were issued on November 7, 2008, from $0.30 to $0.10, (ii) our Class G Warrants, which were issued on September 8, 2009 from $0.36 to $0.10, (iii) our Class H Warrants, which were issued August 24, 2011, from $0.22 to $0.10, (iv) our Class I Warrants, which were issued on October 29, 2010, from $0.40 to $0.10 and (v) our Class J Warrants, which were issued on March 25, 2011, from $0.43 to $0.10 per share. In addition, on September 8, 2011, in order to give certain warrant holders sufficient time to exercise their warrants in accordance with the offer described above, we authorized the extension of the expiration date of our Class G Warrants from September 18, 2011

to September 30, 2011 and our Class J Warrants from September 25, 2011 to September 30, 2011. As a result of this offer, 15,437,501 warrants were exercised and we issued 15,437,501 shares of our common stock for proceeds of $1,543,750.

We have a $1,422,755 investment in RadQual, LLC, our sole nuclear medicine products customer, which represents a 24.5% ownership interest. We account for this investment using the equity method of accounting and therefore record a proportionate share of the earnings and losses of RadQual, LLC. This is considered a non-liquid asset due to the limited marketability of the investment.

New Accounting Standards

None.

Outlook for 2012

Based upon the investments we have made in our facilities, projects, and products developed in 2011, we have the following goals and objectives for 2012:

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To continue the licensing and permitting activities for the planned uranium de-conversion and processing facility ultimately resulting in the receipt of the NRC license for the facility in 2012;

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Complete long term sales agreements with customers for various fluoride products from the planned depleted uranium processing facility;

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Expand sales of our sealed cobalt sources though new agreements and international sales;

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Increase the revenue within the Radiological Services segment by obtaining an NRC license for additional Field Service activities;

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Examine new opportunities to expand the sale of radiochemical products through joint development agreements with Universities, such as Idaho State University for Copper-67, and evaluate new generic drug product applications through the U.S. Food and Drug Administration (FDA);

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Initiate sales and lease arrangements for the newly approved series of AOS Type B (U) transportation containers;

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Continue to expand our customer base, increase revenues in every business segment, continue to reduce production and operating costs, and attempt to achieve profitability in our core business segment operations; and

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Expand sales of our nuclear medicine products and increase cash flow by expanding sales and improving the profitability of our joint venture, TI Services LLC.

We cannot assure you that we will be successful in achieving any of these goals.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following financial statements are included herewith and are hereby incorporated by reference:

Index to Consolidated Financial Statements

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act) that are designed to ensure information required to be disclosed in our reports that are filed or submitted under the Exchange Act, are recorded, processed, summarized, and reported within the time periods specified in the SEC s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management, with the participation of our CEO and CFO, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2011. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2011.

Report of Management on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our financial statements; providing reasonable assurance that receipts and expenditures are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of company assets that could have a material effect on our financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework and criteria established in *Internal Control Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission. This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, testing of the operating effectiveness of controls and a conclusion on this evaluation. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2011.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2011, that have materially affected, or are reasonable likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

On March 23, 2012, we renegotiated the terms of a $500,000 unsecured note payable with William Nicholson, our former Chairman of the Board. The original loan required annual interest payments on the principal balance at 7% per year, payable each April 1st, and the note was to mature on April 1, 2012. Pursuant to the new terms of the loan, the maturity date will be extended from April 1, 2012 to November 1, 2012, and accrued interest in the amount of $35,000 will be paid in cash to Mr. Nicholson on April 1, 2012. Additionally, 204,167 shares of our common stock will be issued to Mr. Nicholson on April 1, 2012 in lieu of the interest to be paid in cash on the loan from April 1, 2012 to November 1, 2012, based on an annual interest rate of 14% and the closing price of our common stock of $0.20 per share on the OTCBB on March 23, 2012.

PART III.

Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

We have adopted a Code of Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. Our Code of Ethics is posted on our website and can be accessed, free of charge, at http://www.internationalisotopes.com.

The other information required by this item is incorporated by reference in our definitive proxy statement for our 2012 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2011.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to our definitive proxy statement for our 2012 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2011.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Securities Authorized for Issuance under Equity Compensation Plans

We currently maintain three equity compensation plans that provide for the issuance of our common stock to officers and other employees, directors and consultants, each of which have been approved by our shareholders: the 2002 Long Term Incentive Plan, the International Isotopes Employee Stock Purchase Plan and the 2006 Equity Incentive Plan. The following table sets forth information regarding outstanding options and shares reserved for future issuance under the foregoing plans as of December 31, 2011:

Equity Compensation Plan Information
December 31, 2011

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants, and rights	(b) Weighted-average exercise price of outstanding options, warrants, and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in Column (a))
Equity compensation plans approved by shareholders:	21,370,000	$ .13	8,640,989[(1)]
Equity compensation plans not approved by shareholders			
Total	21,370,000	$ .13	8,640,989

(1) Includes 7,283,528 shares available for issuance under the 2006 Equity Incentive Plan and 1,357,461 shares available for issuance under the International Isotopes Employee Stock Purchase Plan. Up to 13,000,000 shares that are currently subject to outstanding options granted under the 2002 Long Term Incentive Plan may become available for issuance under the Company s 2006 Equity Incentive Plan in the future to the extent those shares are not issued (for example, if those options expire without being exercised). Shares available for issuance under the Company s 2006 Equity Incentive Plan may be granted in the form of stock options, stock awards, restricted stock awards, restricted stock units, stock appreciation rights or any other form of equity compensation approved by the Compensation Committee or the Board.

The other information required by this item is incorporated by reference to our definitive proxy statement for our 2012 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2011.

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Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this item is incorporated by reference to our definitive proxy statement for our 2012 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2011.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference to our definitive proxy statement for our 2012 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2011.

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) and (a)(2) Financial Statements and Financial Statement Schedules

See the index to and the financial statements and supplementary data beginning on page 27 and 48 which are incorporated by reference.

(a)(3) Exhibits

The following documents are filed or incorporated by reference as exhibits to this report:

2.1

Unit Purchase Agreement, effective as of May 23, 2008, among the Company, Randall O Kane, Keith Allberg and Peter Ouimette (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on June 2, 2008).

2.2

Asset Purchase Agreement, dated May 30, 2008, between the Company and Sequoyah Fuels Corporation (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on June 5, 2008).

2.3

First Amendment to the Asset Purchase Agreement, dated June 3, 2008, between the Company and Sequoyah Fuels Corporation (incorporated by reference to Exhibit 99.2 of the Company s Current Report on Form 8-K filed on June 5, 2008).

2.4

Securities Purchase Agreement, dated November 7, 2008, among the Company and the purchasers named therein (incorporated by reference to Exhibit 2.1 of the Company s Current Report on Form 8-K filed on November 12, 2008).

2.5

Securities Purchase Agreement, dated September 18, 2009, among the Company and the purchasers named therein (incorporated by reference to Exhibit 2.1 of the Company s Current Report on Form 8-K filed on September 18, 2009).

2.6

Securities Purchase Agreement, dated February 24, 2010, among the Company and the purchasers named therein (incorporated by reference to Exhibit 2.1 of the Company s Current Report on Form 8-K filed on February 25, 2010).

2.7

Securities Purchase Agreement, dated October 29, 2010, among the Company and the purchasers named therein (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on November 1, 2010).

3.1

Restated Certificate of Formation, as amended (incorporated by reference to Exhibit 3.1 of the Company s Quarterly Report on Form 10-Q for quarter ended June 30, 2010).

3.2

Bylaws of the Company (incorporated by reference to Exhibit 3.2 of the Company's Registration Statement on Form SB-2 filed on May 1, 1997 (Registration No. 333-26269).

4.1

Form of Class E Warrant (incorporated by reference to Exhibit 4.1 of the Company s Current Report on Form 8-K filed on April 21, 2008).

4.2

Form of Class F Warrant (incorporated by reference to Exhibit 4.1 of the Company s Current Report on Form 8-K filed on November 12, 2008).

4.3

Form of Class G Warrant (incorporated by reference to Exhibit 4.1 of the Company s Current Report on Form 8-K filed on September 18, 2009).

4.4

Form of Class H Warrant (incorporated by reference to Exhibit 4.2 of the Company s Current Report on Form 8-K filed on February 25, 2010).

4.5

Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of the Company s Current Report on Form 8-K filed on November 1, 2010).

4.6

Form of Class J Warrant (incorporated by reference to Exhibit 4.7 of the Company s Annual Report on Form 10-K for the year ended December 31, 2011).

10.1

2002 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Annual Report on Form 10-KSB for the year ended December 31, 2002).

10.2

Form of Incentive Stock Option Agreement under the 2002 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 of the Company s Annual Report on Form 10-KSB for the year ended December 31, 2004).

10.3

International Isotopes Employee Stock Purchase Plan (incorporated by reference to Appendix B to the Company s definitive proxy statement on Schedule 14A, as amended, filed on May 6, 2005).

10.4

Lease Agreement (4137 Commerce Circle), dated May 1, 2011, between the Company and Adrian Rand Robison and Dorothy Robison (incorporated by reference to Exhibit 10.1 of the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2011).

10.5

Option to Purchase and Right of First Refusal for Property located at 4137 Commerce Circle (incorporated by reference to Exhibit 10.7 of the Company s Annual Report on Form 10-KSB for the year ended December 31, 2004).

10.6

Lease Agreement (3159 Commerce Way), dated May 1, 2011, between the Company and Adrian Rand Robison and Dorothy Robison (incorporated by reference to Exhibit 10.2 of the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2011).

10.7

Option to Purchase and Right of First Refusal for Property located at 3159 Commerce Way (incorporated by reference to Exhibit 10.9 of the Company s Annual Report on Form 10-KSB for the year ended December 31, 2004).

10.8

Unsecured Note to former Chairman of the Board, dated April 1, 2002 (incorporated by reference to Exhibit 10.12 of the Company s Annual Report on Form 10-KSB for the year ended December 31, 2004).

10.9

2006 Equity Incentive Plan (incorporated by reference to Annex A of the Company s definitive proxy statement on Schedule 14A filed on May 1, 2006).

10.10

Alpha Omega Services, Inc. Distributor Agreement, dated August 14, 2007, between the Company and Alpha Omega Services, Inc. (incorporated by reference to Exhibit 99.1 of the Company's Current Report of Form 8-K filed on August 22, 2007).

10.11

Technical Support Services Agreement, dated May 30, 2008, between the Company and Sequoyah Fuels Corporation (incorporated by reference to Exhibit 99.3 of the Company s Current Report on Form 8-K filed on June 5, 2008).

10.12

Form of Indemnification Agreement (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on September 17, 2008).

10.13

Memorandum of Agreement, dated October 22, 2009, between International Isotopes Inc. and New Mexico Environment Department (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on October 27, 2009).

10.14

Gemstone Processing Agreement between the Company and Quali-Tech, Inc. (incorporated by reference to Exhibit 10.1 of Amendment No. 1 to the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2009 filed on September 24, 2009).

10.15

Manufacturing Agreement, dated January 30, 2006, between the Company and RadQual, LLC (incorporated by reference to Exhibit 10.2 of Amendment No. 1 to the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2009 filed on September 24, 2009).

10.16

De-Conversion Services Agreement, dated April 13, 2010, between International Isotopes Fluorine Products, Inc. and Louisiana Energy Services, LLC. (incorporated by reference to Exhibit 10.1 to the Company s Quarterly Report on Form 10-Q for the quarter ended March 31, 2010).**

10.17

Sales Agreement, dated April 1, 2012, between the Company and GE-Hitachi Nuclear Energy Americas, LLC (incorporated by reference to Exhibit 10.2 to the Company s Quarterly Report on Form 10-Q for the quarter ended March 31, 2010).**

10.18

Amended and Restated Employment Agreement, dated May 31, 2010, between the Company and Stephen Laflin (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on June 23, 2010).

10.19

Sales Agreement, effective August 1, 2010, between International Isotopes Idaho, Inc. and NTP Radioisotopes (Pty) Ltd. (incorporated by reference to Exhibit 10.3 of the Company s Quarterly Report on Form 10-Q for period ended June 30, 2010).**

10.20

Registration Rights Agreement, dated October 29, 2010, among the Company and certain investors party thereto (incorporated by reference to Exhibit 99.2 of the Company s Current Report on Form 8-K filed on November 1, 2010).

10.21

Modification #1to the Amended and Restated Employment Agreement, dated December 22, 2010,between the Company and Stephen Laflin (incorporated by reference to Exhibit 10.27 of the Company s Annual Report on Form 10-K for the year ended December 31, 2011).

10.22

Modification #2to the Amended and Restated Employment Agreement, dated February 18, 2011, between the Company and Stephen Laflin (incorporated by reference to Exhibit 10.28 of the Company s Annual Report on Form 10-K for the year ended December 31, 2011).

10.23+

Isotope and Technical Services Order Form, dated December 23, 2011, between the Company and the U.S. Department of Energy.**

21.1

Subsidiaries (incorporated by reference to the Company s Annual Report on Form 10-KSB for the year ended December 31, 2005).

23.1+

Consent of Hansen, Barnett & Maxwell.

31.1+

Certification under section 302 of the Sarbanes-Oxley Act of 2002 for Chief Executive Officer.

31.2+

Certification under section 302 of the Sarbanes-Oxley Act of 2002 for Chief Financial Officer.

32.1*

Certification furnished under section 906 of the Sarbanes-Oxley Act of 2002.

32.2*

Certification furnished under section 906 of the Sarbanes-Oxley Act of 2002.

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The following financial statements, formatted in XBRL: (i) Consolidated Balance Sheets as of December 31, 2011 and 2010, (ii) Consolidated Statements of Operations for the years ended December 31, 2011 and 2010, (iii) Consolidated Statement of Shareholders Equity for the years ended December 31, 2011 and 2010, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2011 and 2010and (v) Notes to Consolidated Financial Statements, tagged as blocks of text. The information in Exhibit 101 is furnished and not filed, as provided in Rule 402 of Regulation S-T.

This exhibit constitutes a management contract or compensatory plan or arrangement.

**Contains material that has been omitted pursuant to a request for confidential treatment and such material has been filed separately with the Commission.

+Filed herewith.

*Furnished herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

International Isotopes Inc.

By: /s/ Steve T. Laflin
Steve T. Laflin
President, Chief Executive Officer,
and Director

Date: March 28, 2012

Pursuant to the requirement of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

March 28, 2012	By: /s/ Steve T. Laflin Steve T. Laflin President, Chief Executive Officer, and Director
March 28, 2012	By: /s/ Laurie McKenzie-Carter Laurie McKenzie Carter Chief Financial Officer, Secretary
March 28, 2012	By: /s/ Christopher Grosso Christopher Grosso Director
March 28, 2012	By: /s/ Ralph Richart

Ralph Richart
Chairman of the Board of Directors

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS

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H B M

HANSEN, BARNETT & MAXWELL, P.C.
Certified Public Accountants

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and the Shareholders

International Isotopes, Inc.

We have audited the accompanying consolidated balance sheets of International Isotopes, Inc. and subsidiaries as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion the consolidated financial statements referred to above present fairly, in all material respects, the financial position of International Isotopes, Inc. and subsidiaries as of December 31, 2011 and 2010, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

HANSEN, BARNETT & MAXWELL P.C.

Salt Lake City, Utah

March 28, 2012

Registered with the Public Company Accounting Oversight Board

5 Triad Center, Suite 750, Salt Lake City, Utah 84180-1128

Tel 801-532-2200 FAX 801-532-7944 www.hbmcpas.com

ADDING VALUE NOT COMPLEXITY

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES
Consolidated Balance Sheets

	December 31,	
Assets	**2011**	**2010**
Current assets		
Cash and cash equivalents	$ 2,102,696	$ 4,237,303
Accounts receivable	803,350	844,258
Inventories (Note 4)	1,465,293	1,681,840
Due from related party (Note 3)	-	87,500
Prepaids and other current assets	127,006	122,016
Total current assets	4,498,345	6,972,917
Long-term assets		
Restricted certificate of deposit	428,886	428,365
Property, plant and equipment, net (Note 5)	1,967,154	2,090,781
Capitalized lease disposal costs, net (Note 12)	113,503	140,934
Investment (Note 3)	1,422,755	1,365,851
Patents and other intangibles, net (Note 6)	3,500,162	228,745
Total long-term assets	7,432,460	4,254,676
Total assets	$ 11,930,805	$ 11,227,593