INTERNATIONAL ISOTOPES INC
Form 10-K
March 28, 2013

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, 2012

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 Section 15(d) of the Act. YES o NO x

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

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

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

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

Large accelerated filer o	Accelerated filer o
Non-accelerated filer o	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, 2012 was $30,286,126. 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 6, 2013, the number of shares outstanding of the registrant s common stock, $.01 par value, was 360,432,335 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 2013 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, 2012.

INTERNATIONAL ISOTOPES INC.

FORM 10-K

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PART I

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

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 with plans 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, Idaho, URENCO USA s (UUSA) (formerly known as Louisiana Energy Services or LES) Eunice New Mexico facility, United States Enrichment Corporation s (USEC) American Centrifuge project in Piketon, Ohio, and GE-Hitachi s use of a Silex laser separation technology in Wilmington, North Carolina. We 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 believe that we will 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 our general business plan. During 2012 we:

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Received a Part 40 combined construction and operating license for our planned depleted uranium de-conversion and fluorine extraction processing facility from the Nuclear Regulatory Commission (NRC);

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Received our air permit from the New Mexico Environment Department for the planned depleted uranium de-conversion and fluorine extraction processing facility. The issuance of this permit completed the permitting actions required in New Mexico to allow the start of construction of our planned facility;

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Completed a $3 million private placement that further funded NRC licensing activities, and allowed us to make key investments in our core business segments in Idaho;

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Continued to pursue long-term sales agreements with customers for various fluoride products that will be manufactured by the planned depleted uranium processing facility;

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Completed significant manufacturing process improvements in our iodine-131 processes;

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Executed a contract to purchase an AOS Type B (U) transportation container; and

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Continued the formal design activities for the planned depleted uranium de-conversion facility project in New Mexico.

While our progress in 2012 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 2012, we were able to raise approximately $3 million through the sale of convertible debentures and we spent approximately $1.5 million on the project. During 2013, we intend to control the rate of capital expenditure on the project until project financing has been secured. There is no assurance that adequate financing for the project will be secured on terms acceptable to us, or at all.

As mentioned above, the NRC construction and operating license was issued for the facility in October 2012. This is a forty (40) year operating license and is the first commercial license of this type issued in the U.S. There are no other companies with a similar license application under review by the NRC. Therefore, the NRC license represents a significant competitive barrier and we believe that it provides us with a very valuable asset.

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 both 2011 and 2012, however, TI Services, LLC experienced net losses due to reduced margins on certain non-nuclear medicine related products. During 2012, we ve worked to stem these losses and will continue those efforts in 2013. We believe that we can expand sales opportunities for TI Services, LLC, by continuing to work closely with RadQual, LLC in developing new products that can be added to our contract manufacturing role with RadQual, LLC, and that would, in turn, expand sales opportunities for TI Services, LLC.

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. 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 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.

At the present time 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. We have previously reported that in December 2011 we were forced into a new contract arrangement through the DOE Office of Science National Isotope Development Center (NIDC). As expected, this change in contract approach by the DOE resulted in a significant increase in costs and impacted communication and coordination on production issues to the point of reducing our cobalt product sales. Furthermore, in June 2012, a leak of a cobalt target belonging to another commercial business resulted in the curtailment of all further cobalt handling and production activities at the ATR pending completion of several corrective actions. The investigation into the leaking cobalt target identified three areas that needed corrective action. Those areas were; (1) changes to cobalt target handling controls, (2) concerns with continued irradiation of in-process targets, and (3) enhancing the design of future cobalt targets. We are in the process of completing corrective actions for target handling and enhanced target design, and anticipate resuming the handling of cobalt targets in mid-2013. We also anticipate completing a new cobalt target design that will be used in the ATR and allow resumption of irradiation later in 2013. However, it is not certain that the INL contractor will permit continued irradiation of the in-process cobalt targets currently stored at the reactor site. We are still discussing this issue with the Idaho National Laboratory (INL) contractor; however, if we are not able to resume irradiation of these targets, we would be forced to write down the value of the inventory costs assigned to this material (currently valued at approximately $830,000) and sell or salvage these targets. Because cobalt takes approximately three years to produce, not being able to continue irradiation of these targets would cause about a three year gap in new cobalt production. To mitigate the impact of these delays and interruptions to our cobalt production activities caused by the NIDC and the cobalt target failure, we are investigating alternate sources of cobalt supply, evaluating possible sales of lower activity cobalt already in process, and identifying additional reactors for cobalt irradiation.

Radiochemical 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, in August 2010, we entered into a three-year agreement with NTP for the supply of iodine-131 that allows us to purchase iodine at a mutually agreeable pre-determined price. 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 gland such as Graves s 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. High purity fluoride gases are in ever-increasing demand for processes such as ion-implantation and chemical vapor deposition and also for the manufacture of organic complexes used in a host of industrial applications and manufacturing processes. The FEP products have very high purity, which makes them ideally suited to these specialty applications.

We acquired seven patents for the FEP in January 2004 and built a pilot production facility in which began operation in 2006. In 2010, we were granted an additional process patent on FEP based upon information gained through the operation of the pilot facility. During 2012, our Idaho FEP pilot facility was not used for commercial gas production but instead focused upon production of high purity products and examined methods of scaling up the size of the production operations in support of the new FEP facility in New Mexico. By the end of 2012, we completed our testing of individual components and analytical processes and have begun a shutdown of the pilot plant operations.

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 Quali-Tech, Inc., for gemstone processing and this contract accounts for the majority of our sales in this segment. In May 2012, we modified and renewed the contract, which remains in effect until either party gives a minimum of six months notice to the other that it does not intend to continue the contract. The contract provides that we shall act as the exclusive processor of gemstones for Quali-Tech, Inc., for the term of the contract and two years beyond. In 2012, we obtained a license amendment from the NRC to include certain field service activities. Beginning in 2013, we expect these field services to become a primary source of revenue within this segment.

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 in New Mexico.

Industry Overview, Target Markets, and Competition

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

Nuclear Medicine Standards

Calibration and Reference Standards are required for the daily operational checks and calibration of the measurement of SPECT imaging devices frequently used in nuclear medicine. Calibration and quality assurance testing is required as a routine part of the normal operations of this equipment to ensure its reliability and accuracy. We exclusively manufacture many of these products for RadQual, 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. We also received ISO-9000 and ISO-13485 quality program certifications in 2011 that has allowed us to start selling these products into several foreign countries that require this additional quality certification for manufacturers.

In December 2010, we formed TI Services, LLC, a joint venture with RadQual, LLC, which is expected to continue as a major distributor of products in the field of nuclear medicine and nuclear cardiology. TI Services, LLC experienced net losses in 2011 and in 2012. However, we believe that by implementing some price changes, cost control measures, new product development, and by further expanding into foreign markets, we may be able to improve our performance in this segment in 2013.

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 recycle used cobalt sources by recovering the cobalt for re-use in the manufacture of new sealed sources for teletherapy devices, irradiators, and other source applications. We are the only company in the U.S. that provides this unique service. There has been a significant increase in regulation by the NRC in recent years that has created a significant barrier to any new entrants to this market. 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 are at present dependent upon our contract relationship with the DOE for access to its ATR in Idaho for continued cobalt production. The interruption to cobalt production experienced in 2012 has significantly impacted our cobalt products business segment. This impact will continue to be felt in 2013 because of the slow resumption in production activities and could continue to be felt through 2016 depending upon our ability to resume irradiation of the in-process cobalt targets or locate alternative sources of supply.

Radiochemical Products

We typically supply radioisotope products in bulk form. The markets for most radiochemicals are highly competitive. The target markets for these products are customers who (1) incorporate them into finished industrial or medical devices; (2) use radioisotope products in clinical trials for various medical applications; or (3) further process and include the radioisotope products into a pharmaceutical product for FDA approved therapy or imaging. We are the only U.S. company that supplies 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. During 2011 and 2012, there was some consolidation of pharmacy chains, and corporate decisions made, in regard to purchasing radiochemical, as opposed to finished pharmaceutical products. Those changes resulted in a significant decline in our sales within this business segment in 2011 and continued with a lesser decline in 2012. We believe that the completion of significant improvements to radiochemical processing and greater market stability will reverse this trend and help us realize improved sales in 2013 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 2012, our existing Idaho FEP pilot facility was used for completion of testing certain process parameters and demonstrating the purity of the FEP products. With testing now complete we plan to terminate further activity at the FEP pilot facility. Therefore, the fluorine products segment is not projected to generate any revenue in 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 and only recovered to a limited extent in 2012. We are seeing signs of improved volumes of material shipped to us for processing and expect revenue within this segment to return to historic levels in 2013. In addition we have obtained an amendment to our NRC license to permit certain field service activities. Beginning in 2013, we expect to see field service activities become the primary source of revenue within this segment.

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 face a significant amount of increased new regulation and enhanced security requirements and IITS is well suited to meeting these requirements while significantly reducing the costs of transport to us. IITS has specially trained drivers and specially equipped vehicles intended to meet the new standards for transportation of large cobalt shipments. Therefore, IITS is capable of providing unique transportation services that we believe only one or two other commercial carriers in the U.S. can also provide. The primary purpose of this segment is to support the sale and delivery of our cobalt products. We believe that the increase in sales expected for cobalt products in 2013 will 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, certain field service activities, and research and development. 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 October 2012, we were granted a Part 40 construction and operating license by the NRC for the proposed depleted uranium de-conversion and FEP production facility. The facility, which is to be located in Lea County, New Mexico, is proposed to initially de-convert up to approximately 11 million pounds of depleted uranium hexafluoride (DUF_6) annually into fluoride products and depleted uranium oxides (DUO). The timing of construction and operating 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 have corrected all CGMP violations.

Employees

As of December 31, 2012, we had 23 full-time employees.

Distribution Methods for Products

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

Dependence on Customers

During 2012, one major customer, RadQual, LLC, (RadQual) accounted for 45% of our total gross revenue. This total includes both sales under an exclusive sales agreement with RadQual and its sales as a distributor of our products and also includes sales reported by TI Services, LLC our joint venture with 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, 20%, and 21% of our total gross revenues for the years ended December 31, 2012 and 2011, respectively. Combined sales, on which we are dependent, to our three largest customers, including TI Services, LLC sales, accounted for 48% of our total gross revenues in 2011 and accounted for 56% of our total gross revenues. We are making efforts to reduce our dependency on a small number of customers by expanding sales in both domestic and

foreign markets and through our establishment of the joint venture, TI Services, LLC to expand distribution of products. We have also put in place an additional sales agreement with one customer that we expect will expand the sale of cobalt products and create the additional opportunity for revenue from new radiological services.

Patents, Trademarks, Licenses and Royalty Agreements

In 2004, we obtained certain patents related to the FEP. In July 2010, we were granted a new patent on the FEP process and we are currently 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 $990,021 in 2012, compared with $1,695,315 in 2011. These expenses were primarily associated with engineering, design, production testing, and licensing activities for our planned depleted uranium de-conversion and FEP facility.

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

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

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

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

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.

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. Because the start of construction of the project has been delayed this date is no longer realistic and that will require us to renegotiate this term of the contract with URENCO. 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.

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

therefore, delay revenue generating operations at the facility.

The DOE is obligated to take depleted uranium from enrichment companies. The DOE has constructed two depleted uranium de-conversion facilities. These facilities 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 located in Lea County, New Mexico. Lea County, New Mexico has transferred the property to us under the provisions of the New Mexico Local Economic Development Act, Project Participation Agreement. We are obligated to meet certain performance objectives; namely starting Phase 1 construction no later than December 31, 2014, and completing Phase 1 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 international Patent Cooperation Treaty (PCT) applications to seek international protection for the FEP process in certain countries,

we cannot be certain that our competitors may be able to design around our patents and that 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. Current activity at the Idaho reactor may continue to affect the supply of cobalt material needed for the manufacture of cobalt sources. Loss of the ability to use, or cost effectively use, these irradiation services would significantly impact our cobalt products business segment because there is not currently another reactor available in the United States that is capable of providing this type of service for us. Our nuclear medicine calibration and reference standard manufacturing is conducted under an exclusive contract with RadQual, 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 2012, sales to one major customer accounted for 45% of our total gross revenue. Sales under exclusive contract with this customer represented 20% and 21% of our total gross revenues for the years ended December 31, 2012, and 2011, respectively. Combined sales to our three largest customers accounted for 48% of our total gross revenues during 2012. Combined sales to these three customers accounted for 56% of gross revenue in 2011. 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, 2012, we have generated $69,227,735 in revenues and accumulated deficit (including preferred stock dividends and returns) in the amount of $114,235,302. 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. A surety bond has been used to provide the financial assurance required by the NRC for our Idaho facility license for decommissioning upon termination of operations and a similar mechanism will be required to fund the decommissioning of the new facility. However, if a contamination event 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, cobalt-60, or iodine -131 could result in lost sales of nuclear medicine and calibration standards sales and radiochemical products.

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

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

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

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

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

Import/Export Regulation. We are subject to significant regulatory oversight of our import and export operations due to the nature of our product offerings. Penalties for non-compliance can be significant and violations can result in adverse publicity.

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, 2012, there were approximately 13,585,000 shares of common stock issuable upon exercise of vested stock options outstanding, at a weighted-average exercise price of $0.23 per share. An additional 13,997,495 shares are reserved for issuance under our 2006 Equity Incentive and our Employee Stock Purchase Plan as of December 31, 2012. 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, 2012, 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, Series I Warrants for the issuance of 18,142,333 shares of common stock, and Series K warrants for the issuance of 4,502,520 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 Lea County, New Mexico. The following paragraphs provide a brief summary of these properties.

4137 Commerce Circle, Idaho Falls, ID The facility located on this property houses our main corporate headquarters and all of our 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 Phase 1 of the project and have hired at least 75 persons to operate the facility no later than December 31, 2015, although commercial operations need not have begun by that date. 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, New Mexico. The purchase price of the property would be $776,078, plus interest at the annual rate of 5.25% from the date of the closing to the date of payment. If we timely perform the project commencement requirements, Lea County, New Mexico will execute a full and complete release of the mortgage on the property. We have not recorded the value of this property as an asset and will not until such time that sufficient progress on the project has been made to meet our obligations under the agreements for permanent transfer of the title.

Item 3. LEGAL PROCEEDINGS

We are not party to any material pending legal proceedings.

Item 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

Item 5.

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

Our common stock is quoted on the 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
2012	1st	$0.32	$0.09
2012	2nd	$0.24	$0.11
2012	3rd	$0.23	$0.14
2012	4th	$0.22	$0.06
2011	1st	$0.31	$0.10
2011	2nd	$0.24	$0.12
2011	3rd	$0.17	$0.08
2011	4th	$0.14	$0.06

On March 4, 2013, there were 509 holders of record of our common stock. 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 2013

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, Business under General Business and Products Description, within this report.

In 2012, 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 2012:

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In April 2012, we received our air permit from the New Mexico Environment Department for the planned depleted uranium de-conversion and fluorine extraction processing facility.

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In July 2012, we completed a $3 million private placement that further funded NRC licensing activities and allowed us to make significant investments in our core business segments.

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In October 2012, we were issued a Part 40 combined construction and operating license for our planned depleted uranium de-conversion and fluorine extraction processing facility.

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Completed significant manufacturing process improvements in our iodine-131 processes.

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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 2012:

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Revenue in 2012 was approximately $7.6 million.

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Net loss for 2012 decreased by approximately 19% compared to 2011.

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Our total gross profit rate decreased from 36% in 2011 to 35% in 2012.

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Our operating costs, exclusive of research and development expense, decreased approximately 24% in 2012. Including research and development expense in total operating expense, overall operating costs decreased by approximately

28%.

Year ended December 31, 2012 compared to year ended December 31, 2011

The following table presents comparative Sale of Product for the years 2012 and 2011:

Sale of Product	**For the year ended December 31, 2012**	**For the year ended December 31, 2011**	**$ change**	**% change**
Radiochemical Products	$ 1,677,291	$ 1,811,935	$ (134,643)	-7.43%
Cobalt Products	1,369,130	2,339,154	(970,024)	-41.47%
Nuclear Medicine Standards	4,169,710	4,795,369	(625,659)	-13.05%
Radiological Services	177,871	228,631	(50,760)	-22.20%
Flourine Products	-	-	-	0.00%
Transportation	227,932	286,923	(58,991)	-20.56%
Total Segments	7,621,934	9,462,012	(1,840,077)	-19.45%
Corporate revenue	-	-	-	0.00%
Total Consolidated	$ 7,621,934	$ 9,462,012	$ (1,840,077)	-19.45%

Revenues

Total revenues in 2012 were $7,621,934, compared to $9,462,012 in 2011, which represents a decrease of $1,840,078, or approximately 20%. Each of our business segments reported decreased revenue in 2012, the details of which are discussed below. Cobalt Products sales for 2012 (which includes bulk cobalt sales) accounts for approximately 18% of total revenue, as compared to 25% in 2011. There were no bulk cobalt sales during 2012, and bulk cobalt sales for 2011 accounted 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, 2012	**% of Total Sales 2012**		**For the year ended December 31, 2011**	**% of Total Sales 2011**
Sale of Product						
Radiochemical Products	$	1,677,291	22%	$	1,811,935	19%
Cobalt Products **(including bulk cobalt sales)**		1,369,130	18%		2,339,154	25%
Nuclear Medicine Standards		4,169,710	55%		4,795,369	51%
Radiological Services		177,871	2%		228,631	2%
Flourine Products		-	0%		-	0%
Transportation		227,932	3%		286,923	3%
Corporate revenue		-	0%		-	0%
Total Segments	$	7,621,934	100%	$	9,462,012	100%
Radiochemical Products		$1,677,291	22%		1,811,935	21%
Cobalt Products **(excluding bulk cobalt sales)**		1,369,130	18%		1,409,256	17%
Nuclear Medicine Standards		4,169,710	55%		4,795,369	56%
Radiological Services		177,871	2%		228,631	3%
Flourine Products		-	0%		-	0%
Transportation		227,932	3%		286,923	3%
Corporate revenue		-	0%		-	0%
Total Segments	$	7,621,934	100%	$	8,532,114	100%

Radiochemical Products

Sales of radiochemical products accounted for approximately 22% of our total sales revenue in 2012 and decreased by $134,643, or approximately 7% to $1,677,291, as compared to $1,811,935 in 2011. Sales performance in this segment was largely driven by the decrease in our sales of iodine-131. Sales of iodine-131 decreased in 2011 after we received

the warning letter from the U.S. Food and Drug Administration (FDA) discussed below. As a result of the warning letter, several of our customers moved to other distributers of iodine-131 for their radiochemical needs. However, we expect that the corrective actions that we completed during 2012 will mitigate this drop in iodine-131 revenue and we will see stronger sales of this product during 2013.

Of our total iodine-131 sales for 2012, approximately 83% 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. During 2012 we have incorporated all applicable CGMP requirements into our radiochemical production processes to ensure that our products meet specific quality requirements. We also provided the FDA with a complete response to its Warning Letter and have attained full CGMP compliance.

Cobalt Products

Total cobalt products sales accounted for approximately 18% of our total sales revenue in 2012. There were no bulk cobalt sales during 2012, and we reported $929,898 of bulk cobalt sales in 2011. Please refer to the previous table which presents this comparative data.

The following table presents sales of each of our cobalt product lines for 2012 as compared to 2011:

Cobalt Products	**For the year Ended December 31, 2012**	**For the year Ended December 31, 2011**	**% change**	**$ change**
HSA Cobalt Sales (bulk cobalt)	$ -	$ 929,898	-100%	$ -929,898
Cobalt Recycle	185,500	211,480	-12%	$ -25,980
Sealed Source Manufacturing	1,183,630	1,197,776	-1%	$ -14,146
	$ 1,369,130	$ 2,339,154	-41%	$ -970,024

Sales of total Cobalt Products decreased by 41% to $1,369,130 in 2012, as compared to $2,339,154 in 2011 primarily as the result of the decline in bulk cobalt sales. Bulk cobalt sales decreased by $929,898, or 100%, from 2011 to 2012. Sales of cobalt products excluding bulk cobalt sales decreased by approximately 3% to $1,369,130, as compared to $1,409,256 in 2011. We believe that, if we had been able to pull additional target material from the ATR during 2012, both our bulk cobalt sales and our sealed source sales would have been significantly higher. During 2012 we had customers requesting both bulk cobalt and sealed source products; however, we were unable to supply these products due to the DOE reactor management issues discussed below. Cobalt Recycle decreased by 12% in 2012, as compared to 2011. This decrease was directly attributable to the lack of an approved shipping package to transport expended sources. During the latter part of 2012, the AOS 5979 shipping package was removed from service when its permit expired and the manufacture of its replacement, the AOS 100, had not been completed. The decrease in revenue in this segment was attributable to a combination of a decrease in the production rate of high specific activity material caused by the U.S. Department of Energy s (DOE) experimental projects and a curtailment of cobalt handling by the DOE pending an investigation of a damaged cobalt target in the test reactor. We are working with the DOE

and the subcontractor to resolve both these issues and hope to resume cobalt product production by mid-2013. We have also received certification under both ISO-9001 and ISO-13485 standards for the manufacture and design of certain cobalt-60 products. The ISO certifications are important to our plans for continued expansion of sales of several products into international markets. We anticipate that these certifications will continue to strengthen our international source sales and benefit all of our customers in terms of the quality of the products supplied.

Sales of sealed source products decreased 1% in 2012, as compared to 2011. During 2012 we continued marketing our sealed source products internationally, and, although world economic conditions will potentially have a significant impact on foreign sales, we believe, that with these continued marketing efforts coupled with the restored ability to pull cobalt material from the ATR, and the availability of our new transportation containers, we will be able to promote growth in this segment. 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 currently 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 and because it takes three years to produce cobalt-60.

We previously reported that in December 2011 we were forced into a new contract arrangement through the DOE Office of Science National Isotope Development Center (NIDC). As expected, this change in contract approach by the DOE resulted in a significant increase in costs and impacted communication and coordination on production issues to the point of reducing sales. Furthermore, in June 2012, a leak of a cobalt target belonging to another commercial business resulted in the curtailment of all further cobalt handling and production activities at the ATR pending completion of several corrective actions. The investigation into the leaking cobalt target identified three areas that needed corrective action. Those areas were; (1) changes to cobalt target handling controls, (2) concerns with continued irradiation of in-process targets, and (3) enhancing the design of future cobalt targets. We are currently working through completing corrective actions for target handling and enhanced target design. We currently anticipate beginning to handle cobalt targets in mid-2013 which will allow resumption of cobalt sales. We also anticipate a new cobalt target design later this year that will allow a resumption of irradiation of this new design later this year. However, it is not certain that the INL contractor will permit continued irradiation of the in process cobalt targets currently stored at the reactor site. We are still discussing this issue with the INL contractor but should we not be able to resume irradiation of these targets we would be forced to write down the amount of the inventory costs assigned to this material (currently valued at approximately $830,000) and sell or salvage these targets. Because cobalt takes approximately three years to produce not being able to continue irradiation of these targets would cause about a three year gap in new cobalt production.

To mitigate the impact of these delays and interruptions to our cobalt production activities caused by the NIDC and the cobalt target failure we are investigating alternative sources of cobalt supply, evaluating possible sales of lower activity cobalt already in process, and identifying additional reactors for cobalt irradiation.

Nuclear Medicine Standards

Sales of nuclear medicine standards accounted for approximately 55% and 51%, of our total sales revenue in 2012 and 2011, respectively. Sales in this segment decreased by $625,659, or approximately 13%, to $4,169,710 in 2012, as compared to $4,795,369 in 2011. 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. The following table presents 2012 and 2011 sales for the nuclear medicine standards segment:

	For the year	**For the year**

	ended	ended		
Nuclear Medicine Standards	**December 31, 2012**	**December 31, 2011**	**$ change**	**% change**
Flood Source Sales	$ 1,448,179	$ 1,650,485	$ -202,306	-12%
Miscellaneous Source Sales	331,017	343,775	$ -12,758	-4%
TI Services LLC	2,390,514	2,801,109	$ -410,595	-15%
	$ 4,169,710	$ 4,795,369	$ -625,659	-13%

TI Services, LLC sales for 2012 were $2,390,514 as compared to $2,801,109, for 2011, a decrease of $410,595, or approximately 15%. This decrease in TI Services, LLC sales is largely attributable to a drop in sales of paper products used in nuclear medicine imaging which is the result of clinics shifting towards maintaining electronic records. We are working closely with RadQual, LLC, our partner in the TI Services, LLC joint-venture, to develop new products to market through TI Services, LLC. Sales of flood sources decreased to $1,448,179 in 2012, from $1,650,485, in 2011. This is a decrease of $202,306, or approximately 12%. We believe this decline is the result of medical facilities delaying the replacement of imaging sources due to budgetary constraints and a decline in operating nuclear medicine clinics. However, in 2011, we received both ISO-9000 and ISO-13485 quality program certifications and in 2012 we began marketing our nuclear medicine products into several foreign countries that required this additional quality certification for manufacturers. We believe that as the global economy improves and with our added certifications, our sales in this segment will potentially return to historical growth levels. Miscellaneous source sales decreased by $12,758, to $331,017 in 2012, from $343,775 in 2011. This is a $12,758 decrease, or approximately 4%. The decreases in these year-to-year comparisons are, again, likely the result of clinics delaying the replacement of imaging and calibrating sources in an effort to cut costs. We anticipate, that, as clinics find it necessary to replenish their source supplies, and with stronger marketing efforts by TI Services, LLC, sales in this segment will again increase in 2013.

Radiological Services

Revenues from our Radiological Services segment accounted for approximately 2% of our total sales revenue in both 2012 and 2011. Sales in this segment decreased by $50,760, or approximately 22%, from $228,631 in 2011, to $177,871 in 2012. Gemstone processing accounted for approximately 92% of Radiological Services sales in 2012 and approximately 78% in 2011. Revenues from gemstone processing decreased by $15,087, from $179,451 in 2011, to $164,364 in 2012. This is a decrease of approximately 8% and reflects the general economy and slow growth in sales of luxury items, such as jewelry.

Miscellaneous Radiological Services revenue decreased by approximately 73% in 2012, as compared to 2011. We perform radiological service consulting work in conjunction with our sealed source sales and expended source disposal services. During 2012, opportunities for performing radiological services declined as material used in sealed source manufacture became unavailable to us. This drastic drop in the availability of material was due to a decrease in the production rate of high specific activity material caused by the DOE s experimental projects and a curtailment of cobalt handling by the DOE pending an investigation of a damaged cobalt target in the test reactor.

We obtained an amendment to our NRC license during 2012 that will allow the performance of certain field service activities. These activities include efforts to support recovery of disused sources under the DOE s Orphan Source Recovery Program (OSRP) and installation or removal of certain cobalt therapy units. Based upon the current contract commitments for this type of work in 2013 we expect that field services will become the primary source of revenue within this segment.

Fluorine Products

There were no revenues to report from the fluorine products segment for 2012. 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 2012, we incurred $1,050,995 of planning and other expenses related to the de-conversion project, as compared to $4,428,799 in 2011. This decrease of approximately $3,378,000 is the result of reduced project spending due to a decrease in available funds for the project during 2012, 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 2012, we not only received our NRC combination construction and operating license, but we also made excellent progress on additional planning for the de-conversion project. Having completed our FEP test program during 2012, we expect to complete the shutdown of the FEP pilot scale facility during 2013 and do not anticipate any revenue from the sale of fluoride products in the coming year.

Transportation

Revenues from our Transportation segment accounted for approximately 3% of our total revenues in 2012 and 2011. Sales in this segment decreased by approximately 21% to $227,932 in 2012, as compared to $286,923 in 2011. This decline in revenue was attributable to reduced opportunities for transportation contracting during the period. The decline in our cobalt products segment directly affects revenues in our transportation segment since we use our specially trained drivers to transport our products, such as teletherapy sources, as well as in the transportation of shipping containers such as the type B(U) casks. As revenues for our cobalt products and radiological services segments regain strength through cask sales and field service work, we anticipate that our transportation segment revenues will grow as well. 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 2012 was $4,970,033, as compared to $6,045,471 in 2011, a decrease of $1,075,438 or approximately 18%. Gross profit percentage decreased to 35% for 2012, from 36% in 2011. The slight decrease in gross profit can be attributed to incremental increases in the cost of manufacturing materials including increases in freight costs. The following table presents sales and cost of sales information:

	For the year ended December 31, 2012	% of Total Sales 2012	For the year ended December 31, 2011	% of Total Sales 2011
Total Sales	$ 7,621,934		$ 9,462,012	
Cost of Sales				
Radiochemical Products	$ 1,414,484	18%	$ 1,520,891	16%
Cobalt Products	436,268	6%	989,759	10%
Nuclear Medicine Standards	2,948,675	39%	3,390,893	36%
Radiological Services	80,224	1%	72,663	1%
Flourine Products	-	-	-	-
Transportation	90,383	1%	71,267	1%
Total Segments	$ 4,970,033	65%	$ 6,045,471	64%
Gross Profit	$ 2,651,901		$ 3,416,541	
Gross Profit %	35%		36%	

During 2012, 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 also made adjustments to sales prices and reduced distributor discounts to increase revenue. We will continue to monitor these costs and make further adjustments as necessary to maintain product margins.

Operating Costs and Expenses

Total operating costs and expenses for 2012 were $4,835,351, as compared to $6,786,991 in 2011; this is a decrease of $1,951,640 or approximately 29%.

The following table presents Operating Costs and Expenses for 2012 as compared to 2011:

	For the year Ended December 31, 2012	For the year Ended December 31, 2011	% change
Operating Costs and Expenses:			
Salaries and Contract Labor	$ 1,899,225	$ 3,059,814	-38%
General, Administrative and Consulting	1,946,105	2,031,862	-4%
Research and Development	990,021	1,695,315	-42%
Total operating expenses	$ 4,835,351	$ 6,786,991	-29%

Salaries and Contract Labor decreased 38% in 2012, as compared to 2011. Salaries and Contract Labor included approximately $286,000 in equity-based compensation in 2012, as compared to approximately $1,400,000 in 2011. This decrease was the result of recording a significant amount of non-cash, equity based compensation expense in 2011 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. Equity-based compensation recorded during 2012 was based on 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, 2012 and 2011. General, Administrative and Consulting expenses decreased 4% to $1,946,105 in 2012, as compared to $2,031,862 in 2011. During 2011, we incurred additional consulting and training expenses to enhance and develop our quality assurance program and to address FDA comments with regard to our radiochemical product production processes. These costs decreased in 2012 as corrective actions were fully implemented.

Research and development expense was $990,021 for 2012 as compared to $1,695,315 for 2011. This is a decrease of $705,294, or approximately 42%. The majority of research and development expense, reported in both 2012 and 2011, was incurred for planning and licensing activities with regard to the planned de-conversion facility. During 2012, funding specifically for this project was limited; consequently, we limited some of the additional investment in the project.

Other Income (Expense)

Other Income (Expense) in 2012 was ($98,649) compared to ($2,656,472) in 2011.

	For the year	For the year

	ended December 31, 2012	ended December 31, 2011
Other income (expense)	$ 49,982	$ 6,339
Equity in net income of affiliate	54,463	141,642
Interest income	502	4,724
Interest expense	(203,596)	(2,809,177)
Total other (expense)	$ (98,649)	$ (2,656,472)

Other income was $49,982 for 2012 as compared to $6,339 for 2011. This increase of $43,643 was in large part due to the net effect of a non-operating cost reimbursement project that was completed during 2012, whereas in 2011, there was no such project. Equity in net income of affiliate reported reflects the Company s 24.5% share of net income reported by RadQual, LLC. Interest income reported in 2012 was $502, as compared to $4,724 reported in 2011. This decrease of $4,222, or approximately 89%, is due to a decrease in funds held at banks, and other institutions, in interest bearing accounts. Interest expense decreased significantly during 2012, from $2,809,177 in 2011, to $203,596 in 2012. This is a decrease of $2,605,581, or approximately 92%. This decrease is largely due to non-cash interest expense recorded in 2011 for convertible debentures which matured in August 2011.

Net Loss

Our Net Loss was $2,240,810 in 2012, compared to a Net Loss of $5,950,438 in 2011. The decrease in net loss of $3,709,628, or approximately 62%, was the result of the decrease in research and development expense related to the proposed de-conversion facility and the decrease in interest expense recorded during 2012 as compared to 2011.

Liquidity and Capital Resources

On December 31, 2012, we had cash and cash equivalents of $546,143 compared to $2,102,696 at December 31, 2011, and cash used in operating activities was $2,734,752.

The decrease of cash and cash equivalents of $1,556,553 (difference off balance sheet, CCE) is primarily due to the use of cash for expenses related to the licensing, planning, and engineering of the planned de-conversion facility during 2012.

Accounts receivable at December 31, 2012 were $861,790 as compared to $803,350 at December 31, 2011.

Inventories at December 31, 2012 were $1,284,561 as compared to $1,465,293 at December 31, 2011. 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. It is not certain at the present time whether the INL contractor will permit the continued irradiation of this material. Should the INL contractor determine that continued irradiation of the material will not be allowed we will attempt to sell or salvage this material and would have to write down a significant percentage of the inventory value carried for the targets. A final decision on the fate of these targets is expected before mid-2013.

We incurred a loss of $2,240,810 for the year ended December 31, 2012, and have an accumulated deficit of $114,235,302 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 $1,526,252 for 2012. We used $1,835,313 to purchase property and equipment and intangible assets. We received member distributions from our investment in RadQual, LLC, in the amount of $83,352 and also received proceeds from the maturity of a restricted certificate of deposit in the amount of $225,709.

Financing activities provided cash of $2,704,451 for the year ended December 31, 2012. We received proceeds from the issuance of convertible debentures in the amount of $2,969,900 and proceeds from the sale of stock in the amount of $62,910.

In March 2012, the Company renegotiated the terms of a $500,000 unsecured note payable to its 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 an amendment to the loan, the maturity date was extended from April 1, 2012 to November 1, 2012, and accrued interest in the amount of $35,000 was paid in cash on March 30, 2012. Additionally, 204,167 shares of the Company s common stock were issued on April 1, 2012 to the former Chairman 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 the Company s common stock of $0.20 per share on March 23, 2012. On July 26, 2012, as part of a private placement transaction, the former Chairman of the Board converted $100,000 of this $500,000 note due from the Company as consideration for purchase of convertible debentures in the offering, thereby reducing the amount due from the Company under the original note to $400,000. In October 2012, the Company renegotiated the remaining $400,000 unsecured note payable which was to mature in full on November 1, 2012, and the terms of the note were further modified. Pursuant to the terms of the modification, the Company made a $200,000 principal payment on October 29, 2012. Starting on November 1, 2012, interest shall accrue on the remaining principal balance at an annual rate of 5% and the remaining principal payments were to be made in $100,000 installments on December 1, 2012 and January 1, 2013. In November 2012, the note was further modified to state that the remaining $100,000 installments would be made on January 1, 2013 and February 1, 2013. Subsequently, in January 2013, the note was again modified making the final $100,000 payment plus accrued interest due in March 2013.

We expect that cash from operations, cash obtained through equity offerings, and our current cash balance will be sufficient to fund operations for the next twelve months. And, although 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.

On July 27, 2012, we entered into a securities purchase agreement with certain institutional and private investors pursuant to which we sold convertible debentures for an aggregate of $3,069,900. The debentures bear interest at 8%, mature July 2017 and are unsecured. These debentures are convertible at any time into shares of our common stock at an initial conversion price of $0.225 per share, subject to adjustment in certain conditions. Under certain conditions, we may force the conversion of the debentures any time following the one year anniversary of the closing date. In addition, from and after the second anniversary of the closing date, we have the right to redeem all or part of the debenture at any time prior to their maturity date. Notwithstanding the foregoing, we also have the right prior to the second anniversary of the issuance of the debentures to redeem all or part of the debenture if, but only if, we successfully consummate a financing of the proposed Hobbs, New Mexico de-conversion facility in the amount of at least $25 million. Any redemption of the debentures by us requires the payment of a redemption fee as set forth in the debentures. Each investor also received a common stock purchase warrant to purchase such number of shares of our common stock equal to twenty five percent (25%) of the number of shares of common stock that the note purchased by such investor may be convertible into on the closing date. The total Warrants to be issued is 4,502,520. The Warrants are immediately exercisable at a price of $0.30 per share and have a term of five years. The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free rate of .650%, expected dividend yield of 0%, expected volatility of 88%, and an expected life of 5 years.

On February 20, 2013, we entered into a securities purchase agreement with certain private investors pursuant to which we sold convertible debentures for an aggregate of $1,060,000. The debentures accrue interest at a rate of 10% per annum, compounded annually. The conversion price in effect for these debentures, on any conversion date, is equal to the lesser of $0.14 or the average closing price of our common stock for the 120 consecutive trading days up to, but not including, the maturity date. If at any time prior to the maturity date, the volume weighted average price of our common stock exceeds $0.50 per share over any consecutive thirty trading days then the Company is required to convert the debentures. At the maturity date all of the outstanding principal of the debentures as well as the accrued interest will be converted into shares of common stock. The fair market value of the Company s common stock was $0.15 per share on the date of the agreement. Consequently, the difference between the anticipated conversion price of $0.14 and the closing price of $0.15, multiplied by the number of issuable common shares upon conversion, will be recorded as a beneficial conversion feature with an increase to equity and a debt discount in the amount of $75,715. This amount will be accreted to interest expense through February 20, 2015.

Off-Balance Sheet Arrangements

As of December 31, 2012 and 2011, we had no off-balance sheet arrangements or obligations.

New Accounting Standards

None.

Outlook for 2013

Based upon the investments we have made in our facilities, projects, and products developed in 2012, we have the following goals for 2013:

.

Continue the New Mexico groundwater permitting activities for the planned uranium de-conversion and processing facility;

.

Complete financing arrangements on the planned depleted uranium facility, complete detailed design and break ground on construction of the project.

.

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

.

Successfully resume cobalt production and source sales though existing agreements and international sales, and identify additional back-up sources of supply;

.

Increase the revenue within the Radiological Services segment by utilizing the NRC license for additional field service activities;

.

Continue to 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);

.

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

.

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

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, therefore, are 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, 2012. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2012.

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Annual 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, 2012.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2012, that have materially affected, or are reasonable likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

In October 2012, we renegotiated the remaining $400,000 principal balance on an unsecured note payable to our former Chairman of the Board. Pursuant to the terms of the modification to the note, we made a $200,000 principal payment on October 29, 2012. Starting on November 1, 2012, interest began to accrue on the remaining principal balance at an annual rate of 5% and the remaining principal payments were to be made in $100,000 installments on December 1, 2012 and January 1, 2013. In November 2012, the note was further modified to state that the remaining $100,000 installments would be made on January 1, 2013 and February 1, 2013. Subsequently, in January 2013, we renegotiated the remaining $100,000 principal balance of the note. Per the modified agreement, the remaining $100,000 principal would continue to accrue interest at a rate of 5% until March 2013. All accrued principal and accrued interest was paid in full in March 2013.

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. If we waive, or implicitly waive, any material provision of the Code of Ethics that apply to our executive officers, or substantively amend the Code of Ethics, we will disclose that fact on our website.

The other information required by this item is incorporated by reference in our definitive proxy statement for our 2013 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2012.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to our definitive proxy statement for our 2013 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2012.

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 Inc. 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, 2012:

Equity Compensation Plan Information
December 31, 2012

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:	13,585,000	$ 0.21	13,997,495[(1)]
Equity compensation plans not approved by shareholders	-	-	-
Total	13,585,000	$ 0.21	13,997,495

(1)

Includes 12,735,908 shares available for issuance under the 2006 Equity Incentive Plan and 1,261,587 shares available for issuance under the International Isotopes Inc. Employee Stock Purchase Plan. Up to 2,000,000 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 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 2013 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2012.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to our definitive proxy statement for our 2013 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2012.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference to our definitive proxy statement for our 2013 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2012.

Item 15. EXHIBITS, 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 herein by reference.

(a)(3) Exhibits

The following documents are filed or incorporated herein 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).

2.8

Securities Purchase Agreement, dated July 27, 2012, among the Company, the purchasers named therein and Euro Pacific Capital, Inc. (incorporated by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on August 2, 2012).

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).

4.7

Form of 8% Convertible Note (incorporated by reference to Exhibit 99.2 of the Company s Current Report on Form 8-K filed on August 2, 2012).

4.8

Form of Class K Warrant (incorporated by reference to Exhibit 99.3 of the Company s Current Report on Form 8-K filed on August 2, 2012).

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 Inc. 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, dated April 1, 20002, issued to William Nicholson (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

Modification #1 to Unsecured Note Agreement between the Company and William Nicholson (incorporated by referenced to Exhibit 10.1 of the Company s Quarterly Report on Form 10-Q for the quarter ended March 31, 2012).

10.10

Modification #2 to Unsecured Note Agreement between the Company and William Nicholson (incorporated by referenced to Exhibit 10.1 of the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012).

10.11

Modification #3 to Unsecured Note Agreement between the Company and William Nicholson (incorporated by referenced to Exhibit 10.1 of the Company s Quarterly Report on Form 10-Q for the quarter ended September 30, 2012).

10.12+

Modification #4 to Unsecured Note Agreement between the Company and William Nicholson.

10.13

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).

10.14

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).

10.15

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).

10.16

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).

10.17

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).

10.18

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).

10.19

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).

10.20

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).**

10.21

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).**

10.22

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).**

10.23

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).

10.24

Isotope and Technical Services Order Form, dated December 23, 2011, between the Company and the U.S. Department of Energy (incorporated by reference to Exhibit 10.23 of the Company s Annual Report on Form 10-K for the year ended December 31, 2011).**

10.25

Registration Rights Agreement, dated July 27, 2012, among the Company and the purchasers named therein (incorporated by reference to Exhibit 99.4 of the Company s Current Report on Form 8-K filed on August 2, 2012).

10.26

Amended and Restated Employment Agreement, dated May 16, 2012, between the Company and Steve Laflin (incorporated by reference to Exhibit 10.2 of the Company s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012).

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

31.2+

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

32.1*

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

32.2*

Certification of Chief Financial Officer 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, 2012 and 2011, (ii) Consolidated Statements of Operations for the years ended December 31, 2012 and 2011, (iii) Consolidated Statement of Shareholders Equity for the years ended December 31, 2012 and 2011, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2012 and 2011 and (v) Notes to Consolidated Financial Statements. 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, 2013

Pursuant to the requirements 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, 2013	By: /s/ Steve T. Laflin Steve T. Laflin President, Chief Executive Officer, and Director
March 28, 2013	By: /s/ Laurie McKenzie-Carter Laurie McKenzie Carter Chief Financial Officer, Secretary
March 28, 2013	By: /s/ Christopher Grosso Christopher Grosso Director
March 28, 2013	By: /s/ Ralph Richart Ralph Richart Chairman of the Board of Directors

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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 , and the related consolidated statements of operations, stockholders equity, and cash flows for the years then ended. International Isotopes, Inc. s management is responsible for these financial statements. 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 , and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ **HANSEN, BARNETT & MAXWELL P.C.**

Salt Lake City, Utah

March 28, 2013

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

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

Consolidated Balance Sheets

	December 31, 2012	December 31, 2011
Assets		
Current assets		
Cash and cash equivalents	$ 546,143	$ 2,102,696
Accounts receivable	861,790	803,350
Inventories (Note 4)	1,284,561	1,465,293
Prepaids and other current assets	751,417	127,006
Total current assets	3,443,911	4,498,345
Long-term assets		
Restricted certificate of deposit	203,177	428,886
Property, plant and equipment, net (Note 5)	2,323,262	1,967,154
Capitalized lease disposal costs, net (Note 12)	102,499	113,503
Investment (Note 3)	1,393,866	1,422,755
Patents and other intangibles, net (Note 6)	4,575,190	3,500,162
Total long-term assets	8,597,994	7,432,460
Total assets	$ 12,041,905	$ 11,930,805
Liabilities and Stockholders Equity		
Current liabilities		
Accounts payable	$ 1,328,631	$ 1,833,843
Accrued liabilities	465,020	804,788
Current installments of notes payable (Note 7)	100,000	528,359
Total current liabilities	1,893,651	3,166,990
Long-term liabilities		
Convertible debt	2,711,235	-
Obligation for lease disposal costs (Note 12)	523,238	483,391
Mandatorily redeemable convertible preferred stock (Note 9)	850,000	850,000
Total long-term liabilities	4,084,473	1,333,391
Total liabilities	5,978,124	4,500,381
Stockholders equity (Note 9)		
Common stock, $0.01 par value; 750,000,000 shares authorized; 360,259,221 and 357,202,750 shares issued and outstanding respectively	3,602,597	3,572,024
Additional paid-in capital	116,604,260	115,719,376
Accumulated deficit	(114,235,302)	(111,994,492)
Equity attributable to International Isotopes Inc. stockholders	5,971,555	7,296,908
Equity attributable to noncontrolling interest	92,226	133,516

Total equity	6,063,781	7,430,424
Total liabilities and stockholders equity	$ 12,041,905	$ 11,930,805

See accompanying notes to consolidated financial statements.

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

Consolidated Statements of Operations

	Years ended December 31,	
	2012	**2011**
Sale of product	$ 7,621,934	$ 9,462,012
Cost of product	4,970,033	6,045,471
Gross profit	2,651,901	3,416,541
Operating costs and expenses:		
Salaries and contract labor	1,899,225	3,059,814
General, administrative and consulting	1,946,105	2,031,862
Research and development	990,021	1,695,315
Total operating expenses	4,835,351	6,786,991
Operating loss	(2,183,450)	(3,370,450)
Other income (expense):		
Other income	49,982	6,339
Equity in net income of affiliate	54,463	141,642
Interest income	502	4,724
Interest expense	(203,596)	(2,809,177)
Total other (expense)	(98,649)	(2,656,472)
Net loss	(2,282,099)	(6,026,922)
Loss attributable to noncontrolling interest	(41,289)	(76,484)
Net loss attributable to International Isotopes Inc.	$ (2,240,810)	$ (5,950,438)
Net loss per common share basic and diluted	$ (0.01)	$ (0.02)
Weighted average common shares outstanding - basic and diluted	359,893,961	334,651,426

See accompanying notes to consolidated financial statements.

INTERNATIONAL ISOTOPES INC AND SUBSIDIARIES

Consolidated Statement of Stockholders' Equity

Years ended December 31, 2012 and 2011

	Common Stock		Additional		Equity Attributable to Internat'l	Equity Attributable to	
	Shares	Amount	Paid-in Capital	Accumulated Deficit	Isotopes Shareholders	Noncontrolling Interest	Total Equity
Balance December 31, 2010	323,032,866	$ 3,230,328	$ 107,462,007	$ (106,044,054)	$ 4,648,281	$ 190,000	$ 4,838,281
Shares issued under employee stock purchase plan	87,323	873	11,324	-	12,197	-	12,197
Shares issued for exercise of employee stock options	536,720	5,366	(5,366)	-	-	-	-
Convertible debentures beneficial conversion feature	-	-	2,372,143	-	2,372,143	-	2,372,143
Automatic conversion of convertible debentures	18,108,340	181,083	3,078,417	-	3,259,500	-	3,259,500
Shares issued for exercise of warrants	15,437,501	154,375	1,389,375	-	1,543,750	-	1,543,750
	-	-	1,411,476	-	1,411,476	-	1,411,476

Stock based compensation							
Additional investment in TI Services, LLC by noncontrolling interest	-	-	-	-	-	20,000	20,000
Net loss	-	-	-	(5,950,438)	(5,950,438)	(76,484)	(6,026,922)
Balance December 31, 2011	357,202,750	3,572,024	115,719,376	(111,994,492)	7,296,908	133,516	7,430,424
Shares issued under employee stock purchase plan	119,227	1,201	11,710	-	12,911	-	12,911
Shares issued for exercise of employee stock options	2,685,457	26,854	23,146	-	50,000	-	50,000
Shares issued for conversion of shareholder note	204,167	2,042	38,792	-	40,834	-	40,834
Stock grant	47,620	476	(476)	-	-	-	-
Convertible debentures beneficial conversion feature	-	-	25,656	-	25,656	-	25,656
Warrants issued with convertible debentures	-	-	500,041	-	500,041	-	500,041
Stock based compensation	-	-	286,015	-	286,015		286,015
Net loss	-	-	-	(2,240,810)	(2,240,810)	(41,289)	(2,282,099)
Balance December 31, 2012	360,259,221	$ 3,602,597	$ 116,604,260	$ (114,235,302)	$ 5,971,555	$ 92,226	$ 6,063,781

See accompanying notes to consolidated financial statements.

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

	Years ended December 31, 2012	2011
Cash flows from operating activities:		
Net loss	$ (2,282,099)	$ (6,026,922)
Adjustments to reconcile net loss to net cash used in operating activities:		
Net income in equity method investment	(54,463)	(141,642)
Depreciation and amortization	415,181	392,992
(Gain)/Loss on disposal of property, plant and equipment	-	(5,926)
Accretion of obligation for lease disposal costs	39,847	36,813
Accretion of beneficial conversion feature	33,747	2,665,006
Equity based compensation	286,015	1,411,476
Noncash interest expense	40,834	-
Changes in operating assets and liabilities:		
Accounts receivable	(58,440)	40,908
Prepaids and other current assets	(491,126)	(4,990)
Inventories	180,732	216,547
Accounts payable and accrued liabilities	(844,980)	1,482,657
Net cash (used in) provided by operating activities	(2,734,752)	66,919
Cash flows from investing activities:		
Restricted certificate of deposit	225,709	(521)
Due from related party	-	87,500
Dividends received from equity method investment	83,352	84,738
Proceeds from sale of property, plant and equipment	-	21,281
Purchase of property, plant and equipment	(1,835,313)	(3,528,707)
Net cash used in investing activities	(1,526,252)	(3,335,709)
Cash flows from financing activities:		
Proceeds from contribution by non-controlling interests	-	20,000
Proceeds from issuance of convertible debentures	2,969,900	-
Proceeds from issuance of debt	-	45,000
Proceeds from exercise of warrants	-	1,543,750
Proceeds from sale of stock and warrants	62,910	12,197
Principal payments on notes payable and capital leases	(328,359)	(486,764)
Net cash provided by financing activities	2,704,451	1,134,183
Net change in cash and cash equivalents	(1,556,553)	(2,134,607)
Cash and cash equivalents at beginning of year	2,102,696	4,237,303
Cash and cash equivalents at end of year	$ 546,143	$ 2,102,696
Supplemental disclosure of cash flow activities:		
Cash paid for interest	$ 288,017	$ 65,152
Supplemental disclosure of noncash financing and investing transactions:		

Increase in equity and decrease in debt for the beneficial conversion feature associated with the convertible debentures	$ 25,656	$ 2,372,143
Increase in equity for the conversion of the convertible debentures of $3,075,000 and accrued interest of $184,500	$ -	$ 3,259,500
Increase in equity and prepaid interest for stock issuance in lieu of interest on note	$ 40,834	$ -
Increase in equity and decrease in debt for amount allocated to warrants issued with convertible debentures	$ 366,756	$ -
Increase in equity and prepaids for fees paid in connection with the issuance of the convertible debentures	$ 133,285	$ -
Partial settlement of note payable through conversion to convertible debentures	$ 100,000	$ -

See accompanying notes to consolidated financial statements.

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE 1 DESCRIPTION OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

Description of business

International Isotopes Inc. (the Company) was incorporated in Texas in November 1995. The accompanying consolidated financial statements are presented in conformity with accounting principles generally accepted in the United States of America (GAAP) and include all operations and balances of the Company and its wholly owned subsidiaries, International Isotopes Idaho Inc., International Isotopes Fluorine Products, Inc., and International Isotopes Transportation Services, Inc. The consolidated financial statements also include the accounts of the Company s 50% owned joint venture, TI Services, LLC, which is located in Ohio. Intercompany balances and transactions have been eliminated in consolidation. The Company s headquarters and all operations, with the exception of TI Services, LLC, are located in Idaho Falls, Idaho.

Nature of operations The Company s business consists of six major business segments which include: Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, Radiological Services, and Transportation.

With the exception of certain unique products, the Company s normal operating cycle is considered to be one year. Due to the time required to produce some cobalt products, the Company s operating cycle for those products is considered to be three years. All assets expected to be realized in cash or sold during the normal operating cycle of the business are classified as current assets.

Principles of consolidation The consolidated financial statements include the accounts of the Company, its wholly owned subsidiaries and its 50% owned joint venture, TI Services, LLC. All significant intercompany accounts and transactions have been eliminated in consolidation.

Significant accounting policies

a)

Financial instruments and cash equivalents

The carrying value of notes payable approximates fair value because they bear interest at rates which approximate market rates.

Cash and cash equivalents, totaling $546,143and $2,102,696 at December 31, 2012 and 2011, respectively, consist of operating accounts, money market accounts, and certificates of deposit. For purposes of the consolidated statements of cash flows, the Company considers all highly-liquid financial instruments with original maturities of three months or less at date of purchase to be cash equivalents.

At December 31, 2012 and 2011, the Company had pledged certificates of deposit valued at $203,177 and $428,886, respectively, as security on letters of credit. The letters of credit are required as part of the operating license agreement with the Nuclear Regulatory Commission (NRC). Previously, the Company maintained an irrevocable, automatically renewable letter of credit against a Certificate of Deposit to provide the financial assurance required by the NRC for the operating license. However, in April 2012, that letter of credit was replaced by a surety bond naming the NRC as beneficiary. The surety bond renews annually and requires a letter of credit against a certificate of deposit at Wells Fargo bank in the amount of 50% of the face value of the surety bond. In April 2012, the Company placed $203,177 into a certificate of deposit for this purpose. At December 31, 2012, restricted cash consisted of the new certificate of deposit in the amount of $203,177.

b)

Accounts receivable

The Company sells products mainly to recurring customers, wherein the customer s ability to pay has previously been evaluated. The Company generally does not require collateral. The Company periodically reviews accounts receivable for amounts considered uncollectible. Allowances are provided for uncollectible accounts when deemed necessary. At December 31, 2012 and 2011, the Company recorded no allowance for uncollectible accounts.

c)

Inventories

Inventories are carried at the lower of cost or market. Cost is determined using the first in, first out method. Work in progress inventory contains product that is undergoing irradiation. This irradiation process can take up to three years to reach high specific activity (HSA) levels.

d)

Property, plant and equipment

Depreciation on property, plant and equipment is computed using the straight-line method over the estimated useful life of the asset.

Leasehold improvements are amortized over the shorter of the life of the lease or the service life of the improvements. Maintenance, repairs, and renewals that neither materially add to the value of the property nor appreciably prolong its life are charged to expense as incurred. Gains or losses on dispositions of property and equipment are included in the results of operations.

e)

Patents and other intangibles

Patents and other intangibles are amortized using the straight-line method over their estimated useful lives and are evaluated for impairment at least annually or when events or circumstances arise that indicate the existence of

impairment. The Company evaluates the recoverability of identifiable intangible assets whenever events or changes in circumstances indicate that an intangible asset s carrying amount may not be recoverable. Such circumstances could include, but are not limited to (1) a significant decrease in the market value of an asset, (2) a significant adverse change in the extent or manner in which an asset is used, or (3) an accumulation of the costs significantly in excess of the amount originally expected for the acquisition of an asset. The Company measures the carrying amount of the asset against the estimated undiscounted future cash flows associated with it. Should the sum of the expected future cash flows be less than the carrying value of the asset being evaluated, an impairment loss would be recognized. The impairment loss would be calculated as the amount by which the carrying value of the asset exceeds its fair value. The evaluation of asset impairment requires the Company to make assumptions about future cash flows over the life of the asset being evaluated. These assumptions require significant judgment and actual results may differ from assumed and estimated amounts. During the years ended December 31, 2012 and 2011, the Company had no impairment losses related to intangible assets.

f)

Impairment of long-lived assets

Long-lived assets are reviewed for impairment annually, or when events or circumstances arise that indicate the existence of impairment, using the same evaluation process as described above for patents and other intangibles. Based on the evaluation, no impairment was considered necessary during the years ended December 31, 2012 and 2011, respectively.

g)

Income taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rate is recognized in income in the period that includes the enactment date.

h)

Use of estimates

Management of the Company has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period to prepare these consolidated financial statements in conformity with GAAP. Actual results could differ from those estimates.

i)

Revenue recognition

Revenue is recognized when products are shipped. No warranty coverage or right of return provisions are provided to customers.

During the fiscal year ending December 31, 2012, the Company had sales to one entity which represented more than 10% of its revenues. These sales are reported in the Radiochemical Products and Nuclear Medicine business segments. Sales to this customer accounted for approximately 45% and 38% of total revenues for the years ended December 31, 2012 and 2011, respectively. During the fiscal year ending December 31, 2011, the Company had sales to two different entities each of which represented more than 10% of its revenues. These sales were reported in the Radiochemical Products, Nuclear Medicine and Cobalt Products business segments. These two customers accounted for approximately 48% of revenues for the year ended December 31, 2011. At December 31, 2012 and 2011, 48% and 47% of accounts receivable, respectively, were from one of these customers due to their additional role as a distributor for the Company s radiochemical and nuclear medicine products. This customer accounted for 45% of total sales in 2012 and 38% of total sales in 2011. The loss of either customer may result in lower revenues and limit the cash available to grow the business and achieve profitability.

j)

Research and development costs

The Company had research and development expenses totaling $990,021 in 2012 and $1,695,315 in 2011. Beginning in 2011, the Company became reasonably certain that the NRC would issue the license for the planned de-conversion facility in New Mexico, and therefore began capitalizing costs associated with securing the license for the planned depleted uranium de-conversion and fluorine extraction processing facility.

k)

Share-based compensation

The Company accounts for issuances of share-based compensation to employees in accordance with GAAP which requires the recognition of the cost of employee services received in exchange for an award of equity instruments in the financial statements and is measured based on the grant date fair value of the award. Compensation expense is recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

For the years ended December 31, 2012 and 2011, the Company recognized share-based compensation expense of $286,015 and $1,411,476, respectively, related to stock options, warrants and unvested stock grants. This expense is included as part of salaries and contract labor on the accompanying statements of operations.

l)

Net loss per common share basic and diluted

Basic loss per share is computed on the basis of the weighted-average number of common shares outstanding during the year. Diluted loss per share is computed on the basis of the weighted-average number of common shares plus all potentially dilutive issuable common shares outstanding during the year.

At December 31, 2012 and 2011, the Company had the following common stock equivalents outstanding that were not included in the computation of diluted net loss per common share as their effect would have been anti-dilutive, thereby decreasing the net loss per common share:

	December 31,	
	2012	**2011**
Stock options	17,700,000	25,700,000
Warrants	38,059,303	33,556,783
Unvested stock awards issued under the 2006 Equity Incentive Plan	151,719	370,917
850 shares of Series B redeemable convertible preferred stock	425,000	425,000
	56,336,022	60,052,700

m)

Business segments and related information

GAAP establishes standards for the way public business enterprises are to report information about operating segments in annual financial statements and requires enterprises to report selected information about operating segments in interim financial reports issued to shareholders. It also establishes standards for related disclosure about products and services, geographic areas and major customers. The Company currently operates in six business segments.

NOTE 2 BUSINESS CONDITION AND LIQUIDITY

Business condition The Company has a history of recurring losses with an accumulated deficit of $114,235,302 at December 31, 2012, and a net loss of $2,240,810 for the year then ended. The Company s working capital, which includes inventory that will not be sold for up to three years, has increased by $218,905 from the prior year. The Company has used cash flows from operations of $2,734,752. During 2012, the Company sought to improve future

cash flows from operating activities through improving operating cost control measures, obtaining additional quality certifications to permit expanded sales of products, and raising capital. The Company s net loss was $2,240,810 in 2012, compared to a net loss of $5,950,438 in 2011. The decrease in loss of $3,709,628, or approximately 62%, was the result of capitalizing certain costs related to the planning, licensing, and construction of the proposed de-conversion facility rather than expensing them to research and development expense as well as a significant decrease in non-cash interest expense related to a convertible debenture that matured in 2012.

In 2004, the Company acquired seven patents for the Fluorine Extraction Process (FEP) and began the design and construction of an FEP pilot plant to produce a fluoride gas. The plant was completed to the extent required to conduct some initial production testing in early 2006. During the remainder of 2006 and 2007, the Company expanded the scale of production testing in order to define the operational parameters for regular commercial production and completed installation of additional ancillary equipment and systems. In 2008, the Company produced qualification samples of fluoride gas to provide to their prospective customer. This pilot plant has successfully demonstrated the technical viability of FEP and its ability to produce high purity fluoride gas, but, because of changing market conditions, is not producing that specific fluoride gas on a commercial scale at this time. From 2009 through 2012, the pilot plant was used to complete the testing program for the development of various fluoride gas analytical processes and testing certain key components for the planned uranium de-conversion and fluorine extraction processing facility. The Company expects to shut down the pilot facility in 2013 upon the conclusion of the testing.

Beginning in 2008, the Company started a major undertaking to construct the first commercial uranium de-conversion facility in the United States (U.S.). The Company believes this will provide an excellent commercial opportunity because there is one company operating and expanding a new uranium enrichment facility, and there are several other proposed new commercial enrichment facilities in various stages of licensing, design, or financing. Collectively, these new U.S. enrichment facilities will produce a large amount of depleted uranium hexafluoride that must be de-converted for disposal. In the process of de-conversion, the Company plans to use the FEP process to produce high value, high purity, fluoride gases.

In April 2010, the Company entered into an agreement with URENCO U.S.A. (UUSA), a wholly-owned subsidiary of URENCO, to provide depleted uranium de-conversion services for its enrichment facility located in Eunice, New Mexico. These services will begin once commercial operations of the Company s planned de-conversion facility, to be built in Lea County, near Hobbs, New Mexico, are underway. The term of the agreement extends through the first five years of the Company s operation of the planned uranium de-conversion facility. It will require significant capital and time to design, license, and construct such a uranium de-conversion facility before the Company can recognize revenue under this agreement.

In July 2011, the Company announced the selection of Parsons Corporation as the lead design-build contractor for the planned uranium de-conversion facility. The Company plans to execute a design and build contract with Parsons Corporation if and when it secures additional capital to further support the project.

In August 2011, the Company completed the acquisition of property for the planned uranium de-conversion facility with Lea County, New Mexico. The property is a 640 acre parcel that was offered to the Company as part of an incentives package prepared by the Economic Development Corporation of Lea County. Pursuant to a project participation agreement and an industrial revenue bond transaction, the property was transferred to the Company in accordance with the Local Economic Development Act of Lea County, New Mexico. Under the project participation agreement, the Company is required to commence construction on the facility no later than December 2014 and to substantially complete Phase 1 of the facility and have hired at least 75 persons by December 2015. If the Company fails to perform either of these obligations, and at the time of such failure has not secured financing for Phase 1 of the facility and expended at least $200,000 in costs of improvement of the property, then the Company must either re-convey the property to Lea County, New Mexico or purchase the property from Lea County in accordance with the project participation agreement. In accordance with ASC 360-10-Property, Plant and Equipment, the land was recorded at a zero basis representing the costs incurred by the Company for the acquisition. Should the Company not meet its obligations under the project participation agreement, and therefore decide to purchase the land, the Company would adjust the carrying value of the land to include the costs paid to Lea County to keep the land.

In March 2012, the Company commenced sales of radioactive material transportation containers through an exclusive worldwide distributor agreement with Alpha Omega Services Inc. (AOS), of Bellflower, California, signed in August 2007. AOS and the Company had been awaiting Nuclear Regulatory Commission (NRC) approval as well as the NRC Certificate of Compliance for the containers in order to begin marketing efforts. The series of AOS model containers will address a wide range of needs for the transportation of radioactive materials and provide the Company with some expanded business opportunities in the Radiological Services and Cobalt Products segments.

In April 2012, the Company received the air permit from the New Mexico Environment Department for the proposed depleted uranium de-conversion facility. Although other state permits are required prior to the commencement of operations, the air permit will allow the Company to start construction on its planned project.

In October 2012, the NRC issued a Part 40 combined construction and operating license for the Company s planned depleted uranium de-conversion and fluorine extraction processing facility. The Company originally submitted its license application to the NRC in December 2009, and the NRC had been reviewing the application since that time. The planned facility is a first-of-its-kind depleted uranium de-conversion facility and the first source material facility to implement full-integrated safety analysis, consistent with requirements of Part 70, Subpart H of NRC regulations. The facility is the first source material facility to be licensed by the NRC for a forty-year license term.

The Company intends to continue to explore opportunities to raise funds to support the engineering, construction, and start-up of the planned uranium de-conversion facility through debt financing, equity offerings, or other means over the next year.

NOTE 3 PURCHASED ASSET AND INVESTMENTS

Interest in RadQual, LLC

The Company owns a 24.5% interest in RadQual, LLC (RadQual), with which the Company has an exclusive manufacturing agreement for nuclear medicine products. The 24.5% ownership of RadQual has a balance of $1,393,866 and is reported as an asset at December 31, 2012. For the year ended December 31, 2012, member distributions from RadQual totaled $83,352 and were recorded as a reduction of the investment, and for the same period in 2011, member distributions totaled $84,738. For the years ended December 31, 2012 and 2011, earnings allocated to the Company from RadQual totaled $54,463 and $141,642, respectively. These allocated earnings were recorded as equity in net income of affiliate on the Company s consolidated statements of operations.

At December 31, 2012 and 2011, the Company had receivables from RadQual in the amount of $417,543 and $374,174, respectively, which are recorded as part of accounts receivable on the Company s condensed consolidated balance sheets. For the years ended December 31, 2012 and 2011, the Company had revenues from RadQual in the amount of $3,157,361 and $3,593,132, respectively, which are recorded as sale of product on the Company s consolidated statements of operations.

Acquisition of interest in TI Services, LLC

During December 2010, the Company together with RadQual, formed a 50% owned joint venture called TI Services, LLC. TI Services, LLC was formed to acquire the assets of Technology Imaging Services, Inc. which were held by a bank as collateral under a defaulted loan. TI Services, LLC is engaged in the distribution and selling of products related to the nuclear medicine industry. Because the Company controls more than a 50% direct and indirect ownership interest in TI Services, LLC, the assets and liabilities of TI Services, LLC are consolidated with those of the Company, and RadQual s non-controlling interest in TI Services, LLC is included in the Company s financial statements as a non-controlling interest. During 2011, the Company and RadQual each made an additional $20,000 investment in TI Services, LLC. No additional investments were made during 2012.

NOTE 4 INVENTORIES

Inventories consisted of the following at December 31, 2012 and 2011:

	2012	2011
Raw materials	$ 247,914	$ 249,232
Work in progress	993,343	1,135,834
Finished goods	43,304	80,227
	$ 1,284,561	$ 1,465,293

Included in inventories are the various pellet holders and housings involved in target fabrication, raw cobalt, nickel and other raw elements, completed flood sources and irradiated cobalt and nuclear medicine related supplies and products.

Work in progress includes cobalt-60 isotopes that are located in the U.S. federal government s Advanced Test Reactor (ATR) located outside of Idaho Falls, Idaho. These isotopes are at various stages of irradiation. Some isotopes are near completion and others may require up to three years to complete. At December 31, 2012 and 2011, these isotopes had a carrying value of $830,137 and $717,352, respectively. This value is based on accumulated costs which are allocated based on the length of time isotopes remain in the reactor.

NOTE 5 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are summarized as follows at December 31, 2012 and 2011:

		2012		2011	Estimated Useful Lives
Furniture and fixtures	$	409,327	$	154,797	3 - 5 years
Transportation equipment		117,726		117,726	5 - 10 years
Plant and improvements		567,481		232,295	5 years
Production equipment		4,029,567		3,964,664	5 - 10 years
		5,124,101		4,469,482	
Accumulated depreciation		(2,800,839)		(2,502,328)	
	$	2,323,262	$	1,967,154	

Depreciation expense was $303,409 and $361,972 for the years ended December 31, 2012 and 2011, respectively.

NOTE 6 PATENTS AND OTHER INTANGIBLE ASSETS

The Company owns certain patents and patents pending related to a fluorine extraction process, patents for various uses of some fluoride gases as fluorinating agents, and patents for a container to transport radioactive materials. These patents were developed in an effort to expand the possible markets for the high purity fluoride gases the Company will produce with its fluorine extraction process. In 2010, the Company was granted an additional process patent on the FEP process and during 2011 the Company started the process to file for international protections of this patent in South Africa, Japan, Russia, China, Canada, and the European Union. During 2012, the Company was granted additional process patents for the FEP process. At the present time, the final value of this patent technology or the feasibility of expanding the fluoride gas markets through the use of this newly patented technology is uncertain.

In late 2010, management became reasonably certain that the NRC would issue the operating license for the planned de-conversion facility in New Mexico about mid-2012 and began in 2011 to capitalize certain costs associated with the licensing and planning process. Previous to 2011, these costs were included as part of research and development expense. During 2012 and 2011, the costs capitalized with regard to this facility totaled approximately $1,175,000 and $3,300,000, respectively. In October 2012, the NRC issued the Company a 40 year construction and operating license. The license will be amortized over its 40 year life.

The following table summarizes the patent and intangible activity for the years ended December 31, 2012 and 2011:

	2012	2011
Beginning	$ 3,657,481	$ 362,654
Additions	1,175,796	3,294,827
Ending	4,833,277	3,657,481
Accumulated amortization	(258,087)	(157,319)
	$ 4,575,190	$ 3,500,162

During the years ended December 31, 2012 and 2011, the Company recognized $100,768 and $23,410 of amortization expense, respectively.

Patent and other intangible asset amortization is based on the remaining life of the asset and estimated amortization expense is as follows:

Years ending December 31,	
2013	$ 119,648
2014	126,315
2015	126,315
2016	126,315
2017	126,315
Thereafter	3,950,282
	$ 4,575,190

NOTE 7 CONVERTIBLE DEBENTURES AND NOTES PAYABLE

Convertible debentures

In February 2010, the Company entered into a securities purchase agreement with certain institutional and private investors pursuant to which it sold convertible debentures for an aggregate of $3,075,000, which accrued a fixed sum of interest equal to 6% of the principal amount automatically upon issuance of the debenture. The conversion price in effect for these debentures, on any conversion date, was equal to $0.35 if conversion was at the election of the holder, or the lesser of $0.35 and the average closing price of the Company s common stock for the 120 consecutive trading days up to, but not including, the maturity date if automatically converted at the maturity date which was August 24, 2011, or the per share subscription price of any other equity securities issued by the Company for financing purposes subsequent to the original issue date of the debenture, in each case subject to certain adjustments. To the extent any of the debentures were outstanding as of the maturity date, and were automatically converted pursuant to the terms of the debentures, then investors holding such debentures would receive warrants to purchase the number of shares of common stock equal to one half of the number of shares of common stock issued upon automatic conversion of the debenture. The Company could prepay all or part of the principal without penalty provided interest is paid proportionately with the principal being prepaid. The fair market value of the Company s common stock was $0.43 per share on the date of the agreement. Consequently, the difference between the anticipated conversion price of $0.35 and the closing price of $0.43, multiplied by the number of issuable common shares upon conversion, was recorded as a beneficial conversion feature with an increase to equity and a debt discount in the amount of $702,857. This amount was accreted to interest expense through August 24, 2011.

On August 24, 2011, the maturity date of the convertible debentures pursuant to the terms of the Securities Purchase Agreement, the Company automatically converted the debentures into common stock and Class H warrants. The Securities Purchase Agreement required one Class H warrant to be issued for every two shares of common stock. A total of 18,108,340 shares of common stock and 9,054,175 Class H warrants were issued. The debentures were converted at the lesser of the average stock price for the prior 120 consecutive trading days or $0.18 per share. The Class H Warrants issued at the time of conversion have an exercise price of $0.22 and expire August 24, 2015. The Company recognized an additional charge against interest expense and additional paid in capital for $2,372,143 as a result of the conversion of the convertible debentures. The amount was the result of the additional shares that were

issued from the automatic conversion over those shares originally calculated.

On July 27, 2012, the Company entered into a securities purchase agreement with certain institutional and private investors pursuant to which it sold convertible debentures for an aggregate of $3,069,900. The debentures bear interest at 8%, mature July 2017 and are unsecured. These debentures are convertible at any time into shares of the Company's common stock at an initial conversion price of $0.225 per share, subject to adjustment in certain conditions. Under certain conditions, the Company may force the conversion of the debentures any time following the one year anniversary of the closing date. In addition, after the second anniversary of the closing date, the Company will have the right to redeem all or part of the debentures at any time prior to the maturity date. The Company also has the right prior to the second anniversary of the closing date to redeem all or part of the debentures if the Company successfully consummates a financing of the proposed Hobbs, New Mexico de-conversion facility in the amount of at least $25 million. Any redemption of the debentures by the Company requires the payment of a redemption fee as set forth in the debentures.

Each investor also received a common stock purchase warrant to purchase common stock equal to twenty five percent (25%) of the shares issuable upon conversion of the debentures. The Warrants are immediately exercisable at a price of $0.30 per share and have a term of five years.

In accordance with FASC 470-20, Accounting for Convertible Debt Instruments that May be Settled in Cash Upon Conversion, the Company allocated the proceeds to the debentures and warrants based on their relative fair value resulting in $2,703,144 being allocated to the debentures and $366,756 being allocated to the warrants. Subsequent to the allocation, the Company calculated a beneficial conversion feature of $25,656. The allocated warrant value and the beneficial conversion feature were recorded as debt discount and will be accreted to interest expense over the five-year life of the debentures.

In connection with this offering, the Company paid a fee and issued to the placement agent a warrant to purchase 1,091,520 shares of the Company s common stock. The placement warrant had a fair value of $133,285. The value of the placement warrant and the fees are recorded as offering costs and will be amortized to expense over the life of the debentures.

The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free interest rate of .65%, expected dividend yield of 0%, expected volatility of 88%, and an expected life of 5 years.

Notes payable

In June 2011, the Company entered into an agreement with a related party to obtain financing for certain equipment. The amount financed was $45,000, and included a security interest in the equipment financed and matured June 2012. The note was paid in full in 2012.

In March 2012, the Company renegotiated the terms of a $500,000 unsecured note payable to its 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 an amendment to the loan, the maturity date was extended from April 1, 2012 to November 1, 2012, and accrued interest in the amount of $35,000 was paid in cash on March 30, 2012. Additionally, 204,167 shares of the Company s common stock were issued on April 1, 2012 to the former Chairman 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 the Company s common stock of $0.20 per share on March 23, 2012. On July 27, 2012, as part of a private placement transaction, which is described above, the former Chairman of the Board, converted $100,000 of this $500,000 note due from the Company as consideration for purchase of convertible debentures in the offering, thereby reducing the amount due from the Company under the original note to $400,000. In October 2012, the Company renegotiated the remaining $400,000 unsecured note payable which was to mature in full on November 1, 2012, and the terms of the note were further modified. Pursuant to the terms of the modification, the Company made a $200,000 principal payment on October 29, 2012. Starting on November 1, 2012,

interest began to accrue on the remaining principal balance at an annual rate of 5% and the remaining principal payments were to be made in $100,000 installments on December 1, 2012 and January 1, 2013. In November 2012, the note was further modified to state that the remaining $100,000 installments would be made on January 1, 2013 and February 1, 2013. Subsequently, in January 2013, the Company renegotiated the remaining $100,000 of the note. Per the modified agreement, the remaining $100,000 principal will continue to accrue interest at a rate of 5% until March 2013. All principal and accrued interest was paid in full in March 2013.

Notes payable as of December 31, 2012 and 2011 consist of the following:

	2012	2011
Note payable to a related party bearing interest at 8.5%; monthly installments of $3,925, secured by a equipment.	$ -	$ 22,977
Note payable to a finance company bearing interest at 8.9%; monthly installments of $674, secured by a vehicle.	-	2,648
Note payable to a finance company bearing interest at 9.4%; monthly installments of $679, secured by a vehicle.	-	2,734
Note payable to the former chairman of the board, interest accrues at 5%; All principal and interest repaid March 2013; unsecured.	100,000	500,000
Total notes payable	100,000	528,359
Less: current maturities	(100,000)	(528,359)
Notes payable, excluding current installments	$ -	$ -

Maturities of notes payable obligations at December 31, 2012 are as follows:

Years ending December 31,	
2013	$ 100,000
Thereafter	-
	$ 100,000

NOTE 8 LEASE OBLIGATIONS

Operating leases

The Company leases office space under operating leases, one of which is a ten year lease which expires in 2021 and the second is renewed annually. Rental expense under such leases for the years ended December 31, 2012 and 2011was $193,222 and $192,486, respectively.

The following is a schedule by years of operating leases as of December 31, 2012:

Years ending December 31,	
2013	$ 155,180

2014	136,313
2015	136,313
2016	136,313
2017	136,313
Thereafter	454,376
	$ 1,154,808

NOTE 9 SHAREHOLDERS EQUITY, REDEEMABLE CONVERTIBLE PREFERRED STOCK, OPTIONS AND WARRANTS

Warrants

On March 25, 2011, the Company issued Series J Warrants to purchase a total of 13,333,331 shares of the Company s common stock at an exercise price of $0.43 per share. The Series J Warrants expired on September 25, 2011. The Series J Warrants were offered to the holders of the Series E Warrants that expired on March 20, 2011. The Company recognized compensation expense of $105,000 resulting from the valuation of the Series J Warrants. The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free rate of .18%, expected dividend yield of 0%, expected volatility of 111%, and an expected life of 184 days.

On August 24, 2011, in connection with the maturity of certain convertible debentures, the Company issued Series H Warrants to purchase a total of 9,054,175 shares of the Company s common stock. The Series H Warrants expire on August 24, 2015 and carry an exercise price of $0.22. The Series H Warrants were issued to the holders of the convertible debentures. The convertible debentures were convertible into one share of common stock and one warrant at the conversion price of $0.18 per share. The Company recognized compensation expense of $460,858 resulting from the valuation of the Series H Warrants. The fair value of the Series H Warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free rate of 0.01%, expected dividend yield of 0%, expected volatility of 76%, and an expected life of 4 years.

On September 8, 2011, in an effort to raise capital to support its ongoing planned uranium de-conversion project, the Company authorized an offer to its current warrant holders to encourage them to exercise outstanding warrants. The offer allowed holders of the Company s outstanding warrants to purchase the Company s common stock at a discounted warrant exercise price of $0.10 per share until close of business on September 30, 2011. The Company discounted the exercise price of (i) its Class F Warrants, which were issued on November 7, 2008, from $0.30 to $0.10, (ii) its Class G Warrants, which were issued on September 8, 2009 from $0.36 to $0.10, (iii) its Class H Warrants, which were issued August 24, 2011, from $0.22 to $0.10, (iv) its Class I Warrants, which were issued on October 29, 2010, from $0.40 to $0.10 and (v) its 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, the Company authorized the extension of the expiration date of its Class G Warrants from September 18, 2011 to September 30, 2011 and its Class J Warrants from September 25, 2011 to September 30, 2011. As a result of this offer, 15,437,501 warrants were exercised and the Company issued 15,437,501 shares of its common stock for proceeds of $1,543,750. The Company recognized compensation expense of $507,369 resulting from the valuation of the warrants involved in the offer. The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free rate of .01%, expected dividend yield of 0%, expected volatility of 87%, and an expected life of 22 days.

As disclosed in Note 7, on July 27, 2012, we entered into a securities purchase agreement with certain institutional and private investors. Each investor also received a common stock purchase warrant to purchase such number of shares of our common stock equal to twenty five percent (25%) of the number of shares of common stock that the note purchased by such investor may be convertible into on the closing date. The total possible number of Warrants to be issued is 4,502,520. The Warrants are immediately exercisable at a price of $0.30 per share and have a term of five years. The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free rate of .650%, expected dividend yield of 0%, expected volatility of 88%, and an expected life of 5 years.

The following table summarizes warrant activity for the years ended December 31, 2012 and 2011:

Warrants	**Outstanding Shares**	**Weighted Average Exercise**

		Price
Outstanding at December 31, 2010	56,552,970	$ 0.32
Granted	9,054,174	0.22
Exercised	(15,437,501)	0.10
Forfeited	(16,612,860)	0.36
Outstanding at December 31, 2011	33,556,783	0.25
Granted	4,502,520	0.30
Exercised	-	
Forfeited	-	
Outstanding at December 31, 2012	38,059,303	$ 0.26

Mandatorily Redeemable Convertible Preferred Stock

The Company is authorized to issue up to 5,000,000 shares of preferred stock, par value $0.01 per share. The Board of Directors is authorized to set the distinguishing characteristics of each series prior to issuance, including the granting of limited or full voting rights, rights to the payment of dividends and amounts payable in event of liquidation, dissolution or winding up of the Company.

At December 31, 2012, there were 850 shares of the Series B Preferred Stock outstanding with a mandatory redemption date of May 2022 at $1,000 per share or $850,000. The shares are also convertible into common stock at a conversion price of $2.00 per share. These preferred shares carry no dividend preferences. Due to the mandatory redemption provision, the Series B Preferred Stock has been classified as a liability in the accompanying balance sheets.

Employee Stock Purchase Plan

In September 2004, the Company s Board of Directors approved an employee stock purchase plan for an aggregate of up to 2,000,000 shares of the Company s common stock. The plan allows employees to deduct up to 15% of their payroll each pay period to be used for the purchase of common stock at a discounted rate. The common shares will be purchased at the end of each three-month offering period or other period as determined by the Board. The Plan is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code.

During 2012, and 2011, the Company issued 119,227 and 87,323 shares of common stock to employees for proceeds of $12,909 and $12,197, respectively, in accordance with the employee stock purchase plan.

Subsequent to December 31, 2012, the Company issued 21,394 shares of common stock for proceeds of $2,910 under this employee stock purchase plan.

2006 Equity Incentive Plan

In April 2006, the Company adopted the International Isotopes Inc. 2006 Equity Incentive Plan (the 2006 Plan). The 2006 Plan was approved by shareholders in July 2006. The 2006 Plan replaced the Company s 2002 Long-Term Incentive Plan (the Prior Plan).

The 2006 Plan permits the granting of any or all of the following types of awards: (1) incentive and nonqualified stock options, (2) stock appreciation rights, (3) stock awards, restricted stock and stock units, (4) performance shares and performance units conditioned upon meeting performance criteria, and (5) other stock or cash based awards.

The 2006 Plan authorizes the issuance of up to 20,000,000 shares of common stock, plus 1,350,000 shares issued but not subject to outstanding awards under the Prior Plan. There are also 13,000,000 shares granted and outstanding under the Prior Plan that could become available for issuance under the 2006 Plan. (For example, if they are forfeited or otherwise expire or terminate without the issuance of shares.) Unless earlier terminated, the 2006 Plan will terminate on July 12, 2016. At December 31, 2012 there were 7,164,301 shares available for issuance under this plan.

In September 2012, the Company issued 2,000,000 in nonqualified stock options to certain directors under the 2006 Equity Incentive Plan. The options have an exercise price of $0.17 per share and vest 25% on the first anniversary of the grant date with 25% vesting after each additional one-year period of continuous service. The options expire 10 years from the date of grant. The options had a fair value of $244,483 or $0.12 per share as estimated on the date of grant using the Black-Scholes options pricing model with the following weighted average assumptions: risk free interest rate of .83%, expected dividend yield rate of 0%, expected volatility of 85%, and an expected life of 6.25 years.

Non-Vested Stock Grants

Non-vested stock awards outstanding at December 31, 2012 and 2011, and changes during the same years were as follows:

Non-vested Stock Awards	2012	Weighted average grant date fair value	2011	Weighted average grant date fair value
Balance at beginning of year	$ 370,917	$ 0.18	$ 556,374	$ 0.18
Granted	-	-	-	-
Vested	(185,457)	0.18	(185,457)	0.18
Forfeited	(33,740)		-	
Non-vested shares at end of year	$ 151,720		$ 370,917	

The intrinsic value of stock awards vested during the years ended December 31, 2012 and 2011 was $25,964 and $44,510, respectively. The value of non-vested stock at December 31, 2012 is $24,275 and is based on a December 31, 2012 value of $0.16 per share. During the years ended December 31, 2012 and 2012, the Company recognized $5,278 and $25,445 of compensation expense respectively. As of December 31, 2012, there was approximately $283 of unamortized deferred compensation that will be recognized over a weighted average period of less than 1 year.

In January 2013, 151,720 shares vested and were issued.

Stock Options

A summary of the stock options issued under the Company s 2006 Plan is as follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding at December 31, 2010	26,700,000	$ 0.16		

Exercised	(1,000,000)		0.08		
Outstanding at December 31, 2011	25,700,000	$	0.17		
Granted	2,000,000		0.17		
Exercised	(2,500,000)		0.02		
Forfeited	(7,500,000)		0.02		
Outstanding at December 31, 2012	17,700,000	$	0.23	2.0	$ 580,000
Exercisable at December 31, 2012	13,585,000	$	0.23	2.0	$ 580,000

The total intrinsic value of stock options exercised in 2012 and 2011 was $470,000 and $76,000, respectively.

The total intrinsic value of stock options outstanding at December 31, 2012 was $580,000, all of which relates to options vested and exercisable. The intrinsic value for stock options outstanding is calculated as the amount by which the quoted price of $0.16 of our common stock as of the end of 2012 exceeds the exercise price of the options.

The Company recognized $270,737 and $311,728 of compensation expense for the years ended December 31, 2012 and 2011, respectively.

Pursuant to a board resolution on September 26, 2012, the Company re-priced 4,500,000 options which had an original exercise price of $0.32 per share and expire on May 4, 2019. The stock options were adjusted to an exercise price of $0.17 per share with the expiration date remaining May 4, 2019. An additional $61,972 of equity compensation was recognized in the current period and $10,164 will be recognized in future periods. The option re-price had a fair value of $72,136 as estimated on the date of re-pricing using the Black-Scholes options pricing model with the following weighted-average assumptions: risk free interest rate of 1.03%, expected dividend yield rate of 0%, expected volatility of 83.53%, and an expected life of 6.61 years.

All options exercised were issued under a qualified plan and accordingly, there is no income tax effect in the accompanying financial statements.

NOTE 10 INCOME TAXES

The Company paid no federal or state income taxes during 2012 and 2011. Income tax benefit on losses differed from the amounts computed by applying the U.S. federal income tax rate of 34% to pretax losses as a result of the following:

	2012	2011
Income tax benefit	$ (761,876)	$ (2,023,149)
Nondeductible expenses	129,843	6,922
State taxes net of federal benefit	(103,077)	(273,720)
Change in valuation allowance	735,110	2,289,947
Total income tax expense	$ -	$ -

The tax effects of temporary differences that give rise to significant portions of the Company s deferred tax assets (liabilities) as of December 31, 2012 and 2011 are presented below:

	2012	2011
Deferred income tax asset		
Net operating loss carryforward	$ 10,338,475	$ 9,577,483
Valuation allowance	(10,220,972)	(9,485,861)
Total deferred income tax asset	117,503	91,622
Deferred income tax liability - depreciation	(117,503)	(91,622)
Deferred tax asset (liability)	$ -	$ -

At December 31, 2012, the Company had net operating losses of approximately $26,400,000 that will begin to expire in 2023. The valuation allowances for 2012 and 2011 have been applied to offset the deferred tax assets in recognition of the uncertainty that such benefits will be realized.

In accordance with generally accepted accounting principles, the Company has analyzed its filing positions in all jurisdictions where it is required to file income tax returns for the open tax years in such jurisdictions. The Company has identified its federal income tax returns for the years ended December 31, 2009 through 2012 remain subject to examination. The Company s income tax returns in state income tax jurisdictions remain subject to examination for years ended December 31, 2009 through 2012. The Company currently believes that all significant filing positions are highly certain and that all of its significant income tax filing positions and deductions would be sustained upon audit. Therefore, the Company has no significant reserves for uncertain tax positions, and no adjustment to such reserves was required by generally accepted accounting principles. No interest or penalties have been levied against the Company and none are anticipated, therefore no interest or penalty has been included in the provision for income taxes in the consolidated statements of operations.

The Internal Revenue Code contains provisions which reduce or limit the availability and utilization of net operating loss carry forwards in the event of a more than 50% change in ownership. If such an ownership change occurs with the Company, the use of these net operating losses could be limited.

NOTE 11 COMMITMENTS AND CONTINGENCIES

Dependence on third parties

The production of HSA Cobalt is dependent upon the U.S. Department of Energy, and its prime operating contractor, which controls the reactor and laboratory operations. In January 2011, the Company was informed that the DOE intended to transfer the existing WFO agreement to the National Isotope Development Center (NIDC). In December 2011, the Company 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). Previously, the 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. Continued access to the Advanced Test Reactor for cobalt production continues to remain subject to the approval of BEA based upon the priorities of the experiments program. This change in contract approach by the DOE resulted in a significant increase in costs to the Company and impacted communication and coordination on production issues to the point of reducing sales in 2012. Furthermore, in June 2012, a leak of a cobalt target belonging to another commercial business resulted in the curtailment of all further cobalt handling and production activities at the ATR, pending completion of several corrective actions. The investigation into the leaking cobalt target identified three areas that needed corrective action, those areas were; (1) changes to cobalt target handling controls, (2) concerns with continued irradiation of in-process targets, and (3) enhancing the design of future cobalt targets. The Company is completing corrective actions for target handling and enhanced target design, and anticipates resuming the handling of cobalt targets approximately mid-2013. The Company also anticipates completing a new cobalt target design that will be used in the reactor and allow resumption of irradiation later in 2013. However, it is not certain that the INL contractor will permit continued irradiation of the in-process cobalt targets currently stored at the reactor site. The Company is discussing this issue with the INL contractor, and, if not resolved, the Company will not be able to resume irradiation of these targets and would be forced to write down the value of the Work in Process assigned to this material and sell or salvage these targets. Because cobalt takes approximately three years to produce, not being able to continue irradiation of these targets would cause about a three year gap in new cobalt production. To mitigate the impact of these delays and interruptions to the Company s cobalt production activities, caused by the NIDC and the cobalt target failure, the Company is investigating alternative sources of cobalt supply, evaluating possible sales of lower activity cobalt already in process, and identifying additional reactors for cobalt irradiation.

Nuclear Medicine Reference and Calibration Standard manufacturing is conducted under an exclusive contract with RadQual, LLC which in turn has an agreement in place with several companies for distributing the product. The majority of the radiochemical sold by the Company is provided through a supply agreement with a single entity. A loss of any of these customers or suppliers could adversely affect operating results by causing a delay in production or a possible loss of sales.

Contingencies

Because all of the Company s business segments involve radioactive materials, the Company is required to have an operating license from the Nuclear Regulatory Commission (NRC) and specially trained staff to handle these materials. The Company has an NRC operating license and has amended this license several times to increase the amount of material permitted within the facility. Additional processing capabilities and license amendments could be implemented that would permit processing of other reactor produced radioisotopes by the Company, but this license does not currently restrict the volume of business operation performed or projected to be performed in the coming year. Previously, the Company maintained an irrevocable, automatically renewable letter of credit against a Certificate of Deposit to provide the financial assurance required by the NRC for the operating license. However, in April 2012, that letter of credit was replaced by a surety bond naming the NRC as beneficiary. The surety bond renews annually and requires a letter of credit against a certificate of deposit in the amount of 50% of the face value of the surety bond. In April 2012, the Company placed $203,177 into a certificate of deposit for this purpose. At December 31, 2012, restricted cash consisted of the new certificate of deposit in the amount of $203,177.

Defined Contribution Pension Plan

The Company has a 401(k) defined-contribution pension plan (the Plan) for which employees are eligible after completing six months of full-time service. Participants, under provision of Internal Revenue Code § 401(k), may elect to contribute up to $17,000 of their compensation to the Plan which includes both before-tax and Roth after-tax contribution options. Although the Company reserves the right to make discretionary matching contributions to participant accounts, there were no employer matching contributions made for either 2012 or 2011. All amounts withheld for employee contributions were made during 2012. The employer reserves the right to terminate the Plan at any time.

NOTE 12 ASSET RETIREMENT OBLIGATION

As part of the Company s NRC operating license and as part of the Company s facility lease agreements, the Company is responsible for decommissioning the facilities upon termination or relocation of operations. The Company has developed a decommissioning funding plant using guidance provided by the NRC and estimated a cost to decommission the facility. The decommissioning cost estimate is reviewed at least annually to validate the assumptions and is revised as necessary when changes in the facility processes or radiological characteristics would affect the cost of decommissioning.

In accordance with generally accepted accounting principles, the Company has recognized the fair value of the decommissioning costs as an asset retirement obligation and a related capitalized lease disposal cost. The Company recognizes period-to-period changes in the liability resulting from the passage of time (accretion expense) and revisions to the original estimate resulting from changes in the facility processes or radiological characteristics. Changes resulting from the passage of time are recorded as interest expense in the statement of operations and changes resulting from revisions to the original estimate are recorded as an increase or decrease to the capitalized lease disposal cost. The capitalized lease disposal cost is amortized on a straight-line basis over the remaining life of the facility operating lease agreement.

The following summarizes the activity of the asset retirement obligation for the years ended December 31, 2012 and 2011:

	Obligation for Lease Disposal Cost	**Capitalized Lease Disposal Cost**
Balance at December 31, 2010	$ 446,578	$ 140,934
Increase in lease disposal costs	-	-
Accretion expense / Amortization expense	36,813	(27,431)

Balance at December 31, 2011		483,391		113,503
Increase in lease disposal costs		-		-
Accretion expense / Amortization expense		39,847		(11,004)
Balance at December 31, 2012	$	523,238	$	102,499

NOTE 13 FAIR VALUE MEASUREMENTS

At December 31, 2012 and 2011, the Company had no assets carried at fair value.

NOTE 14 SEGMENT INFORMATION

Information related to the Company s reportable operating business segments is shown below. The Company s reportable segments are reported in a manner consistent with the way management evaluates the businesses. The Company identifies its reportable business segments based on differences in products and services. The accounting policies of the business segments are the same as those described in the summary of significant accounting policies. The Company has identified the following business segments:

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Nuclear Medicine segment consists of the manufacturing of sources and standards associated with SPECT (Single Photon Emission Computed Tomography) imaging, patient positioning, and calibration or operational testing of dose measuring equipment for nuclear pharmacy and in 2012 and 2011 includes consolidated reporting of the Company s 50/50 joint venture, TI Services, LLC.

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Cobalt Products segment includes the production of high and medium specific activity bulk cobalt, recycling expended cobalt sources, and fabrication of a wide array of cobalt teletherapy and experimental irradiator source capsules.

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Radiochemical Products segment includes production of various isotopically pure radiochemicals for medical, industrial, or research applications. These products are either directly produced by the company or are purchased in bulk from other producers and distributed by the Company in customized packages and chemical forms tailored to customer and market demands. Iodine-131 is the most predominant radiochemical sold in this segment.

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Fluorine Products segment concerns the production of small scale qualification samples of high purity fluoride gas for various industrial applications, as well as development of laboratory and analytical processes required to support the planned uranium de-conversion and fluorine extraction facility. The Company has developed or acquired all patent rights to these processes.

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Radiological Services segment concerns a wide array of miscellaneous services such as processing of gemstone which has undergone irradiation for color enhancement, radiological engineering consultant services, Type A package

certification testing, and waste packaging/recycle services.

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Transportation segment includes transportation services the Company engages in for the commercial transfer of nuclear products for which the Company is licenses to transport.

The following presents certain segment information as of and for the years ended December 31, 2012 and 2011:

Sale of product	**2012**	**2011**
Radiochemical products	$ 1,677,291	$ 1,811,935
Cobalt products	1,369,130	2,339,154
Nuclear medicine standards	4,169,710	4,795,369
Radiological services	177,871	228,631
Fluorine products	-	-
Transportation	227,932	286,923
Total segments	7,621,934	9,462,012
Corporate revenue	-	-
Total consolidated	$ 7,621,934	$ 9,462,012

Depreciation and amortization	**2012**	**2011**
Radiochemical products	$ 37,173	$ 36,615
Cobalt products	94,957	105,113
Nuclear medicine standards	21,439	16,936
Radiological services	10,399	10,399
Fluorine products	232,113	205,459
Transportation	13,374	13,807
Total segments	409,455	388,329
Corporate revenue	5,726	4,663
Total consolidated	$ 415,181	$ 392,992

Segment income (loss)	**2012**	**2011**
Radiochemical products	$ 94,165	$ 141,324
Cobalt products	401,132	1,055,662
Nuclear medicine standards	581,342	674,377
Radiological services	90,102	130,785
Fluorine products	(1,050,995)	(4,428,799)
Transportation	(15,734)	13,911
Total segments	100,012	(2,412,740)
Corporate loss	(2,340,822)	(3,537,698)
Net loss	$ (2,240,810)	$ (5,950,438)

Expenditures for segment assets	**2012**	**2011**
Radiochemical products	$ 2,793	$ -
Cobalt products	31,742	3,193
Nuclear medicine standards	4,429	86,149
Radiological services	255,000	-
Fluorine products	1,537,935	3,439,365
Transportation	-	-
Total segments	1,831,899	3,528,707
Corporate purchases	3,414	-
Total consolidated	$ 1,835,313	$ 3,528,707

Segment assets	**2012**	**2011**
Radiochemical products	$ 229,516	$ 196,065
Cobalt products	1,510,183	1,586,748
Nuclear medicine standards	451,252	1,019,239
Radiological services	267,414	19,646
Fluorine products	6,239,235	4,922,409
Transportation	29,734	39,112
Total segments	8,727,334	7,783,219
Corporate assets	3,314,571	4,147,586
Total consolidated	$ 12,041,905	$ 11,930,805

NOTE 15 SUBSEQUENT EVENTS

In January 2013, the Company issued 750,000 in nonqualified stock options to certain consultants under the 2006 Equity Incentive Plan. The options have an exercise price of $0.15 per share and vest 25% on the first anniversary of the grant date with 25% vesting after each additional one-year period of continuous service. The options expire 10 years from the date of grant. The options had a fair value of $100,923 or $0.135 per share as estimated on the date of grant using the Black-Scholes options pricing model with the following weighted average assumptions: risk free interest rate of 1.87%, expected dividend yield rate of 0%, expected volatility of 84.62%, and an expected life of 10 years.

Pursuant to a board resolution on January 10, 2013, the Company re-priced 600,000 options which had an original exercise price of $0.32 per share and expire on May 4, 2019. The stock options were adjusted to an exercise price of $0.15 per share with the expiration date remaining May 4, 2019. An additional $11,145 of equity compensation will be recognized in future periods. The option re-price had a fair value of $11,145 as estimated on the date of re-pricing using the Black-Scholes options pricing model with the following weighted-average assumptions: risk free interest rate of 1.26%, expected dividend yield rate of 0%, expected volatility of 84.20%, and an expected life of 6.29 years.

Pursuant to a board resolution on January 10, 2013, the Company has resolved to initiate the shutdown of its FEP pilot facility and execute a sale of some of the equipment.

On February 20, 2013, the Company entered into a securities purchase agreement with certain private investors pursuant to which it sold convertible debentures for an aggregate of $1,060,000. The debentures accrue interest at a rate of 10% per annum, compounded annually. The conversion price in effect for these debentures, on any conversion date, is equal to the lesser of $0.14 or the average closing price of the Company s common stock for the 120 consecutive trading days up to, but not including, the maturity date. If at any time prior to the maturity date, the volume weighted average price of the Company s common stock exceeds $0.50 per share over any consecutive thirty trading days then the Company is required to convert the debentures. At the maturity date all of the outstanding principal of the debentures as well as the accrued interest will be converted into shares of common stock. The fair market value of the Company s common stock was $0.15 per share on the date of the agreement. Consequently, the difference between the anticipated conversion price of $0.14 and the closing price of $0.15, multiplied by the number of issuable common shares upon conversion, will be recorded as a beneficial conversion feature with an increase to equity and a debt discount in the amount of $75,715. This amount will be accreted to interest expense through February 20, 2015.