

INTERNATIONAL ISOTOPES INC  
Form 10-K  
March 19, 2019

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

**FORM 10-K**

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

For the fiscal year ended December 31, 2018

or

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**  
(State or other jurisdiction of incorporation or  
origination)

**74-2763837**  
(IRS Employer Identification No.)

**4137 Commerce Circle**

**Idaho Falls, Idaho**

(Address of principal executive offices)

**83401**

(Zip code)

**(208) 524-5300**

(Registrant's telephone number, including area code)

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

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

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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  NO

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  NO

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  NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). YES  NO

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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.

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

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards pursuant to Section 13(a) of the Exchange Act.

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

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The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the average bid and asked price of such common equity at June 29, 2018, the last business day of the registrant's second fiscal quarter, was approximately \$21 million. For purposes of this calculation, all directors and executive officers of the registrant and holders of 10% 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 11, 2019, the number of shares outstanding of the registrant's common stock, \$.01 par value, was 413,479,686 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 2019 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, 2018.



**INTERNATIONAL ISOTOPES INC.**

**FORM 10-K**

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## Cautionary Note Regarding Forward-Looking Statements

*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. 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 expected growth in business segment revenues, our expansion into new markets, the ability of our products to compete with several larger companies and products, the results of market studies used to support our business model, our anticipated improvement in economic conditions, the expected increased revenue by gaining approval of new generic drug products, our ability to continue cobalt-60 production and manage costs, the commercial opportunity of the proposed depleted uranium and fluorine extraction processing facility, 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 Annual Report. Certain risks and uncertainties that could cause actual results to differ significantly from management's expectations are described in the section entitled Risk Factors in this Annual Report. That section, along with other sections of this Annual Report, describes some, but not all, of the factors that could cause actual results to differ significantly from management's expectations. We do not intend to publicly release any revisions to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Readers are urged, however, to review the risks and other factors set forth in the other reports that we file from time to time with the Securities and Exchange Commission (the SEC ).*

## PART I

### Item 1.

## BUSINESS

### General Business and Products Description

International Isotopes Inc. (the Company , we , us and our ) manufactures a full range of nuclear medicine calibrators and reference standards, a wide range of products, including cobalt teletherapy sources, and a varied selection of



radioisotopes and radiochemicals for medical research, pharmacy compounding, and clinical applications. We also provide a host of transportation, recycling, and processing services on a contract basis for customers.

We were 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 five reportable segments which include: Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, and Radiological Services.

During 2018, we focused our efforts on achieving profitability in each of our core business segments and reached several significant goals. During 2018, we:

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Increased revenue by approximately 40% and reduced our net loss by approximately 78%;

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Pursued and were awarded numerous field service jobs through the Department of Energy's (DOE) Orphan Source Recovery Program (OSRP) and other domestic programs using our mobile hot cell and highly experienced personnel and increased revenue in the Radiological Services segment by approximately 67%;

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Contracted with an alternate supplier of cobalt-60 to fulfill cobalt contract obligations and meet customer demand for various types of sealed source products, which increased our revenue in the Cobalt Products segment by approximately 302%;

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Expanded sales of our nuclear medicine products through exercising our management opportunity with RadQual, LLC (RadQual). In particular, we increased our international sales by utilizing the marketing and distribution expertise of our joint venture with RadQual, TI Services, LLC (TI Services);

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Supported the review by the U.S. Food and Drug Administration (FDA) of our abbreviated new drug application (aNDA) which was submitted to the FDA with a request for expedited review; and

Maintained our relationships in Lea County, New Mexico (location of our proposed de-conversion facility) and continued to pursue opportunities to obtain additional contracts for depleted uranium de-conversion services related to our proposed de-conversion project.

In 2019, we plan to continue efforts to further expand and improve upon our operations in our core business segments. We intend to continue to invest in these segments and work to pursue product development, reduce production costs and expand sales in each of them. The following paragraphs provide a brief description of each of our business segments. Certain financial information with respect to each of our business segments, including revenues from external customers, a measure of profit or loss, and total assets, is set forth in Note 15 to our Consolidated Financial Statements which begin on page F-7.

### Nuclear Medicine Standards

This segment consists of the manufacture of sources and standards associated with Single Photon Emission Computed Tomography (SPECT) imaging, patient positioning, and calibration or operational testing of dose measuring equipment for the nuclear pharmacy industry. Our nuclear medicine standards products include flood sources, dose calibrators, rod sources, flexible and rigid rulers, spot markers, pen point markers, and a host of specialty design items. These products are manufactured through an exclusive manufacturing agreement with RadQual, of which we own a 24.5% interest. In August 2017, affiliates of the Company purchased the remaining 75.5% interest of RadQual and at that time we were named as one of two managing members of RadQual. As a result of this ownership change, we gained significant influence in management decisions with regard to RadQual's business operations. We have a manufacturing agreement with RadQual, that will remain in place and provides that we will manufacture sources exclusively for RadQual and will not manufacture products that would directly compete with RadQual sources.

There are over 5,000 nuclear medicine centers in the United States (U.S.) that require nuclear medicine products on a regular repeat basis. We have been manufacturing these products for RadQual since 2001. The majority of nuclear medicine product sales are to U.S. customers; however, in recent years, as a result of stronger marketing efforts, we have seen an increase in foreign sales, as shown in Note 14 to the accompanying audited financial statements. 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. The useful life of these products varies depending on the isotope used in manufacture, but in most cases averages eighteen months to two years. The isotopes used in manufacturing these nuclear medicine products are available from various sources world-wide and we are not dependent on a single supplier. In addition to the products themselves, we have developed a complete line of specialty packaging for the safe transportation and handling of these products.

RadQual has numerous distributors for direct sales of its products. Formerly, the largest distributor was Technology Imaging Services Inc. (TIS). In December 2010, we formed a 50/50 joint venture with RadQual to acquire the assets of TIS, and those assets were used to create TI Services LLC. This joint venture has provided sales opportunities in existing and future RadQual product lines both domestically and internationally as a marketer for RadQual products.

### Cobalt Products

Our cobalt products segment includes the production of bulk cobalt (cobalt-60), fabrication of cobalt capsules for radiation therapy as well as various industrial applications, and recycling of expended cobalt sources.

Although bulk cobalt sales have historically accounted for a significant amount of the total revenue from this business segment, during the past several years we have not had any bulk sales because of an interruption in cobalt production in the DOE's Advanced Test Reactor (ATR) located in Idaho. Through continued work with the DOE, a new cobalt target was designed and in October 2014 we entered into a ten-year agreement with the DOE for the irradiation of the new target design. We had expected our supply of cobalt material from the ATR to resume in 2018. However, due to extended reactor shut-downs during the year, we now expect our supply of cobalt material from the ATR to resume by the third quarter of 2019. Subsequent to completing the agreement with the DOE, we entered into contracts with several customers for the sale of this material. In accordance with those agreements, we began receiving pre-payments from customers on future cobalt shipments which we recorded as unearned revenue. To fulfill our supply agreements with these customers, we were able to identify a secondary supplier of cobalt to satisfy the terms of our supply agreements. Accordingly, at the time of shipment, customer payments previously recorded as deferred revenue were reclassified as revenue.

The year-over-year demand for cobalt products has remained strong as a result of the introduction of several new types of cobalt therapy units and we have continued to see demand for cobalt-manufactured products for those devices. We have explored and intend to continue to explore, opportunities to further develop cobalt products and sales on an on-going basis. 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 as part of our efforts to comply with the regulations as well as support cost effective and timely delivery of these products.

At the present time, we are the sole producer of high activity cobalt from any of the DOE reactors in the U.S. There are a few other cobalt source manufacturers in North America, but we believe both our product and service provide us with a competitive edge in competing with these other manufacturers.

We also own older cobalt targets stored at the ATR that hold significant market value to us assuming the material is recoverable. Through working with the DOE, we have determined a feasible and cost-effective method of transfer and shipping for these targets and hope to begin shipping them to our facility in third quarter 2019. We will re-evaluate the market value of all remaining older material at the end of 2019.

### Radiochemical Products

This segment includes the production and distribution of various isotopically pure radiochemicals for medical, industrial, and research applications. These products are either directly produced by us or are purchased in bulk from other producers and distributed by us in customized packages and chemical forms tailored to meet customer and market demands. Sodium Iodide (Iodine-131) radiochemical product accounts for the largest portion of sales within this segment. Our generic sodium iodide drug product will be the only generic product of this type manufactured in North America and we believe the product will offer customers an attractive alternative to the single existing commercial drug product being sold in the U.S. We have several suppliers of sodium iodide from whom we purchased material during 2018.

Other less significant sales of radiochemical products in this segment consist of sales of isotopes such as Cobalt-57 (Co-57), Cesium-137 (Cs-137), Germanium 68 (Ge-68), Sodium-22 (Na-22), and Barium-133 (Ba-133).

### Radiological Services

This segment includes a wide variety of services such as decommissioning disused irradiation units, performing sealed source exchanges in irradiation and therapy units, and processing gemstones.

We are licensed through the Nuclear Regulatory Commission (NRC) to perform certain field service activities in connection with the DOE's Orphan Source Recovery Program (OSRP). These activities include services to support recovery of disused sources under the DOE's OSRP and installation or removal of certain cobalt therapy units. We designed and built a mobile hot cell unit to use in this field service work and during 2018 and 2017 we used the unit extensively to perform numerous OSRP field service jobs. The unique design of our mobile hot cell allows us to modify the hot cell's interface with various therapy units or transportation containers in order to perform customized source removal which provides us with a significant competitive advantage over other techniques. Additionally, this unit has allowed us to expand our field service work to include similar international contract opportunities through the International Atomic Energy Agency (IAEA). As anticipated, this type of field service work generated the majority of revenue within this business segment during 2018 and we expect the same in the coming years.

Fluorine Products and the Planned Uranium De-Conversion Facility

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

DUF6 is the waste by-product of uranium enrichment and any uranium enrichment facility will create very large quantities of DUF6. Our intended plant design would process DUF6 into DUF4 and then use the DUF4 in the FEP process, thereby, creating a business model in which we would be paid to process the DUF6 and then would be able to sell the fluoride products produced from the DUF4.

We established the fluorine products business segment in 2004 to support production and sale of the gases produced using our Fluorine Extraction Process (FEP) that we intended to use in conjunction with the operation of the proposed depleted uranium de-conversion facility in Lea County, New Mexico. 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 high 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.

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

In October 2012, we received the Nuclear Regulatory Commission (NRC) construction and operating license for the planned de-conversion facility. This is a forty (40) year operating license and is the first commercial license of this type issued in the U.S. There are no other companies with a similar license application under review by the NRC and the license does not require us to begin construction of the project by any specific date. Therefore, the NRC license represents a significant competitive barrier and we believe that it provides us with a very valuable asset now and in the future when we are ready to resume formal design and engineering work on the plant.



Due to changes in the nuclear industry near the end of 2013, we placed further engineering work on the proposed uranium de-conversion facility on hold. We still anticipate a potential future need for a depleted uranium conversion facility and, therefore, we are keeping all licenses and permits current.

Further activity within this segment will be deferred until market and industry conditions change and justify resuming design and construction of the facility. In the meantime, we expect to continue to incur some costs associated with the maintenance of licenses, property agreements, and other project investments.

In connection with the proposed de-conversion facility, Lea County, New Mexico transferred property to us under the provisions of the New Mexico Local Economic Development Act, Project Participation Agreement (PPA) as a location for construction of the facility. Under the original agreement, we were obligated to meet certain performance objectives. We did not meet these objectives, however, in July 2015, we executed an amendment to the PPA that extended the due date of the Phase I construction to December 31, 2016, and Phase I completion and hiring at least 75 employees to December 31, 2016. We did not meet the December 31, 2016 deadline and management is working with Lea County to execute an additional modification to the agreement to further extend these dates once an estimated resumption date has been identified. If we do not succeed in extending the commitment dates or in reaching performance dates set forth in a modified agreement then we may either purchase or re-convey the property to Lea County, New Mexico. In addition, if Lea County does not agree to that modification and we do not retain title to the property, it could have a material adverse impact on our planned de-conversion and FEP project since another location would need to be selected and evaluated for environmental compliance.

## **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 are required as a routine part of the normal operations of this equipment to ensure its reliability and accuracy. We exclusively manufacture many of these reference standard products for one customer, RadQual, which in turn has many distributors who make direct sales around the U.S. and internationally. We directly ship these products to all 50 states and many 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 are certified under ISO-9001:2015 and ISO-13485-2016 quality programs that have allowed us to start selling these products into several foreign countries that require this additional quality certification for manufacturers. We use a small number of suppliers for the isotopes and other materials used in manufacturing these nuclear medicine products, but if we were to lose any of these suppliers, others would be available.

### Cobalt Products

Historically, we sold high-activity bulk cobalt to one customer that used it to fabricate several models of sealed sources for medical and industrial applications. In June 2012, a leak of a cobalt target at the ATR 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. Due to this issue, we were forced to discontinue the irradiation of that cobalt target design. Aside from a few shipments in 2014 and 2016 we have not been able to process this old material. We believe that this older material will be recoverable from the targets and once we are able to ship the material to our facility, we can make this determination. Through collaboration with the DOE, we have determined a viable and cost-effective method of transporting this material to our facility and anticipate shipments to begin about third quarter 2019.

Additionally, we were able to purchase bulk cobalt from another supplier during 2018 and were able to manufacture some sealed source products during 2018. We anticipate that we will continue to use this alternate cobalt supply in 2019.

In 2014, we entered into a new 10-year agreement with the DOE utilizing a new cobalt target design. Because of the lengthy irradiation time required we initially anticipated that cobalt shipments to customers would resume in late 2018. However, due to irradiation delays at the ATR, we now expect those shipments to take place during the third quarter of 2019. Our cobalt products are used in applications such as radiation therapy, security devices, radiography examination and in some commercial applications. While there are other technologies available to provide external radiation therapy, there are several new devices just gaining market approval that still depend on cobalt sources for their specialized applications. There are currently no other producers of high specific activity cobalt in the U.S., however, there is one producer of medium specific activity material and there are at least three significant producers

of high specific activity material in Canada and other parts of the world. In addition to us, there is only one other company in the U.S. currently licensed to handle large quantities of cobalt.

We manufacture cobalt sources as well as 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 new entrants to this market. We expect steady demand for cobalt sealed source products over the next several years but are currently dependent upon our contract relationship with the DOE for access to its ATR in Idaho for a large portion of our cobalt production activities. The interruption to cobalt production experienced in 2012 had a significant negative impact on our cobalt products business segment, and although we currently have a ten-year irradiation contract in place with the DOE, future interruptions in the operation of the ATR could have a negative impact on our cobalt products business segment. With our new cobalt production contract in place with the DOE we anticipate our market position in this business segment will become stronger in future years.

#### Radiochemical Products

We typically supply radiochemical 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 pharmaceutical products approved by the U.S. FDA for labeled use in therapy or imaging.

We have submitted an aNDA to the FDA for a radiochemical sodium iodide product. The FDA has granted the Company's request for an expedited review of the application which could accelerate the approval of the product. Once approved we anticipate a quick start-up of commercial sales of the drug product which should have a significant positive impact on our revenues. We are also considering other generic drug opportunities and plan to expand the range of products offered within this business segment in the coming years.

#### Fluorine Products and the Planned Depleted Uranium De-Conversion Facility

Our Fluorine Products segment was developed 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 2013, we curtailed the formal engineering work on the de-conversion facility because of

a lack of demand for uranium de-conversion services at that time. However, we believe that in the future there will be a demand for this service to address still growing stockpiles of depleted UF<sub>6</sub>. When that demand occurs, we believe the ground-work we have completed on the depleted uranium de-conversion and fluorine extraction project should put us in a strong position to take advantage of our position in the industry and should serve to justify the financial investment in this uranium de-conversion project in the future.

### Radiological Services

Our radiological services include the support of field services, including therapy unit decommissioning, and gemstone processing.

In the past several years, we have seen increased opportunities for radiological field service activities involving installation or decommissioning of radiation devices in hospitals, research institutions, and various other commercial facilities. In 2012, we obtained our first amendment to our NRC license to permit certain field service activities and since that time radiological field service work has become a significant contributor to revenue within the segment.

During 2018 and 2017 we were awarded numerous contracts for field service activities in connection with the DOE's OSRP program as well as contracts through the IAEA. We designed and built a mobile hot cell unit for use in this field service work and in 2014 and 2015 we were granted additional amendments to our NRC license that have allowed us to expand the types of services we can provide. The design of our mobile hot cell allows us to adapt it to work in various source removal situations that would not otherwise be possible. We will continue to use the mobile hot cell to support these expanded services both domestically and internationally. While there are other companies that compete with us for field services work, we believe our mobile hot cell gives us a unique competitive advantage in some of these opportunities. We are under contract for several of these jobs which are scheduled to take place in 2019. We will continue to pursue these field service opportunities in the U.S. and abroad and expect that, in future years, field services will be the major source of revenue within this business segment.

Our transportation services (IITS) was originally formed as a separate business segment to support transportation of our own products and to provide for hire transportation services. Over the years the business activities in this segment were primarily derived from the Company's radiological services and cobalt products business segments. Therefore, beginning in the first period of 2018, we began combining the transportation services financial reporting within the radiological services segment to provide more qualitative reporting. Prior period information has been adjusted for comparative reporting.



## Government Regulation

### *Licensing*

We currently operate under two NRC licenses, one for broad scope operations and another for exempt distribution. Our broad scope 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 exempt distribution license permits the release and distribution of irradiated gemstones to unlicensed entities in the U.S. All of our existing licenses and permits are adequate to allow current business operations. 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.

As a condition of our NRC licenses in Idaho, we are required to provide financial assurance for decommissioning activities. We fulfill this license requirement with a surety bond which names the NRC as beneficiary and is supported by a restricted cash account held in trust by a third party. In January 2018, we re-evaluated the financial assurance needed to support decommissioning and increased the bond amount and the restricted cash amount during the first quarter of 2018. Similar financial assurances will be required to fund the decommissioning of the proposed de-conversion facility.

In October 2012, we were granted a 40-year construction and operating license by the NRC for our planned depleted uranium de-conversion and fluorine extraction processing facility (the de-conversion facility). The de-conversion facility is planned to be located in Lea County, New Mexico, and is proposed to initially de-convert up to approximately 11 million pounds of depleted uranium hexafluoride ( $\text{DUF}_6$ ) annually into fluoride products and depleted uranium oxides (DUO). Further engineering work on the proposed de-conversion facility was placed on hold in 2013 until additional contracts for utilization could be obtained. There is no specific timeline required by the NRC for the start of construction on this project. The majority of the pre-construction design, licensing and state permitting has already been completed for the project and a ground water permit from the state of New Mexico remains to be obtained before the plant could begin operation.

### *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 (LLRW) Policy Act (LLRW Act), 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.

The planned de-conversion facility will produce large quantities of depleted uranium oxide waste. Disposal of depleted uranium waste will be the responsibility of the customers supplying DUF6 to the company for de-conversion. There are proposed changes to some of the regulations for low level radioactive waste disposal that could impact the rules surrounding disposal of large quantities of depleted uranium. The Company will continue to monitor any changes in the regulatory framework that could impact the de-conversion facility project.

#### *Nuclear Regulatory Commission Oversight*

We operate under two NRC licenses and are subject to NRC oversight and periodic inspections of our operations.

#### *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 (DOT) for the shipment of radioactive materials. We also have an NRC license for the import and export of radioactive materials. Because of increasing security controls and regulations, it is likely that we may encounter additional regulations affecting transportation, storage, sale, and import/export of radioactive materials.

We are also subject to inspection by the FDA to be in compliance with cGMP for our sodium iodide product and are registered with the FDA as an Active Pharmaceutical Ingredient manufacturer and a manufacturing facility. We have submitted an aNDA to the FDA for our sodium iodide product. Once approved, the facility will thereafter be subject to periodic and random inspections by the FDA for the continued manufacture of this drug product.

We are subject to government regulation and intervention both in the U.S. 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.

### *Environmental Compliance*

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 (CERCLA), the Resource Conservation and Recovery Act (RCRA) and state statutes such as the Idaho Hazardous Waste Management Act, the LLRW Policy Act, NRC regulations concerning various irradiated, radioactive, and depleted uranium materials, and U.S. DOT 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 have incurred, and expect to continue to incur, capital and operating costs to comply with these laws and regulations. For the years ended December 31, 2018 and 2017, we incurred costs of approximately \$153,000 and \$307,000, respectively, for licensing and monitoring fees. 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.

### **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 transportation vehicles and personnel 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, and that invoke certain special transportation requirements, we use our own specially trained employees.

### **Dependence on Customers**

Historically, we have been dependent on one customer, RadQual, of which we own 24.5%, for a significant amount of our gross revenue. In August 2017, several affiliates of the Company purchased the remaining 75.5% and at that time, we were named as a managing member of RadQual. Our sales to RadQual prior to August 2017 accounted for approximately 17% of our total gross revenue for 2017 and our sales to RadQual for 2018 totaled approximately 24%

of our total gross revenue.

Combined sales, on which we are dependent, to our three largest customers, accounted for 46% of our total gross revenues in 2018 and accounted for 31% of our total gross revenues in 2017. 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 relationship with our joint venture, TI Services, to expand distribution of our nuclear medicine products. The change in ownership of RadQual and naming us as a managing member of RadQual business operations, has significantly reduced any risk associated with RadQual as a single major customer of ours.

### **Patents, Trademarks, Licenses and Royalty Agreements**

In 2004, we obtained certain patents related to the FEP. In 2010, we were granted an additional process patent on the FEP process and during 2011 we started the process to file for international protections of this patent in South Africa, Russia, and the European Union. During 2012, we were granted additional process patents for the FEP process in the United States. In 2013, the FEP process patent was granted in Russia and in 2014 the FEP process patent was granted in South Africa.

### **Employees**

As of December 31, 2018, we had 32 total employees, including 30 full-time employees.

### **Available Information**

Our internet website address is [www.intisoid.com](http://www.intisoid.com). We are subject to the reporting requirements under the Securities Exchange Act of 1934, as amended (the Exchange Act). Consequently, we are required to file reports and information with the SEC, including 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. These reports and other information concerning us are available free of charge through (i) our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC, and (ii) the SEC's website at [www.sec.gov](http://www.sec.gov). Information contained on, or accessible through, our website is not incorporated by reference into this Annual Report or other reports filed with the SEC.





**Item 1A.**

**RISK FACTORS**

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

**Risks Related To Our Company Generally**

***We have incurred, and may continue to incur, losses.*** We have incurred net losses for most fiscal periods since our inception. From inception through December 31, 2018, we have generated \$115,017,303 in revenues and an accumulated deficit (including preferred stock dividends and returns) in the amount of \$126,541,421. The negative cash flow we have sustained has materially reduced our working capital, which in turn could materially and negatively impact our ability to fund future operations and continue to operate as a going concern. Management has taken and continues to take, actions to improve our financial condition and results of operations. The availability of necessary working capital, however, is subject to many factors beyond our control, including, among other things, our ability to obtain financing on favorable terms, or at all, 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.

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

***Our operations expose us to the risk of material environmental liabilities.*** We are subject to potential material liabilities related to the remediation of environmental hazards and to personal injuries or property damages that may be caused by hazardous substance releases and exposures. The materials used in our operations expose us to risks of environmental contamination that could 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. We have a Surety Bond in place supported by funds in a restricted cash account to provide the financial assurance required by the NRC for our Idaho facility license for decommissioning and a similar mechanism will be required to fund the decommissioning of the proposed new depleted uranium facility. However, if a contamination event occurred within, or outside of, our facility,

we would be financially responsible to remediate such contamination and could have to borrow money or fund the remediation liability from our future revenue. We may not be able to borrow the funds, or have available revenue, sufficient to meet this potential liability, which could have a significant negative impact on our financial condition and 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, 2022. However, there is no assurance that we will be able to retain Mr. Laflin or our existing personnel or attract additional qualified employees. The loss of any of our key personnel or an inability to attract additional qualified employees could result in a significant decline in revenue.

***General economic conditions in markets in which we do business can impact the demand for our goods and services. Decreased demand for our products and services can have a negative impact on our financial performance and cash flow.*** Demand for our products and services, in part, depends on the general economic conditions affecting the countries and industries in which we do business. A downturn in economic conditions in the U.S. or industry that we serve may negatively impact demand for our products and services, in turn negatively impacting our operations and financial results. Further, changes in demand for our products and services can magnify the impact of economic cycles on our businesses. For instance, our topaz gemstone processing is affected by the demand for luxury items such as jewelry as well as by the instability of foreign markets which are key factors 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 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, cobalt product 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. For waste that cannot be decayed in storage we must handle this waste pursuant to the LLRW Policy Act, 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. An unexpected or material increase in these costs could have a material adverse effect on our financial condition and results of operations.

***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 comply with all applicable health regulations at times and, as a result, may expose us to liability under applicable 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.

***NRC License Enforcement Actions.*** The NRC may take enforcement action in the event that we are found to be in violation of NRC regulations or in violation of any of our license requirements. Consequences of violations depend upon the severity of the violations as well as the adequacy and timeliness of corrective actions implemented by the licensee to investigate and correct the cause of the violation and to prevent reoccurrence. The NRC has discretionary authority in the action they choose to take against license violations, but these actions can include civil penalties and restrictions upon licensee operations or license suspension. The imposition of any such penalties and/or restrictions upon our operations or suspension of our license could have a material adverse effect on our financial condition and results of operations.

***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 CERCLA, the RCRA and state statutes such as the Idaho Hazardous Waste Management Act, the LLRW Policy Act, NRC regulations concerning various irradiated, radioactive, and depleted uranium materials, and U.S. DOT 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 have incurred, 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. Because of increasing security controls and regulations, it is likely that we may encounter additional regulations affecting the transportation, storage, sale, and import/export of radioactive materials.

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

***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 planned uranium de-conversion and fluoride gas production business, if a successful product liability claim were brought against us in excess of our available insurance coverage, it would have a material adverse effect on our business and financial results.

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

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

***Our future growth is largely dependent upon our ability to develop new products 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, but not limited to, 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 or U.S. FDA approval 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 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 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 ATR 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 U.S. that is capable of providing this type of service for us. Our radiochemical iodine is supplied to us through

three supply sources. Unanticipated contract terminations by any of these suppliers and other third parties would have a material adverse impact on our operations, financial results, and cash flow.

***We are dependent on a limited number of customers in connection with our current business operations.*** During 2018 and 2017, sales to RadQual represented 24% and 17%, respectively, of our total gross revenue. Combined sales to our three top customers accounted for 46% and 31% of our total gross revenue during 2018 and 2017, respectively. Although we are making efforts to reduce our dependency on a small number of customers, the loss of any one of these customers could have a significant impact on our future results of operations and financial condition. Unanticipated contract terminations by any of these current customers could have a material adverse impact on operations, financial results, and cash flow.

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

### **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 is quoted on the OTCQB Marketplace under the U.S. trading symbol INIS. The market for our securities is limited, the price of our stock is volatile, and the risk to investors in our common stock is greater than the risk associated with stock trading on other markets. These factors may reduce the potential market for our common stock by reducing the number of potential investors. This may make it more difficult for investors in our common stock to sell shares to third parties or to otherwise dispose of their shares. This could cause our stock price to decline.

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

***We are contractually obligated to issue shares in the future, which will dilute your interest in us.*** As of December 31, 2018, there were approximately 19,541,000 shares of common stock issuable upon the exercise of vested stock options, at a weighted-average exercise price of \$.05 per share. An additional 33,972,216 shares were reserved for issuance under our equity plans as of December 31, 2018. Our outstanding preferred stock and certain of our outstanding debt is also convertible into shares of our common stock at the holders' option. In addition, we expect to issue additional options to purchase shares of our common stock to compensate employees, consultants and directors, and we may issue additional shares to raise capital to expand our manufacturing capability, develop additional products, or fund our planned uranium de-conversion plant. Any such issuances will have the effect of further diluting the interest of the holders of our securities. Also, outstanding as of December 31, 2018, were Series M Warrants for the issuance of 17,165,000 shares of common stock and Series N Warrants for the issuance of 2,925,000 shares of common stock. The weighted average exercise price for all outstanding warrants as of December 31, 2018 was \$0.12 per share.

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

***We will need to raise additional funds to complete the construction of our de-conversion and FEP facility.*** We need to secure more customer contracts and raise 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, unforeseen expenses may be incurred and additional funding may be required to complete the project.

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

Some of these risks relate to our potential inability to:



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

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

obtain the groundwater permit from the state of New Mexico;

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

effectively manage this new business and its operations;

successfully establish and maintain our intended low-cost structure; and

successfully address the other risks described throughout this Annual Report.

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

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



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

***The DOE is obligated to take depleted uranium from enrichment companies.*** The DOE has constructed two depleted uranium de-conversion facilities. These facilities are obligated to process depleted uranium produced from United States commercial uranium enrichment facilities at a price determined by DOE. We believe our depleted uranium processing facility will offer the better value to enrichment companies, but we cannot assure you that enrichment companies will not select the DOE as their de-conversion service provider.

***We may be handling large quantities of DUF<sub>6</sub> and fluoride products, which are radioactive and hazardous materials, respectively, and are subject to intense regulation.*** The hazardous nature of DUF<sub>6</sub> and fluoride products 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. Additionally, the NRC is revising its regulations on the disposal of depleted uranium waste at LLRW disposal facilities that accept large quantities of depleted uranium. Any changes to the current regulations may result in increased disposal costs that we intend to pass through to our customers, which, depending on the significance of the increased cost, may cause potential customers to continue to store their DUF<sub>6</sub> rather than pay for de-conversion and disposal services.

***We will be subject to competition from the DOE and other companies.*** While there are no currently operating commercial DUF<sub>6</sub> de-conversion facilities in the U.S., the DOE is operating two de-conversion plants intended to process DUF<sub>6</sub> from the DOE's existing 1.5 billion-pound stockpile. Additionally, AREVA currently operates a de-conversion plant in France, UUSA is constructing a facility in the U.K., and the State Atomic Energy Corporation ROSATOM has constructed a facility in Russia. We cannot assure you that the operators of the existing DUF<sub>6</sub> de-conversion facilities will not build additional facilities to expand their operations and compete with us in providing de-conversion services or that commercial enrichment companies will not choose to ship their depleted DUF<sub>6</sub> 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. Under the original agreement, we were obligated to meet certain performance objectives; namely starting Phase I construction no later than December 31, 2014, completing Phase I and hiring at least 75 employees by December 31, 2015, in order to retain title to the property. We did not meet either of those deadlines. However, in July 2015, we executed an amendment to the PPA that extended the due date of the Phase I construction to December 31, 2016, and Phase I completion and hiring at least 75 employees to December 31, 2016.

We did not meet either of those deadlines and we are working with Lea County to execute an additional modification to the agreement to further extend these dates once an estimated restart date for the project is determined. If we do not succeed in extending the commitment dates or in reaching performance dates set forth in a modified agreement then we may, at our sole option, either purchase or re-convey the property to Lea County, New Mexico. In addition, if Lea County does not agree to that modification and we do not retain title to the property, it could have a material adverse impact on our planned de-conversion and FEP project since another location would need to be selected and evaluated for environmental compliance.

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

**Item 1B.**

**UNRESOLVED STAFF COMMENTS**

We are a smaller reporting company, and therefore, are not required to provide the information required by this item.

**Item 2.**

**PROPERTIES**

We lease one property which serves as our main corporate headquarters and houses all of our current manufacturing operations for our core business segments. We also hold the conditional title to 640 acres of land in Lea County, New Mexico for the proposed de-conversion facility. The following paragraphs provide a brief summary of these properties.

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

Land - Lea County, New Mexico In August 2011, we received land from Lea County, New Mexico, pursuant to a PPA, 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 were to begin construction of the de-conversion facility no later than December 31, 2014, and complete Phase I of the project and have hired at least 75 persons to operate the facility no later than December 31, 2015, although commercial operations need not have begun by that date. We did not meet the performance milestones set forth in the PPA and we executed a modification to the agreement extending these due dates to December 31, 2016 and 2017, respectively, but did not meet either of those milestones and are working again with Lea County to further extend the commitment dates. If we do not succeed in extending the commitment dates or in reaching performance dates set forth in a modified agreement then we may, at our sole option, either purchase or re-convey the property to Lea County, New Mexico. The purchase price of the property would be \$776,078, plus interest at the annual rate of 5.25% from the date of the closing to the date of payment. We have not recorded the value of this property as an asset and will not do so until such time that sufficient progress on the project has been made to meet our obligations under the agreements for permanent transfer of the title.

**Item 3.**

**LEGAL PROCEEDINGS**

None.

**Item 4.**

**MINE SAFETY DISCLOSURES**

Not applicable.

**PART II**

**Item 5.**

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

Our common stock is traded on the OTCQB under the trading symbol INIS .

As of March 11, 2019, there were 520 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 (the Board ) will evaluate and determine whether to issue dividends, subject to compliance and limitations under any applicable debt or other financing agreements in effect at that time or retain funds for research and development and expansion of our business. We do not anticipate paying any dividends to shareholders of our common stock for the foreseeable future.

**Recent Sales of Unregistered Securities; Use of Proceeds from Registered Securities**

None.

**Purchases of Equity Securities by the Issuer**

None.

**Item 6.**

**SELECTED FINANCIAL DATA**

We are a smaller reporting company, and 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 our results of 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 Annual Report. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report, including information with respect to our plans and strategies for our business, statements regarding the industry outlook, our expectations regarding the future performance of our business and the other non-historical statements contained herein are forward-looking statements. See Cautionary Note Regarding Forward-Looking Statements. You should also review the Risk Factors in Item 1A. of this Annual Report for a discussion of important factors that could cause actual results to differ materially from the results described herein or implied by such forward-looking statements.*

**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, pharmacy compounding, and clinical applications. We also provide a host of transportation, recycling, and processing services on a contract basis for customers. A more detailed description of each of these product lines and services along with a description of our business segments can be found in Item 1, Business within this Annual Report.

During 2018, we focused our efforts on achieving profitability in each of our core business segments and reached several significant goals. During 2018, we:

·  
Increased revenue by approximately 40% and reduced our net loss by approximately 78%;



Pursued and were awarded numerous field service jobs through the DOE's OSRP and other domestic programs using our mobile hot cell and highly experienced personnel and increased revenue in the Radiological Services segment by approximately 67%;

Contracted with an alternate supplier of cobalt-60 to fulfill cobalt contract obligations and meet customer demand for various types of sealed source products, which increased our revenue in the Cobalt products segment by approximately 302%;

Expanded sales of our nuclear medicine products through exercising our management opportunity with RadQual. In particular, we increased our international sales by utilizing the marketing and distribution expertise of our joint venture with TI Services;

Supported the review and approval by the U.S. FDA of our request for an expedited review of our aNDA, which could accelerate the approval of the product; and

Maintained our relationships in Lea County, New Mexico (location of our proposed de-conversion facility), through business meetings and correspondence with Lea County officials, and continued to pursue opportunities to obtain additional contracts for depleted uranium de-conversion services related to our proposed de-conversion project.

### **Business Strategy and Core Philosophies**

Broadly defined, our business strategy is to continue to build our reputation as a leader in the cobalt, radiochemical, field services, and nuclear medicine product industries, as well as seek ways to improve our customer service and expand our market share, with the ultimate goal of providing greater return 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, we believe will boost product sales. A key part of our short-term and long-term business strategy is to develop and market additional generic drug products, such as our sodium iodide product, in our core business segments that will offer customers a high quality and desirable product as well as increase our revenues and secure additional customer contracts. In addition, we will pursue financial support that will be structured in such a way to support further expansion of our products and services.

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 providing a safe and high-quality working environment for our employees. We operate in accordance with an ISO Quality Management System and in accordance with all current Good Manufacturing Practices under which we seek to maintain the highest level of quality and continuously improve our product manufacturing processes.

## Results of Operations

Following is a summary of results of operations for 2018:

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Revenue in 2018 was approximately \$10.4 million, which is a 40% increase over 2017;

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Our 2018 sales in our Cobalt Products, Nuclear Medicine Products, and Radiological Services business segments all increased as compared to 2017;

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Our 2018 sales in Radiochemical Products declined as compared to 2017;

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Our total gross profit rate increased from 44% in 2017 to 45% in 2018; and

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Our operating costs for 2018 decreased approximately 6% as compared to operating costs for 2017.

## Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

The following table presents comparative revenues for the years ended December 31, 2018 and 2017:

	For the year ended		For the year ended	
	December 31, 2018	% of Total	December 31, 2017	% of Total
<u>Revenues</u>		Revenues	(as adjusted)	Revenues
		2018		2017
Radiochemical Products	\$ 2,264,007	21%	\$ 2,321,732	31%
Cobalt Products	2,041,579	20%	507,904	7%
Nuclear Medicine	3,788,779	37%	3,232,229	
Standards				44%
Radiological Services	2,274,458	22%	1,358,525	18%
Total Segments	\$ 10,368,823	100%	\$ 7,420,390	100%

### *Revenues*

Total revenues in 2018 were \$10,368,823, compared to \$7,420,390 in 2017, which represents an increase of \$2,948,433, or approximately 40%. The performance of each segment is discussed below.

	For the year ended		For the year ended			
	December 31, 2018		December 31, 2017		\$ change	% change
<u>Revenues</u>			(as adjusted)			
Radiochemical Products	\$ 2,264,007	\$	2,321,732	\$	(57,725)	-2%
Cobalt Products	2,041,579		507,904		1,533,675	302%
Nuclear Medicine			3,232,229			
Standards	3,788,779				556,550	17%
Radiological Services	2,274,458		1,358,525		15,933	67%
Total Segments	10,368,823		7,420,390		2,948,433	40%
Corporate revenue	-		-		-	-
Total Consolidated	\$ 10,368,823	\$	7,420,390	\$	2,948,433	40%

### Radiochemical Products

Sales of radiochemical products accounted for approximately 21% of our total sales revenue in 2018 and approximately 31% of total sales revenue in 2017. Sales in this segment decreased by \$57,725, or approximately 2% to \$2,264,007 as compared to \$2,321,732 in 2017. This decrease in revenue was the result of an interruption in our supply of sodium iodide material when one of our suppliers shut-down its operations for an extended period. We were able to acquire material from an alternate supplier but experienced a delay in receiving material for customer orders. Because we were able to identify alternate suppliers of sodium iodide during 2018, we do not anticipate supply interruptions during 2019.

Within this segment, we currently distribute sodium iodide (I-131) as a radiochemical product. This product is being used for a variety of applications including use in investigational and clinical trials for the treatment of breast, lung, prostate, and ovarian cancers. We have submitted an aNDA to the FDA for a sodium iodide radiopharmaceutical product which was accepted for an expedited review by the FDA. This is the first of several potential generic drug products we plan to submit to the FDA in the coming years. We believe that the product enhancements we have made, in addition to the generic drug products we plan to submit to the FDA, should increase future sales in this business segment.

### Cobalt Products

Cobalt products sales accounted for approximately 20% of our total sales revenue in 2018 and approximately 7% in 2017. Sales in this segment increased by \$1,533,675, or approximately 302%, in 2018 to \$2,041,579, as compared to \$507,904 in 2017. The increase was the result of our ability to purchase bulk cobalt-60 from an alternate supplier in order to fill outstanding customer orders and is discussed in more detail below. Our sealed source manufacturing generates the majority of our revenue within this segment and sealed source sales depend on our ability to produce or procure this cobalt material.

Although we have not been able to obtain high specific activity material from the ATR reactor since late 2013, periodically we are able to acquire recycled material that can be used to manufacture sealed sources for customers, and in some instances, our customers have supplied their own cobalt material for source fabrication. In October 2014, we entered into a ten-year agreement with the DOE for the irradiation of cobalt targets. It takes approximately three to five years to irradiate these cobalt targets to the desired level of activity and we anticipated having high specific activity cobalt available for our customers in late 2018. However, extended reactor shut-downs delayed this delivery schedule and we now expect to have high specific activity cobalt available for customers by about the third quarter of 2019, and every year thereafter, through at least 2024. The agreement gives us the ability to purchase the current full capacity of the DOE's ATR throughout the ten-year period.

In March 2017, we completed a purchase agreement for some additional cobalt material from a supplier and that material was delivered to us in late 2017 and early 2018. The limited availability of cobalt material during most of 2017 directly impacted our ability to manufacture high activity sealed sources in this business segment, however, with the receipt of the material from our alternate supplier, we were able to resume fulfilling customer orders and significantly increased sales in this business segment during 2018. As mentioned above, in late 2018 we expected to receive material currently undergoing irradiation at the ATR. However, extended periods of shut-down of the ATR delayed this delivery schedule and we now expect to receive shipments in the third quarter of 2019. Delivery of this high specific activity material should support strong cobalt product sales in late 2019 and beyond.

In 2015, 2016, and 2018, we entered into cobalt supply agreements with several customers. Pursuant to these contracts, we will supply bulk cobalt-60 and, in some cases, provide source manufacturing and installation services for the customer. The terms of these cobalt contracts require some advance progress payments from each customer. The funding received under these contracts has been recorded as unearned revenue under short- and long-term liabilities in our consolidated financial statements. We began recognizing some of this revenue in 2018 when we fulfilled contract performance objectives by supplying sealed sources manufactured with cobalt from our alternate supplier.

As of December 2018, we continued to hold many old design cobalt targets at the ATR that have undergone some irradiation. In 2018, in performing year-end analytical procedures, we concluded that the older design targets we hold

at the ATR, and that we continue to report as inventory, hold varying but significant market values in excess of their current carrying values and we concluded that no impairment existed. We anticipate that during the third quarter of 2019, when we expect to begin shipping the new design targets to our facility, we will begin shipping these older design targets to our facility as well. We will extract the material from these older targets and determine its value to us in manufacturing sources. We will periodically continue to review any residual value of this cobalt material for potential impairment and make adjustments to the carrying value if deemed appropriate.

#### Nuclear Medicine Standards

Sales of nuclear medicine standards accounted for approximately 37% and 44%, of our total sales revenue in 2018 and 2017, respectively. Sales in this segment increased by \$556,550, or approximately 17%, to \$3,788,779 in 2018, as compared to \$3,232,229 in 2017.

In August 2017, affiliates of the Company purchased 75.5% of the member units of RadQual and at that time, we were named as one of the managing members of RadQual. Because of this change in member ownership and management, we have consolidated RadQual's operations within the nuclear medicine segment for financial reporting. For purposes of consolidation, all significant intercompany activity has been eliminated in the reporting process. Prior to this change in control, we reported our 24.5% interest in RadQual using the equity method of accounting.

We formed a 50/50 joint venture, TI Services, with RadQual in 2010, to distribute products and promote services for nuclear medicine, nuclear cardiology and PET imaging. Again, due to our affiliate members and management, we have also consolidated TI Services into our financial statements and have eliminated all intercompany transactions.

As a result of the change to consolidated reporting, revenue in this segment includes all of our 2018 sales to RadQual and to TI Services, our 50/50 joint venture with RadQual, with all intercompany sales eliminated. In 2017, revenue in this segment includes all sales to RadQual and TI Services prior to August 10, 2017, with non-controlling interest income eliminated for TI Services, and all sales of RadQual and TI Services from August 10, 2017 to December 31, 2017 with intercompany sales for this consolidated period eliminated.

We anticipate that our sales through RadQual will remain strong and that the change in RadQual member ownership and management will create significant future opportunities to work on new product development and customer service improvements. Additionally, we will continue to work closely with TI Services using their expertise in marketing and distribution strategies to strengthen nuclear medicine product sales through TI Services.

### Radiological Services

The following table presents radiological services revenue for the years ended December 31, 2018 and 2017:

<u>Radiological Services</u>	For the year ended		For the year ended		\$ change	% change	
	December 31, 2018	December 31, 2017	December 31, 2017	December 31, 2017			
Gemstone Processing \$	376,506	\$	382,263	\$	(5,757)	-2%	
Radiological Field Services	1,897,952		976,262		921,690	94%	
	\$	2,274,458	\$	1,358,525	\$	915,933	67%

Revenues from our Radiological Services segment accounted for approximately 22% of our total sales revenue in 2018 and approximately 18% in 2017. Sales in this segment increased by \$915,933, or approximately 67%, from \$1,385,525 in 2017, to \$2,274,458 in 2018. The increase in revenue is attributable to numerous radiological field service contracts awarded to us under the DOE's OSRP and through the IAEA.

Revenue from field service work performed in connection with both the DOE's OSRP and the IAEA accounts for the majority of revenue in this segment and was \$1,897,952 for the year ended December 31, 2018, and \$976,262 for the same period in 2017. This is an increase of \$921,690, or approximately 94%, and was the result of the increased number of these contracts were awarded to us by the DOE. In addition, we have numerous field service jobs under contract with the DOE that we expect to complete during 2019.

Revenue from gemstone processing for the year ended December 31, 2018, was \$376,506 compared to \$382,263 for the same period in 2017. This was a slight decrease of \$5,757, or approximately 2%. This slight decrease in revenue from gemstone processing is the combined result of the quantity of stones being held on our premises awaiting shipment requests from our customer, as well as fluctuations in the current market demand for luxury items such as jewelry. We expect similar fluctuations to occur in future periods.



Radiological Field Services accounted for approximately 83% of the Radiological Services segment sales in 2018 and approximately 72% in 2017. Gemstone processing accounted for approximately 17% of Radiological Services sales in 2018 and approximately 28% in 2017.

### Fluorine Products

There was no revenue to report from the Fluorine Products segment for 2018. We developed our fluorine products in conjunction with the uranium de-conversion project, in order to take advantage of the anticipated need for depleted uranium de-conversion services. We established the Fluorine Products segment in 2004 to support production and sale of the gases produced using our FEP. Our FEP patents offer a unique opportunity to provide certain high-purity fluoride compounds while also offering a for fee de-conversion service to the uranium enrichment industry. From 2004 to 2012, we used a pilot facility to develop production processes for various high-purity products and to test methods of scaling up the size of FEP production in support of a planned de-conversion facility in Lea County, New Mexico. In 2012, we completed our testing of individual components and analytical processes and late in 2013 we closed the pilot plant facility. Also, in 2013, we made the decision to place continued formal design work on the proposed de-conversion facility on hold until such time that we are able to secure additional de-conversion services contracts. Until such time that work resumes on the project, we will limit our expenditures to essential items such as maintenance of the NRC license, land use agreements, communication with our prospective FEP product customers, and interface with the State of New Mexico and Lea County officials.

During 2018, we incurred \$122,651 of planning and other expenses related to the de-conversion project, as compared to \$209,110 in 2017. This is a decrease of \$86,459, or approximately 41%, and is the result of decreased consulting and interest costs allocated to this project in 2018. We expect that our costs in the future will be limited to essential items such as continued interactions with our customers, the state of New Mexico, and Lea County, New Mexico.

We are no longer reporting transportation activities in a separate business segment. In the past, the business activities previously reported in this segment were primarily derived from our radiological services and cobalt products business segments. Because of this, beginning in 2018, we began combining transportation services financial activities within these other segments to provide more qualitative reporting. Prior period results for the affected segments have been retrospectively revised to reflect this change.

*Cost of Revenues and Gross Profit*

Cost of revenues for 2018 was \$5,678,530 as compared to \$4,182,705 in 2017, an increase of \$1,495,825, or approximately 36%. Gross profit percentage increased to 45% for 2018, from 44% in 2017. The following table presents revenues and cost of revenues information:

	<b>For the year ended</b>		<b>For the year ended</b>		<b>% of Total</b>
	<b>December 31, 2018</b>	<b>% of Total</b>	<b>December 31, 2017</b>	<b>(as adjusted)</b>	<b>Revenues</b>
		<b>Revenues 2018</b>			<b>2017</b>
Total Revenues	\$ 10,368,823	100%	\$ 7,420,390		100%
Cost of Revenues					
Radiochemical Products	\$ 1,710,244	17%	\$ 1,709,820		23%
Cobalt Products	1,262,009	12%	105,055		1%
Nuclear Medicine Standards	1,797,795	17%	1,827,311		25%
Radiological Services	908,482	9%	540,519		7%
Fluorine Products	-	-	-		-
Total Segments	\$ 5,678,530	55%	\$ 4,182,705		56%
Gross Profit	\$ 4,690,293		\$ 3,237,685		
Gross Profit %		45%			44%

During 2018, we continued to monitor and control direct costs. Raw materials used in our radiochemical products, nuclear medicine standards, and our cobalt products segments represent the bulk of direct costs for 2018. In each of these business segments, we have purchase agreements in place with suppliers to obtain optimum pricing. Periodically, the cost increases for these raw materials or we may also use alternate supply sources for our material which might not carry pricing as favorable as our contracted suppliers. Specifically, in our cobalt products segment, we contracted with a supplier for cobalt-60 material used in source production which increased our direct costs in that business segment. We have turned to alternate suppliers for this material until we are able to obtain cobalt from the targets currently undergoing irradiation at the DOE's ATR.

Throughout 2018, in our nuclear medicine product segment, we maintained a low cost of scrapped material as a result of adjustments made in the manufacturing processes in this segment. With the exception of the cost of cobalt material, we are not aware of any significant future price increases that may potentially affect our cost of revenues.

### *Operating Costs and Expenses*

Total operating costs and expenses for 2018 were \$4,980,357, as compared to \$5,303,258 in 2017. This is a decrease of \$322,901, or approximately 6%.

The following table presents operating costs and expenses for 2018 as compared to 2017:

	<b>For the year ended</b>	<b>For the year ended</b>		
	<b>December 31, 2018</b>	<b>December 31, 2017</b>	<b>% change</b>	<b>\$ change</b>
Operating Costs and Expenses:				
Salaries and Contract Labor	2,311,710	2,118,257	9%	193,453
General, Administrative and Consulting	2,200,044	2,808,303	-22%	(608,259)
Research and Development	468,603	376,698	24%	91,905
Total operating expenses	4,980,357	5,303,258	-6%	(322,901)

Salaries and contract labor expense increased by \$193,453, or approximately 9%, which is the result of annual salary and wage increases and periodic performance awards made during the year as well as the addition of new personnel. In addition, non-cash equity compensation expense recorded for the year ended December 31, 2018 was \$188,476 as compared to \$163,873 for the same period in 2017. This is an increase of \$24,603, or approximately 15%, and is the result of equity compensation recorded for outstanding stock options granted to employees and non-employees.

General administrative and consulting expenses decreased to \$2,200,044 in 2018, as compared to \$2,808,303 in 2017, a decrease of \$608,259, or approximately 22%. This significant decrease is due to the conclusion of arbitration proceedings and the related decrease in legal costs which concluded in December 2017. Additionally, our licensing costs decreased during the year ended December 31, 2018 as compared to the same period in 2017, as a result of

certain facility licensing fees incurred in 2017 but not incurred in 2018.

Research and development expense was \$468,603 for 2018, compared to \$376,698 for 2017. This is an increase of \$91,905, or approximately 24%. The majority of this increase in research and development expense is the result of increased costs associated with development work being done in our Radiochemical Products segment, specifically, increased costs pertaining to support work for the submittal and monitoring of the abbreviated new drug application to the FDA. During both 2018 and 2017 we limited further investment in the planned de-conversion facility and limited further spending on the project only for expenses necessary to maintain licensing and continued interactions with New Mexico and Lea County. We will continue to delay further engineering work on the de-conversion project until we are able to secure additional contracts for de-conversion services.

### *Other Income (Expense)*

The following table presents other income (expense) for 2018 as compared to 2017:

	<b>For the year ended</b>		<b>For the year ended</b>	
	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Other income (expense)	\$	86,796	\$	(1,203,234)
Equity in net income of affiliate		-		53,173
Interest income		9,428		3,051
Interest expense		(470,106)		(509,740)
Total other (expense)	\$	(373,882)	\$	(1,656,750)

Other income was \$86,796 for 2018 as compared to other expense of \$1,203,234 for 2017. For the year ended December 31, 2017, we recorded a loss on the forfeit of an asset, discussed above, in the amount of \$255,000. This amount represented the cash deposit on the AOS shipping container that we recorded as an asset on our consolidated balance sheets. When we were informed after arbitration proceedings that we would not recover the deposit, we recorded the \$255,000 loss as other expense.

Also, in August 2017, affiliates of the Company, including our Chairman of the Board and Chief Executive Officer, acquired a 75.5% interest in RadQual. Prior to this ownership change, we reported our investment in RadQual as an asset on our consolidated balance sheets in the amount of \$1,436,843. At August 10, 2017, the fair market value of our investment in RadQual was determined to be \$489,999 and we recorded a loss of \$946,844 as other expense for the year ended December 31, 2017, to adjust the carrying value to fair value.

Interest income in 2018 was \$9,428 as compared to \$3,051 in 2017. This increase of \$6,377 was due to interest earned on increased cash balances held at banks and other institutions in interest-bearing accounts.

Interest expense decreased during 2018, to \$470,106, from \$509,740 in 2017. This is a decrease of \$39,634, or approximately 8%. This decrease in interest expense is the combined result of a decrease in interest paid on our Notes (as defined below), which carried an interest rate of 8% per year prior to their maturity and repayment in full in July 2017 and an increase in dividends recorded as interest, paid on Series C Preferred Stock that was issued in 2017 and for which the first annual interest payment was made in 2018. The majority of interest expense recorded in 2017 was related to the Notes. Interest expense recorded for the Notes was \$294,382 for the year ended December 31, 2017, whereas no interest was recorded for the Notes in 2018 as a result of the July 2017 repayment at maturity. In addition, dividends accrued on Series C Preferred Stock, which was issued as a result of the amended notes, totaled \$215,358 and was recorded as interest expense for 2017. Dividends accrued on Series C Preferred Stock totaled \$257,002 and were recorded as interest expense for 2018.

In connection with the 2013 Promissory Note (as defined below), we recorded \$30,000 of interest expense for each of 2018 and 2017, and approximately \$27,000 of non-cash interest expense related to a debt discount feature on the 2013 Promissory Note for 2018 and 2017.

In September 2016, we borrowed an aggregate of \$360,000 from our Chairman of the Board and one of our directors (the 2016 Promissory Note ). The 2016 Promissory Note bears interest at 6% per annum, which was payable upon maturity on March 31, 2017 and was secured by all unencumbered assets. Per the terms of the 2016 Promissory Note, at any time, the lenders could settle any or all of the principal and accrued interest with shares of our common stock, or our other securities, based on the average closing price of our common stock over a 20-day period. In February 2017, all principal plus accrued interest under the 2016 Promissory Note was converted into shares of our Series C Preferred Stock and warrants that we offered through a private placement transaction, as described herein.

### *Net Loss*

Our net loss was \$844,576 in 2018, compared to a net loss of \$3,757,284 in 2017. This is a decrease in loss of \$2,912,708, or approximately 78%. Our decrease in net loss is the result of our approximate 40% increase in revenue, the approximate 4% decrease in operating expense and the approximate 77% decrease in other expense, all of which are discussed above.



### *Liquidity and Capital Resources*

On December 31, 2018, we had cash and cash equivalents of \$828,039 compared to \$409,338 at December 31, 2017. Net cash provided by operating activities was \$97,159 in 2018, compared to net cash used in operating activities of \$465,744 in 2017. This represents a decrease in cash used in operating activities of approximately \$563,000.

Accounts receivable at December 31, 2018 were \$820,370 as compared to \$635,026 at December 31, 2017. Historically, we have not written off any accounts receivable, and there were no accounts written off during 2018.

Inventories at December 31, 2018 were \$2,765,729 as compared to \$1,951,513 at December 31, 2017. The majority of our inventory consists of irradiated material held at the site of the DOE's prime-operating contractor, which controls the ATR located outside of Idaho Falls, Idaho. For 2018, our target inventory accounted for approximately 89% of our work in process inventory and includes cobalt targets of an older design as well as irradiated cobalt material under a new contract with the DOE. During 2017, our target inventory accounted for approximately 92% of our work in process inventory. In 2018 and 2017, as part of our year-end procedures, we evaluated our older target inventory for impairment and concluded that these older design targets have varying but significant degrees of market value depending on any additional costs we may have to incur to transport them to our facility for processing.

Included in our raw material inventory are raw cobalt, strontium and other raw elements. During 2017 we wrote-off approximately \$1,500 to expense for raw material we believed to be of no future value to us. We had no similar write-down in 2018. Raw material inventory is regularly reviewed for obsolescence.

Included in our work in process inventory are in-process and completed nuclear medicine products, irradiated cobalt and nuclear medicine-related materials and products.

We incurred a net loss of \$844,576, for the year ended December 31, 2018, and have an accumulated deficit of \$126,541,421 since inception. To date, our operations and plant and equipment expenditures have been funded principally from proceeds from public and private sales of debt and equity as well as through asset sales.

Net cash used in investing activities was \$86,320 for 2018 and net cash provided by investing activities for 2017 was \$80,180. During 2018, we used \$86,320 to purchase equipment. During 2017, we used \$110,115 to purchase property and equipment and intangible assets, acquired cash through consolidation accounting of RadQual of \$81,184,



and received member distributions from our investment in RadQual in the amount of \$109,111.

Financing activities provided cash of \$189,260 for the year ended December 31, 2018. We received proceeds from the sale of common stock in the amount of \$76,697 and issued debt for proceeds of \$120,000. In addition, we made principal payments on loans in the amount of \$7,437. During 2017, we recorded proceeds from the issuance of preferred stock, as a result of exchanging Series C Preferred stock for convertible notes, in the amount of \$2,860,000. In addition, in 2017, we recorded \$32,286 of contributed cash as part of our consolidated reporting of RadQual, and we made principal payments on loans in the amount of \$2,096,952.

In July 2012, we entered into a securities purchase agreement with certain institutional and private investors pursuant to which we sold convertible, unsecured debentures for an aggregate of \$3,069,900 (the Notes). The Notes carried an interest rate of 8% and had were scheduled to mature in July 2017. The Notes were convertible at any time into shares of our common stock at an initial conversion price of \$0.225 per share, subject to adjustment under certain conditions. Each investor also received a common stock purchase warrant to purchase common stock equal to 25% of the shares issuable upon conversion of the 8% Notes. These warrants were immediately exercisable at a price of \$0.30 per share and had a term of five years.

In February 2017, we entered into subscription agreements with certain investors, including two of our directors, for the sale of (i) an aggregate of 3,433 shares of Series C Preferred Stock, and (ii) Class M warrants to purchase an aggregate of 17,165,000 shares of our common stock (Class M Warrants), for gross proceeds of \$3,433,000. The Series C Preferred Stock accrues dividends at a rate of 6% per annum, payable annually on February 17th of each year, commencing on February 17, 2018. Shares of Series C Preferred Stock are convertible at the option of the holder at any time into shares of our common stock at an initial conversion price equal to \$0.10 per share, subject to adjustment. At any time after February 17, 2019, if the volume-weighted average closing price of our common stock over a period of 90 consecutive trading days is greater than \$0.25 per share, we may redeem all or any portion of the outstanding Series C Preferred Stock at the original purchase price per share plus any accrued and unpaid dividends, payable in shares of common stock. All outstanding shares of Series C Preferred Stock must be redeemed by us on February 17, 2022 at the original purchase price per share, payable in cash or shares of common stock, at the option of the holder. Holders of Series C Preferred Stock do not have any voting rights, except as required by law and in connection with certain events as set forth in the Statement of Designation of the Series C Preferred Stock. The Class M Warrants are immediately exercisable at an exercise price of \$0.12 per share, subject to adjustment as set forth in the warrant, and have a term of five years.

In March 2017, we amended the Notes and gave the noteholders certain additional rights (the Amendment). Pursuant to the Amendment, the Notes were modified to provide each holder the right, at the holder's option and exercisable prior to May 12, 2017, to convert all or any portion of the principal amount of the Notes, plus accrued but unpaid interest, into shares of our Series C Preferred Stock at a conversion price of \$1,000 per share. Holders that elected to convert their Notes into Series C Preferred Stock received a warrant to purchase up to 3,750 shares of our common stock for each share of Series C Preferred Stock received upon conversion of the Notes, with each warrant having a five-year term, a cashless exercise feature, and an exercise price of \$0.10 per share of common stock. As a result of this modification, an aggregate of \$780,000 of the Notes was converted to 780 shares of Series C Preferred Stock and 2,925,000 Class N Warrants. Residual interest was also paid to Note holders who converted was \$1,515. The Notes matured in July 2017 and were repaid in full.

In December 2013, we entered into a promissory note agreement with our chairman of the Board and one of our major shareholders pursuant to which we borrowed \$500,000. The \$500,000 note bears interest at 6% and was originally due June 30, 2014. At any time, the lenders may settle any or all of the principal and accrued interest with shares of the Company's common stock. In connection with the note, each of the two lenders was issued 5,000,000 warrants to purchase shares of the Company's common stock at a purchase price of \$0.06 per share. In June 2014, we renegotiated the terms of this promissory note. Pursuant to the modification, the maturity date was extended to December 31, 2017, and each Lender was granted an additional 7,500,000 warrants to purchase shares of the Company's common stock at \$0.06 per share. The warrants were immediately exercisable. In December 2016, the note was modified to extend the maturity date to December 31, 2022, with all remaining terms remaining unchanged. On December 23, 2018, all of the warrants expired.

In March 2016, we entered into a note payable for the purchase of a vehicle. The principal amount financed was \$47,513. The term of the note is six years and the note carries an interest rate of 6.66%. Monthly payments are \$805 and the note matures April 2022. The note is secured by the vehicle.

In August 2017, we entered into a promissory note agreement with our Chairman of the Board, pursuant to which we borrowed \$60,000 (the 2017 Promissory Note). The 2017 Promissory Note bears interest at 5% per annum and was scheduled to mature on June 30, 2018 and was unsecured. On February 12, 2019, the maturity date was extended to July 31, 2019. At December 31, 2018, accrued interest on the 2017 Promissory Note totaled \$4,117.

In April 2018, we borrowed \$120,000 from our Chief Executive Officer and Chairman of the Board pursuant to a short-term promissory note (the 2018 Promissory Note). The 2018 Promissory Note accrues interest at 6% per annum, which is payable upon maturity of the 2018 Promissory Note. The 2018 Promissory Note is unsecured and originally matured on August 1, 2018. At any time, the holder of the 2018 Promissory Note may elect to have any or all of the principal and accrued interest settled with shares of our common stock based on the average price of the shares over the previous 20 trading days. Pursuant to an amendment to the 2018 Promissory Note on June 29, 2018, the maturity

date was extended to March 31, 2019 with all other provisions remaining unchanged. Pursuant to a second amendment to the 2018 Promissory Note on February 12, 2019, the maturity date was extended to July 31, 2019. At December 31, 2018, accrued interest on the 2018 Promissory Note totaled \$5,220.

In February 2019, we borrowed \$185,474 from RadQual pursuant to a short-term promissory note with a stated interest rate of 6% and a maturity date of July 31, 2019. The promissory note is unsecured.

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

### **Off-Balance Sheet Arrangements**

As of December 31, 2018, we had no material off-balance sheet arrangements or obligations.

### **Goals for 2019**

Based upon the investments we have made in our facilities and investments we anticipate making, and based on projects, and products developed in 2018, we have the following goals for 2019:

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Support the review and approval of our abbreviated new drug application by the U.S. FDA for our sodium iodide product;

.

Pursue additional field service work through both the DOE's OSRP program and other domestic and international programs utilizing our mobile hot cell and highly experienced personnel;



.  
Begin production development of one or more new generic drug products to further enhance revenue production within our Radiochemical segment and identify additional future generic product opportunities;

.  
Expand sales of our nuclear medicine products and increase cash flow by using our management opportunity with RadQual to expand international sales and utilize the marketing expertise of our joint venture, TI Services;

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

.  
Continue to support essential tasks related to our de-conversion project and continue to pursue any opportunities to obtain additional contracts for depleted uranium de-conversion.

### **Critical Accounting Policies**

*Revenue recognition* - We recognize revenue when products ship or services are performed according to predetermined amounts per customer contract obligations or milestones. We have contracted with several customers for the purchase of cobalt-60 material which is currently undergoing irradiation. We have collected advance payments from these customers for project management and up-front handling and irradiation charges and these prepayments have been recorded as unearned revenue. Our estimated future recognition of this unearned revenue is based on an irradiation completion and shipment schedule and on product shipment dates and service performance dates.

*Patents and other intangibles* - We amortize our patents and intangibles using the straight-line method over their estimated useful lives. Patents and other intangibles are evaluated for impairment annually or when events or circumstances arise that indicate the existence of impairment. We evaluate the recoverability of 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 costs significantly in excess of the amount originally expected for the acquisition of an asset. If impairment indicators exist, we measure 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.

*Impairment of long-lived assets* - As part of our year-end procedures we test our long-lived assets for signs of impairment when indicators of impairment exist. If impairment indicators exist, we measure the carrying value of the asset against its estimated future cash flows. If the expected future value is less than the carrying value of the asset an impairment loss would be recognized.

### **Critical Accounting Estimates**

*Asset retirement obligation* The asset retirement obligation is based on the expected future cash flows of the decommissioning funding plan. The decommissioning funding plan is based on the estimated number of hours of specific personnel, estimated wages and disposal costs. Once the decommissioning funding plan has been developed, we use a discount rate to determine the estimated current value of the liability.

### **New Accounting Standards**

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes all existing revenue recognition requirements, including most industry specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. The FASB has subsequently issued the following amendments to ASU 2014-09 which have the same effective date and transition date of January 1, 2018:

In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date.

In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations, which clarifies the implementation guidance on principal versus agent considerations.

In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance.

In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients related to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers.

In December 2016, the FASB issued ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, which amends certain narrow aspects of the guidance issued in ASU 2014-09 including guidance related to the disclosure of remaining performance obligations and prior-period performance obligations, as well as other amendments to the guidance on loan guarantee fees, contract costs, refund liabilities, advertising costs and the clarification of certain examples.

We have evaluated and implemented this guidance, particularly as it pertains to the Company's cobalt products segment where pre-payments are received from customers and has determined that this guidance will not have a material impact on its consolidated financial statements. We maintain the practice of identifying performance obligations under customer contracts and recognizes revenue only as contractual milestones are met and in an amount that is in accordance with the contract price allocated to that performance obligation. Unearned revenue and pre-payments on contracts are recorded as either short-term or long-term liability on our consolidated balance sheets with revenue recognized in the period in which we fulfill the performance obligation.

In February 2016, the FASB issued ASU 2016-02, Leases which was issued to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The amendments in ASU 2016-02 are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We have completed our assessment and will record significant asset and liability balances in connection with our leased property. We expect to record an adjustment of approximately \$800,000 in January 2019, to both the assets and liabilities to recognize a lease related to real estate.



In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows* which was issued to improve uniformity in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments in ASU 2016-15 were effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. We adopted this guidance effective January 1, 2018, and it did not have any impact on the Company's consolidated statements of cash flows.

We adopted ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* (a consensus of the FASB Emerging Issues Task Force) (ASU 2016-18), effective January 1, 2018. This update clarified that transfers between cash and restricted cash are not reported as cash flow activities in the statements of cash flows. As such, restricted cash amounts are included with cash and cash equivalents in the beginning-of-period and end-of-period total amounts on the statements of cash flows. We applied this update retrospectively, which resulted in an adjustment to the beginning-of-period and end-of-period total amounts on the condensed consolidated statement of cash flows for the year ended December 31, 2017 to include restricted cash balances from those periods.

In June 2018, the FASB issued ASU 2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, which expands the scope of Topic 718 to include all share-based payment transactions for acquiring goods and services from nonemployees. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which the grantor acquires goods and services to be used or consumed in its own operations by issuing share-based payment awards. ASU 2018-07 also clarifies that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. The amendments in ASU 2018-07 are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We have assessed this topic and have concluded that there will be no impact of this guidance on our consolidated financial statements.

#### **Item 7A.**

#### **QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are a smaller reporting company, 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

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**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 Exchange Act) that are designed to ensure information required to be disclosed in our reports that are filed or submitted under the Exchange Act, is 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 Chief Executive Officer (CEO) and Chief Financial Officer (CFO), has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2018. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2018.

### **Management's Annual Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act). 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 U.S. 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 (2013)*, 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, 2018.

### **Changes in Internal Control over Financial Reporting**

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2018, that have materially affected, or are reasonable likely to materially affect, our internal control over financial reporting.



**Item 9B.**

**OTHER INFORMATION**

None.

**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 and 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.intisoid.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, in each case that is required to be disclosed, 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 2019 annual meeting of shareholders, which will be filed with the SEC within 120 days after December 31, 2018.

**Item 11.**

**EXECUTIVE COMPENSATION**

The information required by this item is incorporated by reference to our definitive proxy statement for our 2019 annual meeting of shareholders, which will be filed with the SEC within 120 days after December 31, 2018.

**Item 12.**

**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this item is incorporated by reference to our definitive proxy statement for our 2019 annual meeting of shareholders, which will be filed with the SEC within 120 days after December 31, 2018.

**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 2019 annual meeting of shareholders, which will be filed with the SEC within 120 days after December 31, 2018.

**Item 14.**

**PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this item is incorporated by reference to our definitive proxy statement for our 2019 annual meeting of shareholders, which will be filed with the SEC within 120 days after December 31, 2018.

**Item 15.**

**EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

*(a)(1) and (a)(2) Financial Statements*

See the index to and the financial statements beginning on page 28, which financial statements are incorporated herein by reference.

*(a)(3) Exhibits*

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

3.1

Restated Certificate of Formation of the Company, 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

Statement of Designation of the Series C Convertible Redeemable Preferred Stock of the Company (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed on February 24, 2017).

3.3

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 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).



4.2

Form of Class M Warrant (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on February 24, 2017).

4.3

Form of Class N Warrant (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 18, 2017).

10.1

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).

10.2

International Isotopes Inc. Amended and Restated 2015 Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on July 30, 2018).

10.3

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).

10.4

Option to Purchase and Right of First Refusal (4137 Commerce Circle), dated May 2, 2003 between the Company and Adrian Rand Robison and Dorothy Robison (incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-KSB for the year ended December 31, 2004).

10.5

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

10.6

Memorandum of Agreement, dated October 22, 2009, between the Company and the 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).

10.7

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).

10.8

Modification #1 to the Gemstone Processing Agreement, dated November 28, 2016, between the Company and QualiTech, Inc. (incorporated by reference to Exhibit 10.9 of the Company's Annual Report on Form 10-K for the year ended December 31, 2016).

10.9

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).

10.10

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).

10.11

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).

10.12

Registration Rights Agreement, dated February 17, 2017, among the Company and the purchasers named therein (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on February 24, 2017).

10.13

Amended and Restated Employment Agreement, dated May 16, 2012, between the Company and Stephen 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).

10.14

Modification #1 to the Amended and Restated Employment Agreement, dated October 12, 2016, between the Company and Stephen Laflin (incorporated by reference to Exhibit 10.15 of the Company's Annual Report on Form 10-K for the year ended December 31, 2016).

10.15

Promissory Note Agreement, dated December 23, 2013, among the Company, Ralph Richart and John McCormack (incorporated by reference to Exhibit 10.19 of the Company's Annual Report on Form 10-K for the year ended December 31, 2013).



10.16

Modification #1 to the Promissory Note Agreement, dated June 30, 2014, among the Company, Ralph M. Richart and John M. McCormack (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014).

10.17

Modification #2 to the Promissory Note Agreement, dated February 3, 2017, among the Company, Ralph M. Richart and John M. McCormack (incorporated by reference to Exhibit 10.18 of the Company's Annual Report on Form 10-K for the year ended December 31, 2016).

10.18

Isotope and Technical Service Order Form, dated October 2, 2014, between the Company and the U.S. Department of Energy (incorporated by reference to Exhibit 10.18 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014).\*\*

10.19

Cobalt-60 Pellet Supply Agreement, dated April 7, 2015, between Nordion (Canada) Inc., as general partner of and on behalf of Nordion Sterilization LP, and International Isotopes Inc. (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015).\*\*

10.20

First Modification to Cobalt-60 Pellet Supply Agreement, effective April 21, 2017, between International Isotopes Inc. and Nordion (Canada) Inc., as general partner of and on behalf of Nordion Sterilization LP (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on May 10, 2017).\*\*

10.21

Amendment to 8% Convertible Notes, dated March 24, 2017, between Euro Pacific Capital Inc. and they Company (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on March 30, 2017).

21.1

Subsidiaries (incorporated by reference to Exhibit 21 of the Company's Annual Report on Form 10-KSB for the year ended December 31, 2005).

23.1+

Consent of Haynie & Company.

23.2+

Consent of Eide Bailly LLP.

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.

101+

The following financial statements, formatted in XBRL: (i) Consolidated Balance Sheets as of December 31, 2018 and 2017, (ii) Consolidated Statements of Operations for the years ended December 31, 2018 and 2017, (iii) Consolidated Statement of Shareholders Equity for the years ended December 31, 2018 and 2017, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2018 and 2017 and (v) Notes to Consolidated Financial Statements.

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

\*\* Confidential treatment has been granted as to certain portions, which portions were omitted and filed separately with the Securities and Exchange Commission pursuant to a confidential treatment request.

+ Filed herewith.

\* Furnished herewith.

**Item 16.**

**FORM 10-K SUMMARY**

None.



March 19, 2019

By: /s/ Christopher Grosso  
Christopher Grosso  
Chairman of the Board of Directors



**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**

**CONSOLIDATED FINANCIAL STATEMENTS**

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## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors  
International Isotopes, Inc. and Subsidiaries  
Idaho Falls, Idaho

### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of International Isotopes, Inc. and Subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of operations, stockholders' equity, and cash flows, for the years then ended, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the International Isotopes, Inc. and Subsidiaries as of December 31, 2017 and 2016, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### **Basis for Opinion**

These consolidated financial statements are the responsibility of the entity's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to International Isotopes, Inc. and Subsidiaries in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. International Isotopes, Inc. and Subsidiaries is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits

we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risk of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

*/s/ Eide Bailly LLP*

We have served as International Isotopes, Inc. and Subsidiaries' auditor since 2014.

Salt Lake City, Utah

March 30, 2018

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## INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

## Consolidated Balance Sheets

	December 31,	
	2018	2017
Assets		
Current assets		
Cash and cash equivalents	\$ 828,039	\$ 409,338
Accounts receivable	820,370	635,026
Inventories (Note 4)	2,765,729	1,951,513
Restricted cash - due to former member	-	387,455
Prepays and other current assets	315,042	344,627
Total current assets	4,729,180	3,727,959
Long-term assets		
Restricted cash	622,428	453,575
Property, plant and equipment, net (Note 5)	1,906,182	1,935,535
Goodwill (Note 3)	1,384,255	1,376,584
Patents and other intangibles, net (Note 6)	4,348,031	4,511,641
Total long-term assets	8,260,896	8,277,335
Total assets	\$ 12,990,076	\$ 12,005,294
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	\$ 2,285,165	\$ 1,619,229
Accrued liabilities	939,918	1,139,477
Current portion of unearned revenue	3,783,541	2,688,128
Current portion of related party notes payable (Note 7)	180,000	60,000
Current installments of notes payable (Note 7)	7,956	7,437
Total current liabilities	7,196,580	5,514,271
Long-term liabilities		
Related party notes payable, net of current portion and debt discount (Note 7)	446,356	419,534
Notes payable, net of current portion (Note 7)	20,786	28,741
Unearned revenue, net of current portion	7,500	688,980
Obligation for lease disposal costs (Note 12)	507,968	478,424
Mandatorily redeemable convertible preferred stock (Note 9)	4,656,752	4,528,417

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Total long-term liabilities	5,639,362	6,144,096
Total liabilities	12,835,942	11,658,367
Commitments and contingencies (Note 11)	-	-
Stockholders' equity (Note 9)		
Common stock, \$0.01 par value; 750,000,000 shares authorized; 413,168,301 and 406,790,703 shares issued and outstanding respectively	4,131,683	4,067,907
Additional paid-in capital	120,805,997	120,398,620
Accumulated deficit	(126,541,421)	(125,696,845)
Deficit attributable to International Isotopes Inc. stockholders	(1,603,741)	(1,230,318)
Equity attributable to noncontrolling interest	1,757,875	1,577,245
Total equity	154,134	346,927
Total liabilities and stockholders' equity	\$ 12,990,076	\$ 12,005,294

See accompanying notes to consolidated financial statements.

**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES****Consolidated Statements of Operations**

	<b>Years ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
Sale of product	\$ 10,368,823	\$ 7,420,390
Cost of product	5,678,530	4,182,705
Gross profit	4,690,293	3,237,685
Operating costs and expenses:		
Salaries and contract labor	2,311,710	2,118,257
General, administrative and consulting	2,200,044	2,808,303
Research and development	468,603	376,698
Total operating expenses	4,980,357	5,303,258
Operating loss	(290,064)	(2,065,573)
Other income (expense):		
Other income (expense)	86,796	(256,390)
Loss on equity method investment	-	(946,844)
Equity in net income of affiliate	-	53,173
Interest income	9,428	3,051
Interest expense	(470,106)	(509,740)
Total other (expense)	(373,882)	(1,656,750)
Net loss	(663,946)	(3,722,323)
Income attributable to noncontrolling interest	180,630	34,961
Net loss attributable to International Isotopes Inc.	\$ (844,576)	\$ (3,757,284)
Net loss per common share - basic and diluted	\$ -	\$ (0.01)
Weighted average common shares outstanding - basic and diluted	411,071,598	406,361,656

See accompanying notes to consolidated financial statements.

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## INTERNATIONAL ISOTOPES INC AND SUBSIDIARIES

## Consolidated Statement of Stockholders' Equity

Years ended December 31, 2018 and 2017

	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Equity Attributable to Internat'l Isotopes Shareholders	Equity Attributable to Noncontrolling Interest	Total Equity
Balance December 31, 2016	404,999,758	\$ 4,049,998	\$ 119,595,535	\$ (121,939,561)	\$ 1,705,972	\$ 50,169	\$ 1,756,141
Shares issued under employee stock purchase plan	93,865	938	5,177	-	6,115	-	6,115
Increase in noncontrolling interest through consolidation accounting	-	-	-	-	-	1,492,115	1,492,115
Shares issued for exercise of employee stock options	1,487,255	14,873	(5,540)	-	9,333	-	9,333
Stock grant	209,825	2,098	(2,098)	-	-	-	-
Warrants issued with preferred C shares	-	-	641,673	-	641,673	-	641,673
	-	-	163,873	-	163,873	-	163,873

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Stock based  
compensation

Net loss	-	-	-	(3,757,284)	(3,757,284)	34,961	(3,722,323)
Balance December 31, 2017	406,790,703	4,067,907	120,398,620	(125,696,845)	(1,230,318)	1,577,245	346,927
Shares issued under employee stock purchase plan	114,170	1,142	5,555	-	6,697	-	6,697
Shares issued for exercise of employee stock options	3,764,957	37,650	32,350		70,000	-	70,000
Stock issued in lieu of dividends on preferred C shares	2,288,646	22,886	183,094	-	205,980	-	205,980
Stock grant	209,825	2,098	(2,098)	-	-	-	-
Stock based compensation	-	-	188,476	-	188,476		188,476
Net loss	-	-	-	(844,576)	(844,576)	180,630	(663,946)
Balance December 31, 2018	413,168,301	\$ 4,131,683	\$ 120,805,997	\$ (126,541,421)	\$ (1,603,741)	\$ 1,757,875	\$ 154,134

See accompanying notes to consolidated financial statements.

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## INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES

## Consolidated Statements of Cash Flows

	<b>Years ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
Cash flows from operating activities:		
Net loss	\$ (663,946)	\$ (3,722,323)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Net income in equity method investment	-	(53,173)
Depreciation and amortization	267,719	241,436
Loss on disposal of property, plant and equipment	3,893	-
Loss on adjustment of investment	-	946,844
Accretion of obligation for lease disposal costs	29,544	9,450
Accretion of beneficial conversion feature	129,373	5,112
Equity based compensation	188,476	163,873
Noncash interest expense	25,785	173,534
Changes in operating assets and liabilities:		
Accounts receivable	(185,344)	539,759
Prepays and other current assets	29,585	391,784
Inventories	(814,216)	(475,273)
Unearned revenues	413,933	404,340
Accounts payable and accrued liabilities	672,357	908,893
Net cash provided by (used in) operating activities	97,159	(465,744)
Cash flows from investing activities:		
Cash acquired through consolidation accounting	-	81,184
Dividends received from equity method investment	-	109,111
Purchase of property, plant and equipment	(86,320)	(110,115)
Net cash (used in) provided by investing activities	(86,320)	80,180
Cash flows from financing activities:		
Proceeds from sale of stock	76,697	15,447
Proceeds from issuance of debt - related party	120,000	60,000
Cash contributed by non-controlling interest	-	32,286
Proceed from sale of preferred stock	-	2,860,000
Principal payments on notes payable	(7,437)	(2,096,952)
Net cash provided by financing activities	189,260	870,781
Net change in cash and cash equivalents	200,099	485,217
Cash and cash equivalents at beginning of year	1,250,368	765,151



INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

NOTE 1 DESCRIPTION OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

*Description of business* International Isotopes Inc. (the Company or INIS ) 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 TI Services, LLC, ( TI Services ), and the accounts of RadQual, LLC (RadQual). TI Services is headquartered in Youngstown, Ohio and was formed with RadQual in December 2010 to distribute products and services for nuclear medicine, nuclear cardiology and Positron Emission Tomography (PET) imaging. RadQual is a global supplier of molecular imaging quality control devices, and is headquartered in Idaho Falls, Idaho. In addition, the Company owns a 24.5% interest in RadQual. In August 2017, affiliates of the Company purchased 75.5% of RadQual and at the time the Company was named as one of the two managing members of RadQual. As a result of this ownership change, the Company has significant influence in management decisions with regard to RadQual s business operations.

*Nature of Operations* INIS and its subsidiaries, TI Services and RadQual (collectively, the Company, we, our or 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, pharmacy compounding, and clinical applications. The Company also distributes a varied selection of radioisotopes and radiochemicals for medical and clinical research applications. The Company also provides a host of transportation, recycling, and radiological field services on a contract basis for customers and holds several patents for a fluorine extraction process that it plans to use in conjunction with a proposed commercial depleted uranium de-conversion facility which would be located in Lea County, New Mexico (the De-Conversion Facility ). The Company s business consists of five business segments: Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, and Radiological Services Beginning in 2018, the Company began reporting the Transportation segment activity, which was previously reported as a separate segment, within its other business segments. The Company s headquarters and all operations, with the exception of TI Services, are located in Idaho Falls, Idaho.

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 two to three years. Accordingly, preliminary payments received on cobalt contracts, where shipment will not take place for greater than the operating cycle, have been recorded as unearned revenue and, depending upon estimated ship dates, classified under either current or long-term liabilities on the Company's consolidated balance sheets. These unearned revenues will be recognized as revenue in the future period during which the cobalt shipments begin. 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 and its wholly owned subsidiaries, as well as its 24.5% interest in RadQual, and its 50% owned joint venture, TI Services.

Because the Company controls a greater than 50% direct and indirect ownership interest in TI Services, the operating results and financial condition of TI Services, are consolidated with those of the Company. In addition, because the Company has significant management control over RadQual's operations, all of RadQual's operating results and financial condition are consolidated with those of the Company. All significant intercompany accounts and transactions have been eliminated during 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 \$828,039 and \$409,338 at December 31, 2018 and 2017, respectively, consist of operating accounts and money market accounts. 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, 2018 and 2017, the Company had pledged cash on deposit in a money market account valued at \$622,428 and \$453,575, respectively, as security for a surety bond. The surety bond is required as part of the Company's operating license agreement with the Nuclear Regulatory Commission (NRC).

In addition, at December 31, 2017, the Company reported restricted cash in the amount of \$387,455 which represented a cash contingency held by RadQual as a result of the sale of membership units in RadQual in August 2017. The purchasing members of RadQual stipulated that a cash contingency be created to cover expenses and other debt incurred by the prior managing member of RadQual. This determination was concluded in 2018 and the remaining cash was distributed to the prior member. At December 31, 2018, there was no restricted cash held by RadQual.

The Company maintains its cash accounts in various deposit accounts, the balances of which are periodically in excess of federally insured limits.

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 and allowances are provided for uncollectible accounts when deemed necessary. At December 31, 2018 and 2017, the Company recorded no allowance for uncollectible accounts.

c)

Inventories

Inventories are carried at the lower of cost or net realizable value. Cost is determined using the first in, first out method. Work in progress inventory contains product that is undergoing irradiation and this irradiation process can take up to three years to reach high specific activity (HSA) levels. When indicators of inventory impairment exist, the Company measures the carrying value of the inventory against its market value, and if the carrying value exceeds the market value, the inventory value is adjusted down accordingly. For the years ended December 31, 2018 and 2017, no cobalt inventory impairment was recorded. During 2017, \$1,500 of raw material inventory was determined to be obsolete and was written off to expense.

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)

Goodwill and other intangibles

Goodwill is not amortized but is tested for impairment at least annually. Goodwill represents the excess of the purchase price over the fair value of net tangible and identifiable intangible assets recorded as a result of the change in ownership for each of RadQual and TI Services. As of December 31, 2018, there had been no impairment of goodwill.

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 costs significantly in excess of the amount originally expected for the acquisition of an asset. When indicators of impairment exist, 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, 2018 and 2017, 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. There was no impairment recorded during the years ended December 31, 2018 and 2017.

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

Company management 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. Amounts received as prepayment on future products or services are recorded as unearned revenues and recognized as income when the product is shipped or service performed.

j)

Research and development costs

Research and development costs are expensed as incurred and totaled \$468,603 and \$376,698 for the years ended December 31, 2018 and 2017, respectively. These research and development costs were incurred to maintain our planned de-conversion facility license and in our radiochemical products and nuclear medicine standards business segments.

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, 2018 and 2017, the Company recognized share-based compensation expense of \$188,476 and \$163,873, respectively, related to stock options, warrants and stock grants. This expense is included as part of salaries and contract labor in 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, 2018 and 2017, 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:

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	<b>December 31,</b>	
	<b>2018</b>	<b>2017</b>
Stock options	27,805,000	32,250,000
Warrants	20,090,000	45,090,000
850 Shares of Series B redeemable convertible preferred stock	425,000	425,000
4,213 Shares of Series C redeemable convertible preferred stock	42,130,000	42,130,000
	90,450,000	119,895,000

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 five business segments.

n)

Recent accounting standards

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes all existing revenue recognition requirements, including most industry specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. The Company has evaluated and implemented this guidance which had no material effect on the financial statements.

The FASB has subsequently issued the following amendments to ASU 2014-09 which have the same effective date and transition date of January 1, 2018:

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In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date.

In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations, which clarifies the implementation guidance on principal versus agent considerations.

In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance.

In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients related to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers.

In December 2016, the FASB issued ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, which amends certain narrow aspects of the guidance issued in ASU 2014-09 including guidance related to the disclosure of remaining performance obligations and prior-period performance obligations, as well as other amendments to the guidance on loan guarantee fees, contract costs, refund liabilities, advertising costs and the clarification of certain examples.

The Company has evaluated this guidance, particularly as it pertains to the Company's cobalt products segment where pre-payments are received from customers and has determined that this guidance will not have a material impact on its consolidated financial statements. The company maintains the practice of identifying performance obligations under customer contracts and recognizes revenue only as contractual milestones are met and in an amount that is in accordance with the contract price allocated to that performance obligation. Unearned revenue and pre-payments on contracts are recorded as either short-term or long-term liability on the Company's consolidated balance sheets with revenue recognized in the future period in which the Company fulfills the performance obligation.

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In February 2016, the FASB issued ASU 2016-02, *Leases* which was issued to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The amendments in ASU 2016-02 are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We are in the process of completing our assessment and anticipate that ASU 2016-02 will have a material impact on our consolidated Balance Sheets, as we will record significant asset and liability balances in connection with our leased property. The Company has evaluated this standard and will record an adjustment of approximately \$800,000 in January 2019, to both the assets and liabilities of the Company to recognize a lease related to real estate.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows* which was issued to improve uniformity in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments in ASU 2016-15 were effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this guidance effective January 1, 2018, and it did not have any impact on the Company's consolidated statements of cash flows.

The Company adopted ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* (a consensus of the FASB Emerging Issues Task Force) (ASU 2016-18), effective January 1, 2018. This update clarified that transfers between cash and restricted cash are not reported as cash flow activities in the statements of cash flows. As such, restricted cash amounts are included with cash and cash equivalents in the beginning-of-period and end-of-period total amounts on the statements of cash flows. The Company applied this update retrospectively, which resulted in an adjustment to the beginning-of-period and end-of-period total amounts on the condensed consolidated statement of cash flows for the year ended December 31, 2017 to include restricted cash balances from those periods.

In June 2018, the FASB issued ASU 2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, which expands the scope of Topic 718 to include all share-based payment transactions for acquiring goods and services from nonemployees. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which the grantor acquires goods and services to be used or consumed in its own operations by issuing share-based payment awards. ASU 2018-07 also clarifies that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. The amendments in ASU 2018-07 are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently assessing the impact of this guidance on its consolidated financial statements.

o)

Reclassifications

Certain prior year amounts have been reclassified to conform with the current year's presentation. Net income was not affected by these reclassifications.

## NOTE 2 BUSINESS CONDITION AND LIQUIDITY

The Company has a history of recurring losses with an accumulated deficit of \$126,541,421 at December 31, 2018, and a net loss of \$844,576 for the year then ended. The Company's working capital, which includes inventory that will not be sold for up to three years, has decreased by \$681,088 from the prior year. The Company has provided cash flows from operations of \$97,159. During 2018, the Company sought to improve future cash flows from operating activities through execution of new sales agreements, improving operating cost control measures, making improvements in current manufacturing processes, pursuing new service contracts, and developing new products. The Company's net loss was \$844,576 in 2018, compared to a net loss of \$3,757,284 in 2017. This is a decrease in net loss of \$2,912,708.

As discussed in Note 3, net loss for the year ended December 31, 2017 includes loss related to a change from the equity method of accounting to the consolidation method of accounting for the Company's interest in RadQual. The related loss totaled \$946,844 in 2017 and was included in other expenses.

Also included in net loss for the year ended December 31, 2017, is the loss of a \$255,000 deposit made to Alpha Omega Services (AOS) for a shipping container. The Company entered into arbitration proceedings in 2016 in an attempt to recover the deposit for the container, plus damages, for a total claim of \$1,673,241. The arbitration was concluded in December 2017 and the Company was notified that it would not recover any damages from AOS. Accordingly, in 2017 the Company recorded a \$255,000 loss which was included in other expenses.



During the year ended December 31, 2018, the Company continued to focus on its long-standing core business segments, which consist of its radiochemical products, cobalt products, nuclear medicine standards, and radiological services segments, and in particular, the pursuit of new business opportunities within those segments.

In October 2014, the Company secured a ten-year cobalt production agreement with the United States Department of Energy (DOE). The agreement provides the Company with access to the currently available cobalt production positions in the DOE's Advanced Test Reactor (ATR) located at the Idaho National Laboratory in Idaho Falls, Idaho. The ATR is the only DOE reactor in the United States (U.S) capable of producing large quantities of high specific activity cobalt.

In addition to the cobalt production agreement with the DOE, the Company entered into supply agreements in 2015 with several customers for the purchase of cobalt-60. Because it takes approximately three to five years to irradiate cobalt targets to the desired level of activity, the shipment of cobalt-60 product to these customers was anticipated to begin in mid to late 2018. However, deliveries have been delayed to about the third quarter of 2019 due to unanticipated shut-downs at the DOE's ATR located outside of Idaho Falls, Idaho. Pursuant to these cobalt-60 supply agreements, the Company will not only supply cobalt-60 to the customers but, in some instances, will also provide on-going services with respect to manufacturing and selling cobalt sources. Each contract requires quarterly progress payments to be paid by customers to the Company.

Due to changes in the nuclear industry over the past few years, the Company's plans for the design and construction of a large-scale uranium de-conversion and fluorine extraction facility were placed on hold. The Company expects that further activity on this project will remain on hold until the market and industry conditions change to justify resuming design and construction of the facility. The Company will continue to incur some costs associated with the maintenance of licenses and other necessary project investments for the proposed facility, and the Company expects to continue to keep certain agreements in place to support resumption of project activities at the appropriate time. In July 2015, the Company announced that it executed an amendment to its Project Participation Agreement (PPA) with the Lea County, New Mexico Board of Commissioners. The PPA granted to the Company direct and indirect assistance for locating its proposed depleted UF<sub>6</sub> de-conversion facility in Hobbs, New Mexico. The principal component of assistance was the conveyance of approximately 640 acres of land for construction and operation of the proposed facility. The conveyance of the land was contingent upon the Company commencing construction on Phase 1 of the facility by December 31, 2014 and hiring a certain number of employees by December 31, 2015. Under the amendment to the PPA, the Lea County, New Mexico Board of Commissioners agreed to extend those dates to December 31, 2016 and December 31, 2017, respectively. The Company did not meet the deadlines set forth in the amended PPA, but is currently in discussions with the Lea County, New Mexico Board of Commissioners to further extend the milestone dates once a more definitive date for the resumption of the project is known. If the Company does not succeed in extending the commitment dates or in reaching performance dates set forth in a modified agreement, then it 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.

The Company holds a Nuclear Regulatory Commission (NRC) construction and operating license for the depleted uranium facility as well as the property agreement with Lea County, New Mexico, where the plant is intended to be constructed. The NRC license for the de-conversion facility is a forty (40) year operating license and is the first commercial license of this type issued in the United States. 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 the Company believes that it provides it with a very valuable asset. During the year ended December 31, 2018, the Company incurred costs of approximately \$123,000 to maintain licenses and other necessary project investments. During the same period in 2017, the Company incurred costs of approximately \$209,000 for planning and development activities on the project.

The Company expects that cash from operations and its current cash balance will be sufficient to fund operations for the next twelve months. Future liquidity and capital funding requirements will depend on numerous factors, including, contract manufacturing agreements, commercial relationships, technological developments, market factors, available credit, and voluntary warrant redemption by shareholders. There is no assurance that additional capital and financing will be available on acceptable terms to the Company or at all.

NOTE 3 PURCHASED ASSET AND INVESTMENTS

Interest in RadQual, LLC

The Company owns a 24.5% interest in RadQual, with which the Company has an exclusive manufacturing agreement for nuclear medicine products. On August 10, 2017, affiliates of the Company, including the Company's Chairman of the Board and the Chief Executive Officer, acquired the remaining 75.5% interest in RadQual. As a result of this change in ownership, the Company was named as a managing member of RadQual and gained the ability to exercise significant management control over the operations of RadQual. Because of this increased management ability, and pursuant to GAAP, the Company has consolidated the accounts of RadQual into its financial statements beginning as of August 10, 2017. Prior to August 10, 2017, the Company reported its 24.5% ownership of RadQual as an asset with a balance of \$1,436,843 and was using the equity method of accounting for this asset. At August 10, 2017, the fair market value of the Company's investment in RadQual was determined to be \$489,999 and the Company reported as other expense a loss of \$946,844 for the year ended December 31, 2017, to adjust the carrying value to fair value under ASC 805. Upon recording the fair value of the assets and liabilities of RadQual, a provisional amount of \$386,836 was assigned to intangible assets that were acquired and \$1,422,991 was recorded as Goodwill. Goodwill was later adjusted, as allowed by ASC 805, when the fair value of a patent included as part of the purchase was determined to be greater than originally recorded. Accordingly, the amount of Goodwill was decreased with a corresponding increase in the fair value of the patent.

For the year ended December 31, 2017, member distributions from RadQual received prior August 10, 2017, totaled \$109,111 and were recorded as a reduction of the investment in RadQual. During the same period, earnings allocated to the Company from RadQual prior to August 10, 2017, totaled \$53,173, and were recorded as equity in net income of affiliate on the Company's condensed consolidated statements of operations and as a reduction to the investment on the consolidated balance sheets, prior to consolidation.

Acquisition of Interest in TI Services, LLC

In December 2010, the Company together with RadQual, formed a 50% owned joint venture, TI Services, LLC (TI Services). TI Services 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, the assets and liabilities of TI Services are consolidated with those of the Company, and RadQual's non-controlling interest in TI Services is included in the Company's financial statements as a non-controlling interest.

## NOTE 4 INVENTORIES

Inventories consisted of the following for the years ended December 31, 2017 and 2018:

	<b>2018</b>	<b>2017</b>
Raw materials	\$ 42,911	\$ 42,911
Work in progress	2,719,786	1,906,377
Finished goods	3,032	2,225
	\$ 2,765,729	\$ 1,951,513

Included in raw material inventory are raw cobalt, strontium and other raw elements. Raw material inventory is regularly reviewed for obsolescence.

Work in process includes completed flood sources, irradiated cobalt and nuclear medicine related materials and products, and cobalt-60 targets that are located in the ATR located outside of Idaho Falls, Idaho. The cobalt-60 targets are owned by the Company and contain cobalt-60 material at various stages of irradiation. The carrying value of the targets is based on accumulated irradiation and handling costs which have been allocated to each target based on the length of time the targets have been held and processed at the reactor. At December 31, 2018, the remaining cobalt target inventory had a carrying value of \$389,293, and at December 31, 2017, the inventory was valued at \$425,159.

Work in process also includes costs to irradiate cobalt-60 material under a contract with the DOE. This material has been placed in the reactor exclusively for purchase by the Company, and at December 31, 2018 and 2017, the amount of accumulated irradiation charges reported as inventory was \$2,066,820 and \$1,323,540, respectively. The Company has contracted with several customers for the purchase of this cobalt-60 material and has collected advance payments for project management, up-front handling and irradiation charges. The advance payments from customers were recorded as unearned revenue which are recognized in the Company's consolidated financial statements as cobalt products are completed and shipped. For the year ended December 31, 2018, the Company recognized approximately \$87,000 of revenue in its consolidated statements of operations for customer orders filled during the period under these cobalt contracts.

#### NOTE 5 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are summarized as follows at December 31, 2018 and 2017:

			<b>Estimated</b>	
	<b>2018</b>	<b>2017</b>	<b>Useful Lives</b>	
Furniture and fixtures	\$ 196,242	\$ 175,387	3 - 5 years	
Transportation equipment	122,874	122,874	5 - 10 years	
Plant and improvements	496,154	496,154	5 years	
Production equipment	3,557,717	3,510,389	5 - 10 years	
	4,372,987	4,304,804		
Accumulated depreciation	(2,466,805)	(2,369,269)		
	\$ 1,906,182	\$ 1,935,535		

Included in fixed assets are assets purchased during the planning phase for the construction of a de-conversion facility in Hobbs, New Mexico. Although construction of the facility is currently on hold, the Company has determined that these assets continue to have future economic value based on what it considers a strong likelihood that construction of the facility will occur in the future.

Depreciation expense was \$102,444 and \$108,434 for the years ended December 31, 2018 and 2017, respectively.

#### NOTE 6 PATENTS AND OTHER INTANGIBLE ASSETS

The Company owns certain patents and patents pending related to a fluorine extraction process and patents for various uses of some fluoride gases as fluorinating agents. These patents were developed in an effort to expand the potential markets for the high purity fluoride gases the Company will produce with its fluorine extraction process. The Company has filed and been granted international protections on its FEP process patent with some foreign applications still pending. At the present time, Company management believes there is significant future value to these patents, however, 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 October 2012, the NRC issued the Company a 40-year construction and operating license for the de-conversion facility. Capitalized costs associated with the licensing and planning process for this license are being amortized over the 40-year life of the license.

The following table summarizes the patent and intangible activity for the years ended December 31, 2018 and 2017:

	<b>2018</b>		<b>2017</b>
Beginning	\$ 5,366,757	\$	4,909,019
Additions	5,560		457,738
Disposals	(9,215)		-
Ending	5,363,102		5,366,757
Accumulated amortization	(1,015,071)		(855,116)
	\$ 4,348,031	\$	4,511,641

During the year ended December 31, 2018 the Company recognized \$165,275 of amortization expense, and during the year ended December 31, 2017, the Company recognized \$132,392 of amortization expense.

Included in additions for 2017 are \$433,243 allocated to patents and \$10,833 of intangible assets added as a result of the change to consolidation accounting in relation to RadQual. The patents acquired pertain to products that will be manufactured in the Company's nuclear medicine business segment.

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

<b>Years ending December 31,</b>		
2019	\$	164,970
2020		164,970
2021		164,970
2022		164,970
2023		164,970
Thereafter		3,523,181
	<b>\$</b>	<b>4,348,031</b>

#### NOTE 7 CONVERTIBLE DEBENTURES AND NOTES PAYABLE

##### Convertible debentures

In July 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 had a stated interest rate of 8% per annum which was payable semi-annually (the Notes). The Notes were 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 under certain conditions. 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 Notes. The warrants were immediately exercisable at a price of \$0.30 per share with a five-year life and matured in July 2017.

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 Notes and warrants based on their relative fair value, which resulted in \$2,703,144 being allocated to the Notes 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 accreted to interest expense over the five-year life of the Notes.

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 were recorded as offering costs and were amortized to expense over the life of the underlying Notes.

As discussed in Note 9 below, in February 2017, pursuant to a private placement transaction with certain investors, the Company issued 3,433 shares of Series C Preferred Stock and warrants. In connection with the private placement, two investors holding Notes exchanged aggregate principal totaling \$205,000 of the Notes for shares of the Series C Preferred Stock and warrants.

On March 24, 2017, the Company entered into an Amendment to the 8% Convertible Notes (the Amendment), pursuant to which the Notes were amended to give noteholders certain additional rights. Pursuant to the Amendment, the Notes were modified to provide each holder the right, at the holder's option and exercisable prior to May 12, 2017, to convert all or any portion of the principal amount of the Notes, plus accrued but unpaid interest, into shares of Series C Preferred Stock at a conversion price of \$1,000 per share. Holders that elected to convert their Notes into Series C Preferred Stock received a Class N Warrant to purchase up to 3,750 shares of the Company's common stock for each share of Series C Preferred Stock received upon conversion of the Notes, with each Warrant having a five-year term, a cashless exercise feature, and an exercise price of \$0.10 per share of common stock. On May 12, 2017, the Company completed the retirement of \$1,835,000 of the Notes in early cash redemptions, and \$780,000 of the Notes were converted into an aggregate of 780 shares of Series C Preferred Stock.

#### Notes payable

In December 2013, the Company entered into a promissory note agreement with the Company's former Chairman of the Board of Directors (the Board) and one of the Company's major shareholders pursuant to which the Company borrowed \$500,000 (the 2013 Promissory Note). The 2013 Promissory Note bears interest at 6% per annum and was originally due on June 30, 2014. According to the terms of the 2013 Promissory Note, at any time, the lenders may settle any or all of the principal and accrued interest with shares of the Company's common stock. In connection with the 2013 Promissory Note, each of the two lenders was issued 5,000,000 warrants to purchase shares of the Company's common stock at a purchase price of \$0.06 per share. In June 2014, the Company renegotiated the terms of the 2013 Promissory Note. Pursuant to the modification, the maturity date was extended to December 31, 2017, and each lender was granted an additional 7,500,000 warrants to purchase shares of the Company's common stock at \$0.06 per share. The warrants were immediately exercisable. In December 2016, the 2013 Promissory Note was modified to extend the maturity date to December 31, 2022, with all remaining terms remaining unchanged. On December 23, 2018, all of the warrants expired. The



fair value of these warrants was \$384,428 and was recorded as a debt discount and will be amortized to interest expense over the new life of the 2013 Promissory Note. The Company calculated a beneficial conversion feature of \$15,464 which will be accreted to interest expense over the new life of the 2013 Promissory Note. As a result, the Company recorded non-cash interest expense in 2018 of \$26,823 and \$26,822 of non-cash interest was recorded in 2017.

In March 2016, the Company entered into a note payable for the purchase of a vehicle. The principal amount financed was \$47,513. The term of the note is six years and carries an interest rate of 6.66% per annum. Monthly payments are \$805 and the note matures April 2022. The note is secured by the vehicle that was purchased with the note's proceeds.

In August 2017, the Company entered into a promissory note agreement with its Chairman of the Board pursuant to which the Company borrowed \$60,000 (the 2017 Promissory Note). The 2017 Promissory Note accrues interest at 5% per annum, which is payable upon maturity of the note, and at December 31, 2018, the amount of accrued interest on the note was \$4,117. The 2017 Promissory Note is unsecured and was scheduled to mature on June 30, 2018. Pursuant to an amendment to the 2017 Promissory Note on June 29, 2018, the maturity date was extended to March 31, 2019 with all other provisions remaining unchanged. Pursuant to a second amendment to the 2018 Promissory Note on February 12, 2019, the maturity date was extended to July 31, 2019 with all other provisions of the note remaining unchanged.

On April 9, 2018, the Company borrowed \$120,000 from its Chief Executive Officer and its Chairman of the Board pursuant to a short-term promissory note (the 2018 Promissory Note). The 2018 Promissory Note accrues interest at 6% per annum, which is payable upon maturity of the 2018 Promissory Note. The 2018 Promissory Note is unsecured and originally matured on August 1, 2018. At any time, the holder of the 2018 Promissory Note may elect to have any or all of the principal and accrued interest settled with shares of the Company's common stock based on the average price of the shares over the previous 20 trading days. Pursuant to an amendment to the 2018 Promissory Note on June 29, 2018, the maturity date was extended to March 31, 2019 with all other provisions remaining unchanged. Pursuant to a second amendment to the 2018 Promissory Note on February 12, 2019, the maturity date was extended to July 31, 2019. At December 31, 2018, accrued interest on the 2018 Promissory Note totaled \$5,220.

Notes payable as of December 31, 2018 and 2017 consist of the following:

	<b>2018</b>	<b>2017</b>
Note payable to related parties bearing interest at 6% all principal and interest due on July 31, 2019, secured	\$ 120,000 28,742	\$ - 36,179

Note payable to a financial institution bearing interest at 6.66% Monthly installments of \$805, secured		
Note payable to a related party bearing interest at 5% All principal and interest due July 31, 2019	60,000	60,000
Note payable to related parties net of unamortized debt discount of \$53,644 and \$80,466 at December 31, 2018 and 2017, respectively, bearing interest at 6% all principal and interest due on December 31, 2020, secured	446,356	419,533
Total notes payable	655,098	515,712
Less: current maturities	(187,956)	(67,437)
Notes payable, net of current installments and debt discount	\$ 467,142	\$ 448,275

Maturities of convertible debt and notes payable, excluding debt discount and debt issuance costs, at December 31, 2018, are as follows:

<b>Years ending December 31,</b>		
2019	\$	187,956
2020		507,236
2021		7,236
2022		6,314
Thereafter		-
	\$	708,742
Discount		(53,644)
	\$	655,098

## NOTE 8 LEASE OBLIGATIONS

### Operating leases

The Company currently leases office space under a ten-year operating lease that expires in 2021. Rental expense under the leases for the years ended December 31, 2018 and 2017 was \$147,413 each year.

The following is a schedule by years of the currently held operating lease as of December 31, 2018:

<b>Years ending December 31,</b>	
2019	\$ 147,413
2020	146,488
2021	45,318
Thereafter	-
	\$ 339,219

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

##### Warrants

In December 2013, the Company entered into a promissory note agreement with the Company's former Chairman of the Board and one of the Company's major shareholders as discussed above. In connection with the promissory note, each of the two lenders was issued 5,000,000 warrants to purchase shares of the Company's common stock at a purchase price of \$0.06 per share. Pursuant to an amendment to the promissory note, as discussed above, each lender was granted an additional 7,500,000 warrants. On December 23, 2018, all 25,000,000 warrants associated with these notes expired.

The following table summarizes warrant activity for the years ended December 31, 2018 and 2017:

<b>Warrants</b>	<b>Outstanding</b>	<b>Shares</b>	<b>\$</b>	<b>Weighted</b>
				<b>Average</b>
				<b>Exercise</b>
Outstanding at December 31, 2016	27,419,172			0.08
Granted	20,090,000			0.12
Exercised	-			
Forfeited	(2,419,172)			0.30
Outstanding at December 31, 2017	45,090,000			0.09
Granted	-			
Exercised	-			
Forfeited	(25,000,000)			0.09

Outstanding at December 31, 2018

20,090,000 \$

0.12

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 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, 2018 and 2017, there were 850 shares of the Series B Convertible Redeemable Preferred Stock (the Series B Preferred Stock ) outstanding with a mandatory redemption date of May 2022 at \$1,000 per share, or \$850,000 in aggregate redemption value. The Series B Preferred Stock is 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 consolidated balance sheets.

On February 17, 2017, the Company entered into subscription agreements with certain investors, including two of the Company's directors, for the sale of (i) an aggregate of 3,433 shares of Series C Preferred Stock, and (ii) Class M warrants to purchase an aggregate of 17,165,000 shares of the Company's common stock (the Class M Warrants), for gross proceeds of \$3,433,000. The Series C Preferred Stock accrues dividends at a rate of 6% per annum, payable annually on February 17th of each year, commencing on February 17, 2018. The Series C Preferred Stock are convertible at the option of the investors at any time into shares of the Company's common stock at an initial conversion price equal to \$0.10 per share, subject to adjustment. At any time after February 17, 2019, if the volume-weighted average closing price of the Company's common stock over a period of 90 consecutive trading days is greater than \$0.25 per share, the Company may redeem all or any portion of the outstanding Series C Preferred Stock at the original purchase price per share plus any accrued and unpaid dividends, payable in shares of common stock. All outstanding shares of Series C Preferred Stock must be redeemed by the Company on February 17, 2022 at the original purchase price per share, payable in cash or shares of common stock, at the option of the holder. Holders of Series C Preferred Stock do not have any voting rights, except as required by law and in connection with certain events as set forth in the Statement of Designation of the Series C Preferred Stock.

The Class M Warrants are immediately exercisable at an exercise price of \$0.12 per share, subject to adjustment as set forth in the warrant, and have a term of five years.

The Company allocated the proceeds to the Series C Preferred Stock and Class M Warrants based on their relative fair value, which resulted in \$2,895,379 being allocated to the Series C Preferred Stock and \$537,621 being allocated to the Class M Warrants. The allocated Class M Warrant value was recorded as a discount to the Series C Preferred Stock and will be amortized to interest expense over the five-year life of the warrants.

The fair value of the Class M Warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk-free interest rate of 1.92%, expected dividend yield of 0%, expected volatility of 66%, and an expected life of five years.

On March 24, 2017, the Company entered into an Amendment to the 8% Convertible Notes (the Amendment), pursuant to which the 8% Convertible Notes (the Notes) issued by the Company in July 2012 were amended to give noteholders certain additional rights. Pursuant to the Amendment, the Notes were modified to provide each holder the right, at the holder's option and exercisable prior to May 12, 2017, to convert all or any portion of the principal amount of the Notes, plus accrued but unpaid interest, into shares of Series C Preferred Stock at a conversion price of \$1,000 per share. Holders that elected to convert their Notes into Series C Preferred Stock received a Class N Warrant to purchase up to 3,750 shares of the Company's common stock for each share of Series C Preferred Stock received upon conversion of the Notes, with each Warrant having a five-year term, a cashless exercise feature, and an exercise price of \$0.10 per share of common stock. On May 12, 2017, the Company completed the retirement of \$1,835,000 of the Notes in early cash redemptions, and \$780,000 of the Notes were converted into an aggregate of 780 shares of Series C Preferred Stock and Class N Warrants to purchase an aggregate of 2,925,000 shares of the Company's common stock.

The Class N Warrants are immediately exercisable at an exercise price of \$0.10 per share, subject to adjustment as set forth in the warrant, and have a term of five years.

The Company allocated the proceeds to the Series C Preferred Stock and Class N Warrants based on their relative fair value, which resulted in \$675,947 being allocated to the Series C Preferred Stock and \$104,053 being allocated to the Class N Warrants. The allocated Class N Warrant value was recorded as a discount to the Series C Preferred Stock and will be amortized to interest expense over the five-year life of the warrants.

The fair value of the Class N Warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk-free interest rate of 1.93%, expected dividend yield of 0%, expected volatility of

66%, and an expected life of five years.

In February 2018, the Company paid its first dividend on the Series C Preferred Stock. Dividends payable totaled \$241,730. Some holders of the Series C Preferred Stock elected to settle their dividend payments with shares of the Company's common stock in lieu of cash. The Company issued 2,288,646 shares of common stock in lieu of a dividend payment of \$205,980. The remaining \$35,750 of dividend payable was settled with cash.

#### Employee Stock Purchase Plan

In September 2004, the Company's Board 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 salary or wages 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. At December 31, 2018, there were 579,731 shares available for issuance under the employee stock purchase plan.

During 2018 and 2017, the Company issued 114,170 and 93,865 shares of common stock to employees for proceeds of \$6,697 and \$6,115, respectively, in accordance with the employee stock purchase plan.

2015 Incentive Plan

In April 2015, the Company's Board of Directors approved the International Isotopes Inc. 2015 Incentive Plan (as amended, the 2015 Plan) which was subsequently approved by the Company's shareholders in July 2015. The 2015 Plan was amended and restated in July 2018 to increase the number of shares authorized for issuance under the 2015 Plan by an additional 20,000,000 shares. The 2015 Plan provides for the grant of incentive and non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares and units, and other stock or cash-based awards. The 2015 Plan amended and restated the Company's Amended and Restated 2006 Equity Incentive Plan (2006 Plan). The 2015 Plan authorizes the issuance of up to 80,000,000 shares of common stock, plus 11,089,967 shares authorized, but not issued under the 2006 Plan. At December 31, 2018, there were 33,392,485 shares available for issuance under the 2015 Plan.

Non-Vested Stock Grants

Pursuant to an employment agreement, in both February 2018 and February 2017, the Company awarded 350,000 fully vested shares of common stock to its Chief Executive Officer under the 2015 Plan. The number of shares awarded was based on a \$28,000 stock award using a price of \$0.08 per share. The employment agreement provides that the number of shares issued will be based on the average closing price of common stock for the 20 trading days prior to issue date but not less than \$0.05 per share. Compensation expense recorded pursuant to this stock grant was \$16,786, which was determined by multiplying the number of shares awarded by the closing price of the common stock on February 28, 2018, which was \$0.08 per share. The Company withheld 140,175 shares of common stock to satisfy the employee's payroll tax obligations in connection with this issuance. The net shares issued on February 28, 2018 totaled 209,825 shares.

Stock Options

A summary of the stock options issued under the Company's equity plans is as follows:

<b>Options</b>	<b>Outstanding</b>	<b>Weighted</b>	<b>Weighted</b>	<b>Average</b>
	<b>Shares</b>	<b>Average</b>	<b>Average</b>	<b>Intrinsic</b>
		<b>Exercise Price</b>	<b>Remaining</b>	<b>Value</b>
			<b>Contractual</b>	

			<b>Life</b>	
Outstanding at December 31, 2016	23,316,667	0.06		
Granted	11,500,000	0.06		
Exercised	(2,566,667)	0.04	\$	108,500
Forfeited	-			
Outstanding at December 31, 2017	32,250,000	0.06		1,069,500
Granted	1,500,000	0.08		
Exercised	(5,500,000)	0.04		187,500
Forfeited	(445,000)	0.77		
Outstanding at December 31, 2018	27,805,000	0.06	6.2	
Exercisable at December 31, 2018	19,541,000			

The total intrinsic value of stock options outstanding at December 31, 2018 was \$332,500. The intrinsic value for stock options outstanding is calculated as the amount by which the quoted price of \$0.06 of the Company's common stock as of the end of 2018 exceeds the exercise price of the options.

The Company recognized \$171,690 and \$147,087 of compensation expense related to these options for the years ended December 31, 2018 and 2017, respectively. At December 31, 2018, the remaining compensation expense was \$133,524 and will be recognized over 2.29 years.

During the year ended December 31, 2018, 1,000,000 qualified stock options were exercised under a cashless exercise. The Company withheld 388,889 shares to satisfy the exercise price and issued 611,111 shares of common stock. The options exercised were granted under a qualified plan, and accordingly, there is no income tax effect in the accompanying condensed consolidated financial statements.

In April 2018, 2,000,000 non-qualified stock options were exercised for \$70,000. The options exercised were granted under the 2015 Plan, and accordingly, there is no income tax effect in the accompanying condensed consolidated financial statements.



In July 2018, 2,500,000 qualified stock options were exercised under a cashless exercise. The Company withheld 1,346,154 shares to satisfy the exercise price and issued 1,153,846 shares of common stock. The options exercised were granted under a qualified plan, and accordingly, there is no income tax effect in the accompanying condensed consolidated financial statements.

In February 2018, the Compensation Committee granted an aggregate of 1,000,000 qualified stock options to an employee. The stock options were granted with an exercise price of \$0.08 per share. The options vest one fifth per year beginning one year from the grant date and expire on February 19, 2028. The options had a fair value of \$59,130 as estimated on the date of issue using the Black-Scholes options pricing model with the following weighted-average assumptions: risk free interest rate of 2.63% to 2.81%, expected dividend yield rate of 0%, expected volatility of 62.10% to 69.94% and an expected life between 5.5 and 7.5 years.

In June 2018, the Compensation Committee granted an aggregate of 500,000 qualified stock options to an employee. The stock options were granted with an exercise price of \$0.09 per share. The options vest one fifth per year beginning one year from the grant date and expire on June 4, 2028. The options had a fair value of \$20,635 as estimated on the date of issue using the Black-Scholes options pricing model with the following weighted-average assumptions: risk free interest rate of 2.78% to 2.89%, expected dividend yield rate of 0%, expected volatility of 63.23% to 69.04% and an expected life between 5.5 and 7.5 years.

On July 11, 2017 and August 2, 2017, the Compensation Committee granted an aggregate of 8,000,000 incentive stock options to executive officers and employees with an exercise price of \$0.06 per share. Also, the Compensation Committee granted 500,000 nonqualified stock options to consultants and 3,000,000 nonqualified stock options to members of the Board. All of the stock options were granted with an exercise price of \$0.06 per share with the exception of 1,000,000 options issued to a board member with an exercise price of \$0.08 per share. On October 19, 2018, the Compensation Committee voted to re-price the exercise price for these 1,000,000 options to \$0.06 per share. The employee and consultant options vest one fifth per year beginning one year from the grant date and expire on July 11, 2027. Executive officer and board member options vest one fourth immediately and one fourth each subsequent year and expire on July 11, 2027. The options had a fair value of \$450,298 as estimated on the date of issue using the Black-Scholes options pricing model with the following weighted-average assumptions: risk free interest rate of 1.92% to 2.18%, expected dividend yield rate of 0%, expected volatility of 70.31% to 73.67% and an expected life between 5.53 and 7.53 years.

During the year ended December 31, 2017, 2,300,000 stock options were exercised under cashless exercises. The Company withheld 1,079,412 shares to satisfy the exercise price and issued 1,220,558 shares of common stock.

During the year ended December 31, 2017, 266,667 non-qualified stock options were exercised. The Company received \$9,333 in cash to satisfy the exercise price and issued 266,667 shares of common stock.

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 2018 and 2017. Income tax benefit on losses differed from the amounts computed by applying the recently enacted U.S. federal income tax rate of 21% to pretax losses as a result of the following:

	<b>2018</b>	<b>2017</b>
Income tax benefit	\$ (177,361)	\$ (789,030)
Nondeductible expenses	50,695	(7,455)
State taxes net of federal benefit	(58,487)	(278,039)
Change in effective tax rate	-	3,620,117
Change in valuation allowance	185,153	(2,545,593)
	\$ -	\$ -

The tax effects of temporary differences that give rise to significant portions of the Company's deferred tax assets (liabilities) as of December 31, 2018 and 2017 are presented below:

	<b>2018</b>	<b>2017</b>
Deferred income tax asset	\$ -	\$ -
Net operating loss carryforward	8,770,264	9,890,479
Valuation allowance	(9,863,607)	(9,678,454)
Total deferred income tax asset	(1,093,343)	212,025
Deferred income tax liability - depreciation	1,093,343	(212,025)
Deferred tax asset (liability)	\$ -	\$ -

At December 31, 2018, the Company had net operating losses of approximately \$33,132,000 that will begin to expire in 2021. The valuation allowances for 2018 and 2017 have been applied to offset the deferred tax assets in recognition of the uncertainty that such benefits will be realized.

In accordance with GAAP, 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 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 GAAP. 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

Sales to RadQual for January 1, 2017 to August 10, 2017 were \$1,290,482 which represents approximately 17% of the Company's total gross revenue for 2017. Sales during 2018 and 2017 to the Company's top three customers were approximately 46% and 31%, respectively of its total gross revenue. The Company is making efforts to reduce its dependence on a small number of customers by expanding both domestic and foreign markets and through the establishment of the joint venture, TI Services to expand the distribution of products.

The production of HSA Cobalt is dependent upon the DOE, and its prime operating contractor, which controls the reactor and laboratory operations at the ATR located outside of Idaho Falls, Idaho. On October 2, 2014, the Company signed a ten-year contract with the DOE for the irradiation of cobalt targets for the production of cobalt-60. The Company will be able to purchase cobalt targets for a fixed price per target and with an annual 5% escalation in price. The contract term is October 1, 2014, through September 30, 2024. However, the DOE may end the contract if it determines termination is necessary for the national defense, security or environmental safety of the U.S. If this were to occur, all payments made by the Company would be refunded.

Nuclear Medicine Reference and Calibration Standard manufacturing is conducted under an exclusive contract with RadQual, which in turn has an agreement in place with several companies for distributing the products. The radiochemical product sold by the Company is supplied to the Company through agreements with several suppliers.

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 the Company's business segments involve the handling or use of radioactive material, the Company is required to have an operating license from the NRC and specially trained staff to handle these materials. The Company has amended this operating license numerous times to increase the amount of material permitted within the Company's facility. Although this license does not currently restrict the volume of business operation performed or projected to be performed in the upcoming year, additional processing capabilities and license amendments could be implemented that would permit processing of other reactor-produced radioisotopes by the Company. The financial assurance required by the NRC to support this license has been provided for with a surety bond and a restricted money market account, in the amount of \$622,428, held with North American Specialty Insurance Company and Merrill Lynch, respectively.

In August 2011, we received land from Lea County, New Mexico, pursuant to a PPA, 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 were to begin construction of the de-conversion facility no later than December 31, 2014, and complete Phase I of the project and have hired at least 75 persons to operate the facility no later than December 31, 2015, although commercial operations need not have begun by that date. In 2015 the Company negotiated a modification to the PPA agreement that extended the start of construction date to December 31, 2015, and the hiring milestone to December 31, 2016. Those dates were not met and the Company is currently in the process of renegotiating a second modification to the agreement to further extend those dates. If we do not succeed in reaching an amendment to extend the performance dates in the agreement then we may, at our sole option, either purchase or re-convey the property to Lea County, New Mexico. The purchase price of the property would be \$776,078, plus interest at the

annual rate of 5.25% from the date of the closing to the date of payment. We have not recorded the value of this property as an asset and will not do so until such time that sufficient progress on the project has been made to meet our obligations under the agreements for permanent transfer of the title.

#### Defined Contribution Pension Plan

The Company has a 401(k) defined-contribution pension plan (the 401(k) Plan ). Employees are eligible to participate in the Plan after completing six months of full-time service. Participants, under provision of Internal Revenue Code § 401(k), may elect to contribute up to \$18,500 of their 2018 compensation to the 401(k) 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 2018 or 2017. All amounts withheld for employee contributions for 2018 were paid into the 401(k) Plan. The employer reserves the right to terminate the 401(k) 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 any facilities upon termination or relocation of operations. The Company has developed a decommissioning funding plan using guidelines provided by the NRC and has estimated the cost of decommissioning the facility in Idaho Falls. 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 GAAP, the Company has recognized future estimated decommissioning costs as an asset retirement obligation and a related capitalized lease disposal cost. The Company has recognized period-to-period changes in the liability (accretion) in the statement of operations as amortization expense. Changes resulting from revisions to the original estimate are recorded as an increase or decrease to the capitalized lease disposal cost. 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, 2018 and 2017:

**Obligation for Lease****Disposal Cost**

Balance at December 31, 2016	\$	468,974
Increase in lease disposal costs		-
Accretion expense/amortization expense		9,450
Balance at December 31, 2017		478,424
Increase in lease disposal costs		-
Accretion expense/amortization expense		29,544
Balance at December 31, 2018	\$	507,968

## NOTE 13 FAIR VALUE MEASUREMENTS

At December 31, 2018 and 2017, the Company had no assets carried at fair value.

## NOTE 14 REVENUE RECOGNITION

Revenue from Product Sales

The following tables present the Company's revenue disaggregated by business segment and geography, based on management's assessment of available data:

	Year Ended December 31, 2018				Year Ended December 31, 2017			
	U.S.	Outside U.S.	Total Revenues	% of Total Revenues	U.S.	Outside U.S.	Total Revenues	% of Total Revenues
Radiochemical Products	\$ 2,101,597	\$ 162,410	\$ 2,264,007	21%	\$ 2,127,730	\$ 194,002	\$ 2,321,732	31%
Cobalt Products	1,252,253	789,326	2,041,579	20%	507,904	-	507,904	7%
Nuclear Medicine Products	3,769,774	19,005	3,788,779	37%	3,232,229	-	3,232,229	44%
Radiological Services	1,134,691	1,139,767	2,274,458	22%	1,266,658	91,867	1,358,525	18%
Fluorine Products	-	-	-	0%	-	-	-	0%
	\$ 8,258,315	\$ 2,110,508	\$ 10,368,823	100%	\$ 7,134,521	\$ 285,869	\$ 7,420,390	100%

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Prior period amounts have not been adjusted under the modified retrospective approach.

Under ASC Topic 606, the Company recognizes revenue when it satisfies a performance obligation by transferring control of the promised goods or services to its customers, in an amount that reflects the consideration the Company expects to receive in exchange for the product or service.

Product sales consist of a single performance obligation that the Company satisfies at a point in time. All transactions in the radiochemical products and nuclear medicine standards segments fall into this category. Most sales transactions in the cobalt products business segment fall into this category but other cobalt product sales are recorded as deferred income as discussed below. The Company recognizes product revenue when the following events have occurred: (a) the Company has transferred physical possession of the products, (b) the Company has a present right to payment, (c) the customer has legal title to the products, and (d) the customer bears significant risks and rewards of ownership of the products. Based on the Company's historical practices and shipping terms specified in the sales agreements and invoices, these criteria are generally met when the products are:

Invoiced.

Shipped from the Company's facilities ( FOB shipping point , which is the Company's standard shipping term). For these sales, the Company determined that the customer is able to direct the use of, and obtain substantially all of the benefits from, the products at the time the products are shipped.

In the radiological services segment, the Company performs services under multiple types of contracts. In this segment, the Company processes gemstones and recovers various types of radioactive and/or hazardous materials from third-party facilities. Contracts for gemstone processing include two performance obligations and revenue for these contracts is recognized when each obligation is met. Recovery projects typically have only one performance obligation which is delivery of the final product or service. Under these contracts, the Company recognizes revenue once the work is complete and the customer has obtained substantially all of the benefits from the services, and the performance obligations under the contract have been met. Some recovery contracts have milestones at which point the Company can invoice and receive payments from the customer. With these contracts, the company considers each milestone a performance obligation and records revenue at the time each milestone is completed, and the customer has inspected and accepted the results of the services. The Company's standard payment terms for its customers are generally 30 days after the Company satisfies the performance obligations.

The Company's revenue consists primarily of products manufactured for use in the nuclear medicine industry, distribution of radiochemicals, cobalt source manufacturing, and providing radiological services on a contract basis



for customers. 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 two to three years. Accordingly, preliminary payments received on cobalt contracts, where shipment will not take place for greater than one year, have been recorded as unearned revenue on the Company's consolidated balance sheets and classified under current or long-term liabilities, depending upon estimated ship dates. For the year ended December 31, 2018, the Company reported current unearned cobalt products revenue of \$3,783,541 and non-current unearned revenue of \$7,500. For the period ended December 31, 2017, the Company reported current unearned revenue of \$2,688,128 and non-current unearned revenue of \$688,980. These unearned revenues will be recognized as revenue in the periods during which the cobalt shipments take place.

#### Contract Balances

The Company records a receivable when it has an unconditional right to receive consideration after the performance obligations are satisfied. As of December 31, 2018, and December 31, 2017, accounts receivable totaled \$820,370 and \$635,026, respectively. For the year ended December 31, 2018, the Company did not incur material impairment losses with respect to its receivables.

#### Practical Expedients

The Company has elected the practical expedient not to determine whether contracts with customers contain significant financing components.

NOTE 15 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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The Nuclear Medicine Standards segment consists of the manufacture of sources and standards associated with Single Photon Emission Computed Tomography imaging, patient positioning, and calibration or operational testing of dose measuring equipment for the nuclear pharmacy industry and includes consolidated reporting of TI Services, and the consolidated reporting of the Company's 50/50 joint venture with RadQual.

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The Cobalt Products segment includes management of a cobalt irradiation contract, fabrication of cobalt capsules for teletherapy or irradiation devices, and recycling of expended cobalt sources.

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The Radiochemical Products segment includes production and distribution 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 predominant radiochemical sold in this segment and an abbreviated new Drug Application (aNDA) has been submitted to the U.S. FDA to market this as a generic drug product upon approval.

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The Fluorine Products segment historically involved 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. During 2013, these testing activities

were completed, and the pilot plant facility was closed. The Company has developed or acquired all patent rights to these processes. Future work in this segment will involve license support and, as financing permits, further work related to the de-conversion facility.

The Radiological Services segment concerns a wide array of miscellaneous services that consists of gemstone processing and field services that include source installation, removal, and radiation device decommissioning.

The following presents certain segment information as of and for the years ended December 31, 2018 and 2017:

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	<b>2018</b>	<b>2017 (as adjusted)</b>
Sale of product		
Radiochemical products	\$ 2,264,007	\$ 2,321,732
Cobalt products	2,041,579	507,904
Nuclear medicine standards	3,788,779	3,232,229
Radiological services	2,274,458	1,358,525
Fluorine products	-	-
Total segments	10,368,823	7,420,390
Corporate revenue	-	-
Total consolidated	\$ 10,368,823	\$ 7,420,390

	<b>2018</b>	<b>2017 (as adjusted)</b>
Depreciation and amortization		
Radiochemical products	\$ 27,015	\$ 8,015
Cobalt products	6,839	35,790
Nuclear medicine standards	66,272	27,932
Radiological services	44,152	49,854
Fluorine products	113,666	113,691
Total segments	257,944	235,282
Corporate depreciation and amortization	9,775	6,154
Total consolidated	\$ 267,719	\$ 241,436

	<b>2018</b>	<b>2017 (as adjusted)</b>
Segment income (loss)		
Radiochemical products	\$ 289,773	\$ 402,158
Cobalt products	523,795	229,954
Nuclear medicine standards	675,367	627,832
Radiological services	1,122,604	545,814
Fluorine products	(122,651)	(209,110)
Total segments	2,488,888	1,596,648
Corporate loss	(3,333,464)	(5,353,932)
Total consolidated	\$ (844,576)	\$ (3,757,284)

	<b>2018</b>	<b>2017 (as adjusted)</b>
Expenditures for segment assets		
Radiochemical products	\$ 62,130	\$ 40,863
Cobalt products	-	-
Nuclear medicine standards	22,630	2,940
Radiological services	-	13,277
Fluorine products	1,560	14,223
Total segments	86,320	71,303
Corporate purchases	-	38,812
Total consolidated	\$ 86,320	\$ 110,115

Segment assets **2018**

			<b>2017 (as adjusted)</b>
Radiochemical products	\$	344,994	\$ 282,971
Cobalt products		2,611,939	1,813,356
Nuclear medicine standards		2,113,960	2,214,061
Radiological services		281,077	198,437
Fluorine products		5,590,053	5,702,159
Total segments		10,942,023	10,210,984
Corporate assets		2,048,053	1,794,310
Total consolidated	\$	12,990,076	\$ 12,005,294

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NOTE 16 SUBSEQUENT EVENTS

Pursuant to an employment agreement with the Company's Chief Executive Officer, the Company issued 279,767 shares of fully-vested Company stock in February 2019. The number of shares awarded was based on a \$28,000 stock award using a price of \$0.06 per share. The original agreement stated that the number of shares issued would be based on the average closing price of common stock for the 20 trading days prior to issue date but not less than \$0.10 per share. In October 2016, the employment agreement was modified to state that the number of shares issued will be based on the average closing price of common stock for the 20 trading days prior to issue date but not less than \$0.05 per share. Compensation expense recorded pursuant to this transaction was \$28,000, which was determined by multiplying the number of shares awarded by the average closing price of the stock for the preceding 20 trading days, which was \$0.06 per share. The Company withheld 186,900 shares to satisfy the employee's payroll tax liabilities in connection with this issuance. The net shares issued on February 28, 2019 totaled 279,767 shares.

In February 2019, the managing members of RadQual authorized a member distribution in the amount of \$60,187 to the Company. The Company recorded the member distribution as a reduction to the investment. In addition, RadQual loaned the Company \$185,474 pursuant to a promissory note with a stated interest rate of 6% and a maturity date of July 31, 2019. The promissory note is unsecured.

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