

INTERNATIONAL ISOTOPES INC  
Form 424B3  
August 10, 2011

**Filed Pursuant to Rule 424(b)(3)**

**Registration No. 333-171140**

**Prospectus Supplement No. 1 to Prospectus dated July 20, 2011**

**59,687,333 Shares**

**Common Stock, par value \$0.01**

This Prospectus Supplement No.1 supplements the prospectus of International Isotopes Inc. (the Company ) dated July 20, 2011(the Prospectus ), relating to the offer and sale of up to 29,075,000 shares of our outstanding common stock and 30,612,333 shares of our common stock issuable upon the exercise of warrants previously issued to certain shareholders named in the Prospectus pursuant to a private placement completed on October 29, 2010. This Prospectus Supplement No. 1 should be read in conjunction with the Prospectus and is qualified by reference to the Prospectus, except to the extent that the information in this Prospectus Supplement No. 1 supersedes the information contained in the Prospectus, and may not be delivered or utilized without the Prospectus.

This Prospectus Supplement No. 1 includes the attached report, as set forth below, as filed by the Company with the Securities and Exchange Commission.

The Company's Quarterly Report of Form 10-Q, for the quarter ended June 30, 2011, filed with the Securities and Exchange Commission on August 10, 2011.

Our common stock is quoted on the OTC Bulletin Board® under the ticker symbol INIS.OB. On August 9, 2011, the last sale price of the common stock, as reported on the OTC Bulletin Board®, was \$0.15 per share.

**Investing in our securities involves risk. You should carefully review the risks and uncertainties described under the heading Risk Factors beginning on page 1 of the Prospectus and in the documents which are incorporated by reference therein.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of this Prospectus Supplement No. 1 is August 10, 2011.

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

**FORM 10-Q**

(Mark One)

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

For the quarterly period ended June 30, 2011

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:

0-22923

**INTERNATIONAL ISOTOPES INC.**

*(Exact name of registrant as specified in its charter)*

**Texas**  
*(State or other jurisdiction of  
incorporation or organization)*

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

**4137 Commerce Circle**  
**Idaho Falls, Idaho, 83401**  
*(Address of principal executive offices, including zip code)*

**(208) 524-5300**  
*(Registrant's telephone number, including area code)*

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes  No

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

Large accelerated filer   
Non-accelerated filer

Accelerated Filer   
Smaller Reporting Company

(Do not check if a smaller reporting company)

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

As of July 22, 2011 the number of shares of Common Stock, \$.01 par value, outstanding was 323,625,769.

**INTERNATIONAL ISOTOPES INC.**

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**For The Quarter Ended June 30, 2011**

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## Part I. Financial Information

## Item 1. Financial Statements

**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**  
**Unaudited Condensed Consolidated Balance Sheets**

<b>Assets</b>	<b>June 30, 2011</b>	<b>December 31, 2010</b>
Current assets		
Cash and cash equivalents	\$ 2,057,578	\$ 4,237,303
Accounts receivable	1,138,513	844,258
Inventories	1,552,655	1,681,840
Due from related party	-	87,500
Prepays and other current assets	55,904	122,016
Total current assets	4,804,650	6,972,917
Long-term assets		
Restricted certificate of deposit	428,683	428,365
Property, plant and equipment, net	2,046,819	2,090,781
Capitalized lease disposal costs, net	113,657	140,934
Investment	1,414,747	1,365,851
Patents and other intangibles, net	221,472	228,745
Total long-term assets	4,225,378	4,254,676
Total assets	\$ 9,030,028	\$ 11,227,593
<b>Liabilities and Stockholders Equity</b>		
Current liabilities		
Accounts payable	\$ 746,824	\$ 717,363
Accrued liabilities	1,246,588	623,111
Convertible debentures, net of beneficial conversion feature of \$58,581 and \$292,863	3,016,419	2,782,137
Current installments of notes payable	936,006	454,811
Current installments of capital leases	-	9,930
Total current liabilities	5,945,837	4,587,352
Long-term liabilities		
Obligation for lease disposal costs	464,620	446,578
Notes payable, excluding current installments	-	505,382
Mandatorily redeemable convertible preferred stock	850,000	850,000
Total long-term liabilities	1,314,620	1,801,960
Total liabilities	7,260,457	6,389,312
Stockholders Equity		
	3,236,047	3,230,328



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Common stock, \$0.01 par value; 750,000,000 shares authorized; 323,604,727 and 323,032,866 shares issued and outstanding respectively		
Additional paid-in capital	107,764,647	107,462,007
Accumulated deficit	(109,429,252)	(106,044,054)
Equity attributable to International Isotopes Inc. stockholders	1,571,442	4,648,281
Equity attributable to noncontrolling interest	198,129	190,000
Total equity	1,769,571	4,838,281
Total liabilities and stockholders' equity	\$ 9,030,028	\$ 11,227,593

See accompanying notes to condensed consolidated financial statements.

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

	Three Months ended		Six Months ended	
	2011	June 30, 2010	2011	June 30, 2010
Sale of product	\$ 2,614,744	\$ 1,485,293	\$ 5,028,059	\$ 2,594,844
Cost of product	1,615,523	748,373	3,109,801	1,482,243
Gross profit	999,221	736,920	1,918,258	1,112,601
Operating costs and expenses:				
Salaries and contract labor	495,631	448,795	1,146,322	967,876
General, administrative and consulting	462,677	478,838	901,161	850,203
Research and development	1,591,173	1,362,805	2,998,884	2,018,970
Total operating expenses	2,549,481	2,290,438	5,046,367	3,837,049
Net operating loss	(1,550,260)	(1,553,518)	(3,128,109)	(2,724,448)
Other income (expense):				
Other income	13	19,103	3,158	16,063
Equity in net income of affiliate	31,390	-	76,246	-
Interest income	1,427	667	3,277	1,714
Interest expense	(161,883)	(173,322)	(331,641)	(265,261)
Total other expense	(129,053)	(153,552)	(248,960)	(247,484)
Net loss	(1,679,313)	(1,707,070)	(3,377,069)	(2,971,932)
Less (income) loss attributable to noncontrolling interest	9,127	-	(8,129)	-
Net loss attributable to International Isotopes Inc.	\$ (1,670,186)	\$ (1,707,070)	\$ (3,385,198)	\$ (2,971,932)
Net loss per common share basic and diluted	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.01)
Weighted average common shares outstanding - basic and diluted	323,425,663	293,926,893	323,312,599	293,900,022

See accompanying notes to condensed consolidated financial statements.



**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**  
**Unaudited Condensed Consolidated Statements of Cash Flows**

	<b>Six Months ended</b>	
	<b>June 30,</b>	
	<b>2011</b>	<b>2010</b>
Cash flows from operating activities:		
Net loss	\$ (3,377,069)	\$ (2,971,932)
Adjustments to reconcile net loss to net cash used in operating activities:		
Net income in equity of affiliate	(76,246)	-
Depreciation and amortization	213,226	231,112
(Gain)/Loss on disposal of property, plant and equipment	(3,145)	14,635
Accretion of obligation for lease disposal costs	18,042	16,668
Accretion of beneficial conversion feature	234,282	175,712
Equity based compensation	301,849	418,982
Changes in operating assets and liabilities:		
Accounts receivable	(294,255)	(460,587)
Inventories	129,185	(85,506)
Deferred revenue	-	8,226
Prepays and other assets	66,112	77,856
Accounts payable and accrued liabilities	652,938	465,997
Net cash used in operating activities	(2,135,081)	(2,108,837)
Cash flows from investing activities:		
Restricted certificate of deposit	(318)	(162,639)
Due from related party	87,500	-
Dividends received from equity method investment	27,350	-
Proceeds from sale of property, plant and equipment	18,500	3,800
Purchase of property, plant and equipment	(150,069)	(7,207)
Net cash used in investing activities	(17,037)	(166,046)
Cash flows from financing activities:		
Proceeds from sale of stock	6,510	13,040
Proceeds from issuance of convertible debentures	-	3,075,000
Proceeds from issuance of debt	45,000	-
Principal payments on notes payable and capital leases	(79,117)	(81,938)
Net cash provided by (used in) financing activities	(27,607)	3,006,102
Net increase (decrease) in cash and cash equivalents	(2,179,725)	731,219
Cash and cash equivalents at beginning of period	4,237,303	461,091
Cash and cash equivalents at end of period	\$ 2,057,578	\$ 1,192,310
Supplemental disclosure of cash flow activities:		
Cash paid for interest	\$ 52,177	\$ 47,900

Supplemental disclosure of noncash transactions:

Increase in equity for the beneficial conversion feature associated with the convertible debentures	\$	-	\$	702,857
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See accompanying notes to condensed consolidated financial statements.

**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**

**Notes to Unaudited Condensed Consolidated Financial Statements**

**June 30, 2011**

(1)

**The Company and Basis of Presentation**

International Isotopes Inc. (the Company) was incorporated in Texas in November 1995. The Company has three wholly owned subsidiaries: International Isotopes Idaho, Inc., a Texas corporation, and International Isotopes Fluorine Products, Inc., and International Isotopes Transportation Services, Inc., both of which are Idaho corporations. The Company also owns a 50% interest in TI Services, LLC, which is headquartered in Ohio.

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

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

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

*Interim Financial Information* The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (SEC). Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. In the opinion of management, all adjustments and reclassifications considered necessary in order to make the financial statements not misleading and for a fair and comparable presentation have been included and are of a normal recurring nature. Operating results for the three and six month period ended June

30, 2011, are not necessarily indicative of the results that may be expected for the year ended December 31, 2011. The accompanying financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2010 filed with the SEC on March 31, 2011.

(2)

#### Current Developments and Liquidity

*Business Condition* Since inception, the Company has suffered substantial losses. During the six-month period ended June 30, 2011 the Company reported a loss of \$3,385,198 and net cash used in operating activities of \$2,135,081. During the same period in 2010, the Company reported a loss of \$2,971,932 and net cash used in operating activities of \$2,108,837. The Company has made significant investments in, and will continue to invest in, the design, licensing, and construction of a large scale uranium de-conversion and fluorine extraction facility. Assuming the Company continues development work on this project at the current schedule, the Company expects that these continued expenses will exceed current revenue from sales by a significant amount for the remainder of 2011 and the next several years as well. As a result, the Company expects to continue to incur significant losses until the planned uranium de-conversion facility commences commercial production, which the Company does not expect to occur until the first quarter of 2014 at the earliest. Current expenditures on that project include licensing, design, and related subcontractor project efforts. Management expects to generate sufficient cash flows from the existing business segments to meet operational needs during 2011; however, there is no assurance that these cash flows will occur. In addition, the Company will require additional capital to support ongoing efforts for the planned large scale uranium de-conversion processing and fluorine extraction plant. There can be no assurance that the Company will be able to secure additional capital or financing on terms acceptable to the Company or at all.

The Company's efforts to start the uranium de-conversion project began in 2004 with the acquisition of patents for its Fluorine Extraction Process (FEP). Since that time the Company has made significant investments in this major undertaking to construct the first commercial depleted uranium de-conversion and fluorine extraction facility in the U.S. The Company believes this will provide a commercial opportunity because there are several companies constructing, or planning to construct, new uranium enrichment facilities in the U.S. These facilities are expected to produce large amounts of depleted uranium hexafluoride (UF<sub>6</sub>) that must be de-converted for disposal. In the process of de-conversion the Company plans to use FEP to produce high-value, high-purity fluoride gases. Additional design and licensing activities for this new facility will continue throughout the remainder of 2011.

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

In July 2011, the Company announced the selection of Parsons Corporation as the lead design-build contractor for the proposed de-conversion facility. The Company has successfully completed contract negotiations with Parsons Corporation and a letter of intent has been executed documenting the current intention of the parties with respect to contract terms. The Company plans to execute the Parsons design and build contract if and when it secures additional capital to further support the project.

The Company continues to explore the opportunity to raise funds to support the engineering, construction, and start-up of the project through debt financing and equity offerings of securities over the next year.

(3)

Net Loss Per Common Share - Basic and Diluted

At June 30, 2011, and 2010, 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:

**June 30,**



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	<b>2011</b>	<b>2010</b>
Stock options	25,700,000	26,700,000
Warrants	56,552,970	25,940,637
Restricted stock awards issued under the 2006 Equity Incentive Plan	370,917	579,947
850 shares of Series B redeemable convertible preferred stock	425,000	425,000
Convertible debentures and accrued interest	9,266,180	8,907,997
	92,315,067	62,553,581

For the three and six months ended June 30, 2011, the Company had 25,700,000 stock options outstanding, 56,552,970 warrants outstanding, 370,017 restricted stock awards outstanding, 425,000 shares of Series B redeemable convertible preferred stock outstanding, and 9,266,180 potential shares related to convertible debentures that were not included in the computation of diluted loss per common share because they would be anti-dilutive.

For the three and six months ended June 30, 2010, the Company had 26,700,000 stock options outstanding, 25,940,637 warrants outstanding, 579,947 restricted stock awards outstanding, 425,000 shares of Series B redeemable convertible preferred stock outstanding, and 9,907,997 potential shares related to convertible debentures that were not included in the computation of diluted loss per common share because they would be anti-dilutive. The following table shows the amounts used in computing basic and diluted weighted-average number of shares outstanding during the three and six-month periods ended June 30, 2011 and 2010:

	For the three months ended		For the six months ended	
	June 30,		June 30,	
	2011	2010	2011	2010
Basic weighted-average shares outstanding	323,425,663	293,926,893	323,312,599	293,900,022
Effect of dilutive securities and convertible debt:				
Stock options	n/a	n/a	n/a	n/a
Warrants	n/a	n/a	n/a	n/a
Restricted stock awards	n/a	n/a	n/a	n/a
Convertible preferred stock	n/a	n/a	n/a	n/a
Convertible debentures	n/a	n/a	n/a	n/a
Diluted weighted-average shares outstanding	323,425,663	293,926,893	323,312,599	293,900,022

(4)

#### Investments

At June 30, 2011, the Company owned a 24.5% interest in RadQual, LLC, with which the Company has an exclusive manufacturing agreement for nuclear medicine products. The remaining 75.5% ownership of RadQual, LLC, is concentrated among a very small group of investors and due to this concentration the Company was unable to exert significant control or influence over the operations or policies of RadQual, LLC. In December 2010 with the formation of TI Services, LLC, which was owned 50% by RadQual, LLC and 50% by the Company. Accordingly, the investment in RadQual, LLC is recorded on the equity method at the lower of cost or fair value. The 24.5% ownership of RadQual, LLC has been recorded on the equity method and has a balance of \$1,414,747 at June 30, 2011. For the six months ended June 30, 2011, member distributions from RadQual, LLC totaled \$27,350 and were recorded as a reduction of the investment and for the same period in 2010, member distributions totaled \$30,436. During the six months ended June 30, 2011, earnings allocated to the Company from RadQual, LLC totaled \$76,246. These allocated earnings were recorded as equity in net income of affiliate.

At June 30, 2011, and 2010, the Company had receivables from RadQual, LLC in the amount of \$514,163 and \$469,988, respectively, which are recorded as part of accounts receivable. For the six months ended June 30, 2011 and 2010, the Company had revenues from RadQual, LLC in the amount of \$1,843,498 and \$1,674,925, respectively, which are recorded as sale of product.

(5)

## Inventories

Inventories consisted of the following at June 30, 2011, and December 31, 2010:

	<b>June 30,</b>	<b>December 31,</b>
	<b>2011</b>	<b>2010</b>
Raw materials	\$ 249,929	\$ 260,972
Work in progress	1,225,943	1,388,550
Finished goods	76,783	32,318
	\$ 1,552,655	\$ 1,681,840

Work in progress includes cobalt-60 which is located in the U.S. federal government's Advanced Test Reactor (ATR) located outside of Idaho Falls, Idaho. The cobalt is at various stages of irradiation. Some cobalt is near completion while some will still require several more years to complete. At June 30, 2011, and December 31, 2010, the cobalt had a carrying value of \$857,531 and \$1,007,056, respectively. This value is based on accumulated costs which are allocated based on the length of time the cobalt remains in the reactor.

(6)

Stockholders Equity, Options and Warrants

Employee Stock Purchase

During the six months ended June 30, 2011, and 2010, the Company issued 35,141, and 33,018 shares of common stock, respectively, to employees for proceeds of \$6,510, and \$13,040, respectively. Subsequent to June 30, 2011, the Company issued 21,042 shares of common stock to employees for proceeds of \$3,040. All of these shares were issued in accordance with the Company's employee stock purchase plan.

Share-based Compensation Plans

Employee/Director Grants - The Company accounts for issuances of stock-based compensation to employees by recognizing, as compensation expense, the cost of employee services received in exchange for the equity instruments. The expense is based on the grant date fair value of the award. Stock option compensation expense is recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

Non-Employee Grants - The Company accounts for its issuances of stock-based compensation to non-employees by measuring the value of any awards that were vested and non-forfeitable at their date of issuance based on the fair value of the equity instruments at the date of issuance. The non-vested portion of awards that are subject to the future performance of the counterparty are adjusted at each reporting date to their fair values based upon the then current market value of the Company's stock and other assumptions that management believes are reasonable.

Option awards outstanding as of June 30, 2011, and changes during the six months ended June 30, 2011, were as follows:

<b>Fixed Options</b>	<b>Shares</b>	<b>Weighted Average Exercise Price</b>	<b>Weighted Average Remaining</b>	<b>Aggregate Intrinsic Value</b>
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			<b>Term</b>	
Outstanding at December 31, 2010	26,700,000	\$	0.16	
Granted	-		-	
Exercised	(1,000,000)		0.08	
Forfeited	-		-	
Outstanding at June 30, 2011	25,700,000		0.17	4.1 \$ 2,140,000
Exercisable at June 30, 2011	21,170,000		0.12	3.3 \$ 2,140,000

The intrinsic value of outstanding and exercisable shares is based on the closing price of the Company's common stock of \$0.17 per share on June 30, 2011.

On April 23, 2011, 552,941 shares of common stock were issued for the cashless exercise of 1,000,000 options.

As of June 30, 2011, there was approximately \$357,273 of unrecognized compensation cost related to stock options that will be recognized over a weighted average period of 1.4 years.

#### Restricted Stock Grants

Restricted stock awards outstanding as June 30, 2011, and changes during the six months ended June 30, 2011, were as follows:

<b>Restricted Stock Awards</b>	<b>Shares</b>
Non-vested at December 31, 2010	556,374
Granted	-
Vested	(185,457)
Forfeited	-
Non-vested at June 30, 2011	370,917

The value of non-vested stock under the 2006 Equity Incentive Plan at June 30, 2011, was \$63,056 and is based on a June 30, 2011, value of \$0.17 per share. As of June 30, 2011, there was approximately \$15,788 of unamortized deferred compensation that will be recognized over a weighted average period of 1.2 years.

Compensation expense charged against income for stock based awards during the six-month period ended June 30, 2011, was \$93,805. Stock based compensation expense for this same period in 2010 was \$418,982.

### Warrants

On March 25, 2011, the Company issued Series J Warrants. A total of 13,333,331 warrants were issued with each warrant representing the right to purchase one share of the Company's common stock. The Warrants expire on September 25, 2011 and carry an exercise price of \$0.43. The Series J Warrants were offered to the holders of the Series E Warrants that expired on March 20, 2011. The Company recognized compensation expense of \$105,000 resulting from the valuation of the Warrants. The fair value of the warrants, determined using the Black-Scholes Option Pricing Model, was calculated using the following assumptions: risk free interest rate of .4%, expected dividend yield of 0%, expected volatility of 111%, and an expected life of 184 days. Warrants outstanding at June 30, 2011 and changes during the six months ended June 30, 2011 were as follows:

Warrants outstanding at December 31, 2010	56,552,970
Issued	13,333,331
Exercised	-
Forfeited	(13,333,331)
Outstanding at June 30, 2011	56,552,970

(7)

### Notes Payable

On June 28, 2011, the Company entered into an agreement with a related party to obtain financing for certain equipment. The amount financed is \$45,000 and includes a security interest in the equipment financed. The note accrues interest at 8.5%, the monthly payment is \$3,925 and is due June 28, 2012. This note is included in Notes Payable on the balance sheet.

In June 2011 the Company was notified by Compass Bank that the note payable, which matured April 20, 2011, would not be renewed. In June 2011, a sixty day extension was granted by the bank and the loan balance of \$366,788 is expected to be paid in full with cash from existing Company accounts on or before August 29, 2011.

(8)

Commitments and Contingencies

Leases

On May 1, 2011 the Company entered into two new lease agreements on the facilities located in Idaho Falls, Idaho. The new lease for the main facility at 4137 Commerce Circle, Idaho Falls, Idaho, is for a period of ten years and includes an option to extend for an additional five years. The monthly rental payment under the terms of the new lease is \$11,359. The new lease for the FEP facility at 1359 Commerce Way, Idaho Falls, Idaho, is for a period of one year and includes an option to extend for an additional five years. The monthly rental payment under the terms of the lease is \$4,717.

### Dependence on Third Parties

The production of Cobalt is dependent upon the U.S. Department of Energy (DOE), and its prime operating contractor, which controls the reactor operations and, therefore, controls the continued production of cobalt in the government funded reactor. Previously, the Company's agreement with the prime operating contractor had been on a reactor cycle-by-cycle contract basis. In July 2010, the Company entered into a three-year Work For Others (WFO) agreement with the DOE prime operating contractor to continue cobalt production and cask handling. In January 2011, the Company was informed that DOE intended to transfer the existing WFO agreement to the National Isotope Development Center (NIDC). Negotiations have been underway since that time between the Company and NIDC on contract terms and costs for cobalt production services. While the Company believes it will be able to complete these contract negotiations with NIDC under reasonable contract pricing terms there is the possibility, however, that the new contract costs imposed by NIDC will make it prohibitive to continue cobalt production in the DOE reactor. Should that happen the Company would be forced to terminate cobalt production in the DOE reactor and attempt to locate an alternate source of supply of cobalt-60 from outside the U.S. In addition to the continued contract issues with NIDC the Company's continued access to the reactor for cobalt production, as always, remains subject to approval by the prime operating contractor of the reactor based upon the priorities of its experiments program.

Nuclear Medicine Reference and Calibration Standard manufacturing is conducted under an exclusive contract with RadQual, LLC, which in turn has an agreement in place with several companies for distributing the products. The contract states that the Company will manufacture these products exclusively for RadQual LLC, will not manufacture any products that would directly compete with RadQual, LLC, and that the Company holds the right of first refusal to contract manufacture products that RadQual, LLC wishes to supply to its customers. The current contract with RadQual, LLC was originally executed January 2006, and automatically renews for additional one year terms on each January 1st anniversary date unless terminated in writing by either party 90 days in advance of the anniversary date. A discontinuation of the Company's relationship with RadQual, LLC could adversely affect operating results by causing a possible loss of sales.

The majority of the sales in the radiochemicals business segment are attributed to sales of radiochemical iodine. The iodine is purchased by the Company through a sole supply agreement with NTP Radioisotopes (Pty) Ltd. of South Africa. That agreement extends through August 2013, and includes annual provisions for price adjustment. The termination of our relationship with NTP Radioisotopes could adversely affect operating results by causing a delay in production or a possible loss of sales in this segment. The processing of iodine is also subject to inspection and the regulatory authority of the U.S. Food and Drug Administration (FDA). The FDA has inspected the Company's facility and determined that the Company's handling of iodine is considered by the FDA as manufacturing of an active pharmaceutical ingredient. The Company will need to implement improvements in its Quality Assurance methods and controls to meet the FDA requirements resulting from this determination. In addition, the FDA may determine that manufacturing the iodine product will require an amended New Drug Application which would cause the Company to incur further regulatory fees and increase the cost of producing this product. Any of these regulatory issues could impact the Company's business decision to continue future iodine production.



The Company's gemstone production is tied to an exclusive agreement with Quali-Tech, Inc., and future gemstone irradiation services are dependent upon the continuation of that agreement. Should this agreement terminate, sales in the Company's Radiological Services would be negatively impacted because the agreement prohibits it from processing gemstones for other customers for two years after the agreement terminates.

#### Contingencies

Because all of the Company's business segments involve radioactive materials the Company is required to have an operating license from the Nuclear Regulatory Commission ( NRC ) and specially trained staff to handle these materials. The Company has an NRC operating license and has amended this license several times to increase the amount of material permitted within the facility. Additional processing capabilities and license amendments could be implemented that would permit processing of other reactor produced radioisotopes by the Company. Should this occur, the current license does not restrict the volume of business operation performed or projected to be performed in the coming year. An irrevocable, automatically renewable letter of credit against a Certificate of Deposit at Wells Fargo Bank has been used to provide the financial assurance required by the NRC for the Idaho facility license.

(9)

#### Subsequent Events

On July 13, 2011, the Company issued 21,042 shares of common stock to employees for proceeds of \$3,040.

(10)

## Segment Information

The Company has six reportable segments which include; Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, Radiological Services, and Transportation. Information regarding the operations and assets of these reportable business segments is contained in the following table:

	<b>Three months ended June 30,</b>		<b>Six months ended June 30,</b>	
	<b>2011</b>	<b>2010</b>	<b>2011</b>	<b>2010</b>
Sale of Product				
Radiochemical				
Products	\$ 475,901	\$ 404,620	\$ 917,201	\$ 848,660
Cobalt Products	821,409	486,377	1,234,244	646,262
Nuclear				
Medicine				
Standards	1,186,399	483,520	2,579,556	917,039
Radiological				
Services	57,635	57,876	134,250	105,533
Fluorine				
Products	-	-	-	-
Transportation	73,400	52,900	162,808	77,350
Total Segments	2,614,744	1,485,293	5,028,059	2,594,844
Corporate				
revenue	-	-	-	-
Total				
Consolidated	\$ 2,614,744	\$ 1,485,293	\$ 5,028,059	\$ 2,594,844

	<b>Three months ended June 30,</b>		<b>Six months ended June 30,</b>	
	<b>2011</b>	<b>2010</b>	<b>2011</b>	<b>2010</b>
Depreciation and				
Amortization				
Radiochemical				
Products	\$ 9,155	\$ 9,350	\$ 18,308	\$ 18,799
Cobalt Products	27,401	27,619	54,769	55,238
Nuclear Medicine				
Standards	3,090	1,278	5,954	2,556
Radiological				
Services	2,600	2,600	5,200	5,200
Fluorine Products	48,484	48,129	88,046	99,054
Transportation	3,395	7,414	7,018	16,525
Total Segments	94,124	96,389	179,294	197,371
Corporate	17,039	28,248	33,932	33,741
depreciation and				

amortization					
Total Consolidated	\$	111,163	\$	124,637	\$ 213,226 \$ 231,112

Segment	Three months ended June 30,		Six months ended June 30,	
	2011	2010	2011	2010
Income (Loss)				
Radiochemical Products	\$ 54,459	\$ 19,793	\$ 89,854	\$ 77,550
Cobalt Products	392,070	287,241	623,579	263,342
Nuclear Medicine Standards	195,051	223,078	399,964	396,603
Radiological Services	30,655	26,737	83,560	35,427
Fluorine Products	(1,701,456)	(1,508,477)	(3,292,659)	(2,232,930)
Transportation	13,184	(22,775)	23,465	(50,973)
Total Segments	(1,016,037)	(974,402)	(2,072,237)	(1,510,980)
Corporate loss	(654,149)	(732,668)	(1,312,961)	(1,460,952)
Net Loss	\$ (1,670,186)	\$ (1,707,070)	\$ (3,385,198)	\$ (2,971,932)

Expenditures for Segment Assets	Three months ended June 30,		Six months ended June 30,	
	2011	2010	2011	2010
Radiochemical Products	\$ -	\$ -	\$ -	\$ -
Cobalt Products	1,965	-	1,965	-
Nuclear Medicine Standards	44,759	-	83,065	-
Radiological Services	-	-	-	-
Fluorine Products	19,865	-	37,161	7,207
Transportation	-	-	18,047	-
Total Segments	66,589	-	140,238	7,207
Corporate purchases	-	-	9,831	-
Total Consolidated	\$ 66,589	\$ -	\$ 150,069	\$ 7,207

Segment Assets	June 30,	December 31,
	2011	2010
Radiochemical Products	\$ 279,108	\$ 269,673
Cobalt Products	1,773,825	1,931,262
Nuclear Medicine Standards	601,128	732,790
Radiological Services	22,121	45,677
Fluorine Products	1,636,531	1,691,917
Transportation	45,901	60,227

Total Segments	4,358,614	4,731,546
Corporate assets	4,671,414	6,496,047
Total Consolidated	\$ 9,030,028	\$ 11,227,593

**ITEM 2.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*This Quarterly Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and within the safe harbor provisions 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 Quarterly Report are forward looking. In particular, statements regarding growth in our business segments; progress on our depleted uranium de-conversion and fluorine extraction processing facility; potential future sales of fluoride products; the potential market for de-conversion services; increased cash flow to meet operational needs; improvement in our financial strength, debt ratio and attractiveness to investors and lenders; future liquidity requirements; NRC licensing requirements; and the consequences of the loss of any of our major customers or suppliers are forward looking. Forward-looking statements reflect management's current expectations, plans or projections. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. Certain risks and uncertainties that could cause our actual results to differ significantly from management's expectations are described in the risk factors set forth in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 filed with the Securities and Exchange Commission on March 31, 2011. These factors, describe some but not all of the factors that could cause actual results to differ significantly from management's expectations. The Company will not publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Readers are urged, however, to review the factors set forth in reports that we file from time to time with the Securities and Exchange Commission.*

**RESULTS OF OPERATIONS**

*Three months ended June 30, 2011 compared to three months ended June 30, 2010*

Revenues for the three-month period ended June 30, 2011, were \$2,614,744, as compared to \$1,485,293 for the same period in 2010, an overall increase of \$1,129,451, or approximately 76%. All business segments reported increases in revenues for the period with the exception of the Radiological Services segment which reported a slight decrease in revenue of \$241, or less than 1%. In December 2010, we entered into a 50/50 joint venture with RadQual, LLC and formed TI Services, LLC. Total revenue generated by TI Services, LLC for the quarter ended June 30, 2011 was \$723,611 and is being reported on a consolidated basis with the Nuclear Medicine Standards business segment revenue.

The Company recorded \$502,533 of bulk cobalt sales for the three-month period ended June 30, 2011, and there were no bulk cobalt sales during the same period in 2010. Fluctuations in bulk cobalt sales can create large variations in period-to-period revenue comparisons. The following table presents a period-to-period comparison of total revenue by segment, as well as a period-to-period comparison of total revenue by segment excluding bulk cobalt sales. Management believes that a comparison of total revenue excluding bulk cobalt sales provides meaningful information to investors because of the large period-to-period fluctuations in bulk cobalt sales. However, this information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue. Further discussion of the performance of each business segment is described more fully in the following paragraphs.

	<b>For the three-</b>	<b>% of</b>	<b>For the three-</b>	<b>% of</b>
	<b>months ended</b>	<b>Total</b>	<b>months ended</b>	<b>Total</b>
<b>Sale of Product</b>	<b>June 30,</b>	<b>Sales</b>	<b>June 30,</b>	<b>Sales</b>
	<b>2011</b>	<b>2011</b>	<b>2010</b>	<b>2010</b>
Radiochemical Products	\$ 475,901	18%	\$ 404,620	27%
Cobalt Products <b>(including bulk cobalt sales)</b>	821,409	31%	486,377	33%
Nuclear Medicine Standards	1,186,399	45%	483,520	33%
Radiological Services	57,635	2%	57,876	4%
Fluorine Products	-	0%	-	0%
Transportation	73,400	3%	52,900	4%
Corporate revenue	-	0%	-	0%
Total Segments including bulk cobalt sales	\$ 2,614,744	100%	\$ 1,485,293	100%
Radiochemical Products	\$ 475,901	23%	\$ 404,620	27%
Cobalt Products <b>(excluding bulk cobalt sales)</b>	318,876	15%	486,377	33%
Nuclear Medicine Standards	1,186,399	56%	483,520	33%
Radiological Services	57,635	3%	57,876	4%
Fluorine Products	-	0%	-	0%
Transportation	73,400	3%	52,900	4%
Corporate revenue	-	0%	-	0%
Total Segments excluding bulk cobalt sales	\$ 2,112,211	100%	\$ 1,485,293	100%

Gross profit for the three-month period ended June 30, 2011 was \$999,221, compared to \$736,920, for the same period in 2010. This represents an increase of \$262,301, or approximately 36%. Cost of sales increased to \$1,615,523 for the three-month period ended June 30, 2011, from \$748,373 for the same period in 2010. This increase in cost of sales is primarily due to the inclusion of the cost of goods sold of T.I. Services, LLC products. The increase was also due, to a lesser extent, by the increased costs of shielding material such as lead shield bags which are used in shipping products as well as other increases in materials costs. The gross profit percentage for the three months ended June 30, 2011, was 38% and 50% for the same period in 2010.

Gross profit for the three-month period ended June 30, 2011, includes TI Services, LLC revenues in the amount of \$723,611 and TI Services, LLC cost of sales in the amount of \$576,111. 2011 is the first year of reporting TI Services, LLC activity on a consolidated basis with all other business segments, therefore there are no corresponding sales or cost of sales to report for TI Services, LLC in 2010.

<b>For the three-</b>	<b>% of</b>	<b>For the three-</b>	<b>% of</b>
<b>months ended</b>		<b>months ended</b>	

	<b>June 30,</b>	<b>Total</b>		<b>June 30,</b>	<b>Total</b>
	<b>2011</b>	<b>Sales</b>		<b>2010</b>	<b>Sales</b>
		<b>2011</b>			<b>2010</b>
Total Sales	\$ 2,614,744		\$ 1,485,293		
Cost of Sales					
Radiochemical Products	\$ 394,221	15%	\$ 351,193		24%
Cobalt Products	369,213	14%	134,779		9%
Nuclear Medicine Standards	815,836	31%	227,966		15%
Radiological Services	20,368	1%	21,016		1%
Fluorine Products	-	-	-		-
Transportation	15,885	1%	13,419		1%
Total Segments	\$ 1,615,523	62%	\$ 748,373		50%
Gross Profit	\$ 999,221		\$ 736,920		
Gross Profit %	38%		50%		

Operating expenses increased to \$2,549,481 for the three-month period ended June 30, 2011, from \$2,290,438 for the same period in 2010. Operating expense for the three-month period includes \$156,527 of operating expense attributable to TI Services, LLC. This overall increase from period-to-period represents an increase of \$259,043 or approximately 11%.



The following table shows a comparison of total operating expenses for the three-month period:

	<b>For the three- months ended</b>	<b>For the three- months ended</b>		
	<b>June 30, 2011</b>	<b>June 30, 2010</b>	<b>% change</b>	<b>\$ change</b>
<u>Operating Costs and Expenses:</u>				
Salaries and Contract Labor	\$ 495,631	\$ 448,795	10%	\$ 46,836
General, Administrative and Consulting	462,677	478,838	-3%	(16,161)
Research and Development	1,591,173	1,362,805	17%	228,368
Total operating expenses	\$ 2,549,481	\$ 2,290,438	11%	\$ 259,043

As illustrated in the above table, the increase in operating costs and expenses is primarily attributable to research and development expenses associated with the planning and licensing of the planned depleted uranium de-conversion facility. Salaries and contract labor increased by \$46,836, or approximately 10%, for the three-month period ended June 30, 2011, compared to the same period in 2010. General administrative costs decreased by \$16,161, or approximately 3%, to \$462,677 for the three months ended June 30, 2011, compared to \$478,838 for the same period in 2010. Research and development costs increased by \$228,368, or approximately 17%, for the three months ended June 30, 2011, compared to same period in 2010. The increase in salaries and contract labor expense was the result of reporting TI Services, LLC salary and wage expense on a consolidated basis, combined with staffing adjustments made and a decrease in the amount of equity based compensation reported for the period ended June 30, 2011, compared to the same period in 2011. The increase in research and development expense is almost entirely attributable to the continued planning and licensing activities with regard to the depleted uranium de-conversion facility. These research and development expenses have increased from period-to-period and are expected to continue to do so provided that funding for the project continues to be available. Our net loss for the three-month period ended June 30, 2011, was \$1,670,186, as compared to \$1,707,070 for the same period in 2010. This is a decrease in loss of \$36,884, or approximately 2%, and was attributable to controlling research and development costs related to the planned depleted uranium de-conversion and fluorine extraction processing facility.

Interest expense for the three-month period ended June 30, 2011, was \$161,883, compared to \$173,322 for the same period in 2010. The decrease of \$11,439, or approximately 7%, is attributable to interest expense recorded in April of 2010 with regard to the convertible debentures, with no corresponding payment in 2011, as well as the pay-off of two commercial equipment loans. The convertible debentures that were issued in February 2010 to various institutional and private investors contain a beneficial conversion feature, and accordingly, we have recorded this feature as a contra-liability while simultaneously accreting the beneficial portion of the convertible debenture as interest expense over the 18-month life of the convertible debentures. The convertible debentures mature in August 2011.

*Radiochemical Products.* Revenues from the sale of radiochemical products for the three-month period ended June 30, 2011 were \$475,901, compared to \$404,620 for the same period in 2010. This represents an increase in revenue of \$71,281 or approximately 18%. Although competitive market conditions persist, we believe that our marketing efforts, commitment to high quality customer service, and our pricing structure have provided us with a strong competitive position in the market. Gross profit of radiochemical products for the three months ended June 30, 2011, was \$81,680, compared to \$53,426 for the same period in 2010. Gross profit percentages were approximately 17% and 13%, for the three-month periods ended June 30, 2011 and 2010, respectively. This slight increase in gross profit is attributable to marketing efforts mentioned above, to lower freight prices which were renegotiated during the first quarter of 2011, and to lower shielding costs generated by our lead pig recycling program. Operating expense for this segment for the three-month period ended June 30, 2011, was \$27,221, compared to \$33,634 for the same period in 2010. This decrease of \$6,413, or approximately 19%, is the result of decreases in indirect wage expense and production supply expense. Net income for this segment increased for the three-month period ended June 30, 2011, to \$54,459 from \$19,793 for the same period in 2010, an increase of \$34,666, or approximately 175%.

The processing of iodine is subject to inspection and the regulatory authority of the U.S. Food and Drug Administration (FDA). The FDA has inspected the Company's facility and determined that the Company's handling of iodine is considered by the FDA as manufacturing of an active pharmaceutical ingredient. The Company will need to implement improvements in its Quality Assurance methods and controls to meet these FDA requirements. In addition, the FDA may determine that manufacturing the iodine product will require an amended New Drug Application which would cause the Company to incur further regulatory fees and increase the cost of producing this product. Any of these regulatory issues could impact the Company's business decision to continue future iodine production.

Cobalt Products. Revenues from the sale of cobalt products for the three-month period ended June 30, 2011, were \$821,409, compared to \$486,377 for the same period in 2010. This represents an increase in revenue of \$335,032, or approximately 69%. We recorded \$502,533 of bulk cobalt sales for the three-month period ended June 30, 2011 and there were no bulk cobalt sales during the same period in 2010. The increase in segment revenue is the result of the timing of large bulk cobalt product sales which have a dramatic affect on period-to-period comparisons, as illustrated in the table above. Management believes that a period-to-period comparison excluding bulk cobalt sales offers a more useful comparison for the shareholder. However, this information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue. Excluding bulk cobalt sales, total cobalt product sales for the three-month period ended June 30, 2011, decreased by \$167,500, or approximately 35%, compared to the same period in 2010. This decrease in revenue can be attributed to the timing of sealed source product sales which declined during the three-months ended June 30, 2011, compared to the same period in 2010, as well as a decrease in other cobalt product sales such as services performed in connection of expended gamma knife source recovery and cobalt recycling. The following table presents cobalt products sales for the three months ended June 30, 2011 and 2010:

	<b>For the three- month period ended June 30, 2011</b>	<b>For the three- month period ended June 30, 2010</b>	<b>% change</b>	<b>\$ Change</b>
<u>Cobalt Products</u>				
HSA Cobalt Sales (bulk cobalt)	\$ 502,533	\$ -	0%	\$ 502,533
Sealed Source Manufacturing	264,216	393,657	-33%	(129,440)
Other Cobalt Product Sales	54,660	92,720	-41%	(38,060)
	<b>\$ 821,409</b>	<b>\$ 486,377</b>	<b>69%</b>	<b>\$ 335,033</b>

Gross profit for the three months ended June 30, 2011, was \$452,197, compared to \$351,598 for the same period in 2010. The increase is primarily due to the cost of sales related to the sale of bulk cobalt. Operating expense in this segment decreased by \$4,229, or approximately 7% for the three-month period ended June 30, 2011, as compared to the same period in 2010 and was attributable to decreased spending in production supplies. Net income for cobalt products was \$392,070 for the three-month period ended June 30, 2011, as compared to \$287,241 for the same period in 2010. The increase in net income of \$104,829, or approximately 37% is attributable to bulk cobalt sales. We anticipate strong sales in this segment for the remainder of 2011 based on current customer commitments for sealed

source sales, as well as our contractual commitments for bulk cobalt sales. We have also received certification under both ISO-9001 and ISO-13485 standards for the manufacture and design of certain cobalt-60 products. The ISO certifications are important to the Company's plans for continued expansion of sales of several products into international markets. ISO certification also improves our capabilities and value as a contract manufacturer of nuclear medicine products for RadQual, LLC. We anticipate that these certifications will strengthen our teletherapy source sales internationally as well as benefit our customers in terms of the quality of our products.

We have a contract with one customer, GE-Hitachi, for 100% of our bulk cobalt sales. This contract was renewed in April 2010 and carries a term of four years. The contract states a minimum purchase of material each year (yearly periods are each April 1 - March 31), and any shortages in annual purchases will be invoiced to GE Hitachi. Under this contract we expect to have a minimum of \$2,656,000 in bulk cobalt sales over the four-year period.

The production of cobalt, which we use in both bulk cobalt sales and sealed source sales, is dependent on the U.S. Department of Energy, and its prime-operating contractor which manages the Idaho reactor. Loss of the ability to use these irradiation services would significantly impact our cobalt products business segment because there is not currently another reactor available in the United States that is capable of providing this type of service for us. Previously, our agreement with the prime-operating contractor had been on a reactor cycle-by-cycle contract basis, but in July 2010, we entered into a three-year Work For Others agreement with the DOE prime operating contractor to continue cobalt production and cask handling. In January 2011, the Company was informed that DOE intended to transfer the existing WFO agreement to the NIDC. Negotiations have been underway since that time between the Company and NIDC on contract terms and costs for cobalt production services. While the Company believes it will be able to complete these contract negotiations with NIDC under reasonable contract pricing terms there is the possibility, however, that the new contract costs imposed by NIDC will make it prohibitive to continue cobalt production in the DOE reactor. Should that happen the Company would be forced to terminate cobalt production in the DOE reactor and attempt to locate an alternate source of supply of cobalt-60 from outside the U.S. A termination of our cobalt production business would have a material adverse effect on the financial results and the operations of the Company. In addition to the continued contract issues with NIDC the Company's continued access to the reactor for cobalt production, as always, remains subject to approval by the prime operating contractor of the reactor based upon the priorities of its experiments program.

*Nuclear Medicine Standards.* Revenues from nuclear medicine products for the three-month period ended June 30, 2011, were \$1,186,399, compared to \$483,520 for the same period in 2010. This represents an increase in revenue attributable to this segment of \$702,879, or approximately 145%. In December 2010, we formed a 50/50 joint venture, TI Services, LLC, with RadQual, LLC, to distribute products and services for nuclear medicine, nuclear cardiology, and PET imaging. For the three-month period ended June 30, 2011, revenues from this joint venture totaled \$723,611. The following table presents total sales for this segment for the three months ended June 30, 2011 and 2010.

	<b>For the three- months ended June 30, 2011</b>	<b>For the three- months ended June 30, 2010</b>	<b>% change</b>
Nuclear Medicine Standards Sales	\$ 371,151	\$ 336,593	10%
Flood Source Sales	91,637	146,927	-38%
Miscellaneous Source Sales	723,611	-	-
TI Services LLC	\$ 1,186,399	\$ 483,520	145%

Gross profit for the three-month period ended June 30, 2011 was \$370,564, as compared to \$255,553 for the same period in 2010, an increase of \$115,011, or approximately 45%. Because we are reporting our investment in TI Services, LLC on a consolidated basis, gross profit for the three months ended June 30, 2011 includes \$576,111 of costs attributable to TI Services, LLC with no corresponding expense for the same period in 2010. The following table presents cost of sales for this segment for the three months ended June 30, 2011 and 2010:

	<b>For the three- months ended June 30,</b>	<b>For the three- months ended June 30,</b>	
	<b>2011</b>	<b>2010</b>	<b>% change</b>
Nuclear Medicine Standards			
Cost of Sales			
Flood Sources	\$ 198,896	\$ 181,692	9%
Miscellaneous Sources	40,829	46,275	-12%
TI Services LLC	576,111	-	-
	\$ 815,835	\$ 227,966	258%

Operating expense for this segment for the three-month period ended June 30, 2011 increased to \$192,769, from \$32,475 for the same period in 2010, an increase of \$160,294. Operating expense for the three months ended June 30, 2011, includes \$156,527 of expense for TI Services, LLC, whereas there was no such expense to report for the same period in 2010. Exclusive of the TI Services, LLC expense, operating expense increased approximately 12% and was primarily attributable to increased costs of general nuclear medicine production supplies used in production support as well as an increase in depreciation expense related to new equipment purchased. Net income for this segment decreased by \$37,154, or approximately 17%, to \$185,924 for the three-month period ended June 30, 2011, compared to \$223,078 for the same period in 2010. Of the \$37,154 decrease in net income, approximately \$9,127 was attributable to net loss generated by TI Services, LLC. We will continue to expand this line of business through our new joint venture, TI Services, LLC, which we anticipate will result in increased sales and profitability. In addition, we have received certification under both ISO-9001 and ISO-13485 standards for the manufacture and design of certain nuclear medicine products which will permit expansion of product sales internationally.

*Radiological Services.* Revenues from radiological services for the three-month period ended June 30, 2011 were \$57,635, compared to \$57,876 for the same period in 2010, a decrease of \$241 or less than 1%. Revenue in this segment is generated by gem stone processing and radiological service consulting work performed in conjunction with sealed source sales and expended source disposal services and is expected to remain constant through the end of the year. Gross profit for this segment for the three-month period ended June 30, 2011, was \$37,267, compared to \$36,861 for the same period in 2010. Operating expense for the three months ended June 30, 2011 was \$6,613, as compared to \$10,124 for the same period in 2010. This is a decrease of \$3,511, or approximately 35%, and is the result of overall cost control with regard to operations. Net income for the three-month period ended June 30, 2011 was \$30,655, as compared to \$26,737 for the same period in 2010. Historically, most of our radiological services have been performed in support of gemstone processing for Quali-Tech, Inc. There are very few companies in the U.S. that possess the mix of qualifications and licensing necessary to provide this type of gemstone related service, and although the volume of gemstones to be processed has not been at historical proportions we anticipate that demand for these services will improve as overall market conditions improve.

*Fluorine Products.* There were no revenues to report from the fluorine products segment for the three-month period ended June 30, 2011 or for the same period in 2010. We are developing our fluorine products in conjunction with uranium de-conversion in order to take advantage of the anticipated need for depleted uranium de-conversion services. Our Fluorine Extraction Process (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 the three-month period ended June 30, 2011, we incurred approximately \$1,735,000 of planning, licensing, and other expense as compared to approximately \$1,508,000 in 2010. This is an increase of \$227,000, or approximately 15%. During 2011, we will continue to use our existing FEP facility in Idaho for testing individual components and analytical processes required for the planned uranium de-conversion facility in New Mexico as funding for the project permits. We do not anticipate any revenues from sales of fluoride products in 2011.

*Transportation Services.* This segment was established to provide for transportation of our products (such as cobalt sources) and to offer for hire transportation services of hazardous and non-hazardous cargo materials. This business segment provides us with considerable savings for the transportation of our products and produces a small revenue

stream by providing transportation of products for other companies. The transportation services segment will also provide some of the transportation services for the planned de-conversion facility. Revenues from transportation services for the three-month period ended June 30, 2011 were \$73,400, compared to \$52,900 for the same period in 2010. This is an increase of \$20,500, or approximately 39%. This increase in revenue is the result of utilizing our transportation services segment for the transport of our cobalt products including sealed source products and expended source disposal. Gross profit was \$57,515 for the three-month period ended June 30, 2011, compared to \$39,481 for the same period in 2010, or 78% and 75%, respectively, of transportation services segment revenue for these periods. Operating expense was \$44,331 for the three-month period ended June 30, 2011, compared to \$62,256 for the same period in 2010. This represents a decrease of \$17,925, or approximately 29%. This decrease in expense is the result of decreased labor costs as well as decreases in depreciation expense. For the three-month period ended June 30, 2011 net income was \$13,184, compared to a net loss of \$22,775 for the same period in 2010.



*Six months ended June 30, 2011 compared to six months ended June 30, 2010*

Revenues for the six-month period ended June 30, 2011, were \$5,028,059, as compared to \$2,594,844 for the same period in 2010, an increase of \$2,433,215, or approximately 94%. In December 2010, we entered into a 50/50 joint venture with RadQual, LLC and formed TI Services, LLC. Total revenue generated by TI Services, LLC for the six months ended June 30, 2011 was \$1,555,368 and is being reported on a consolidated basis with the Nuclear Medicine Standards business segment revenue. The Company recorded \$502,533 of bulk cobalt sales for the six-month period ended June 30, 2011, but recorded no bulk cobalt sales during the same period in 2010. Because each bulk cobalt sale represents a material dollar amount, these sales can create significant variations in period-to-period comparisons. Therefore, management believes that a comparison of total revenue excluding bulk cobalt sales provides meaningful information to investors because of these large period-to-period variations. However, this information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue.

The following table presents a period-to-period comparison of total revenue by segment, as well as a period-to-period comparison of total revenue by segment excluding bulk cobalt sales. This information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue.

	<b>For the six-</b>	<b>% of</b>	<b>For the six-</b>	<b>% of</b>
	<b>months ended</b>	<b>Total</b>	<b>months ended</b>	<b>Total</b>
	<b>June 30,</b>	<b>Sales</b>	<b>June 30,</b>	<b>Sales</b>
	<b>2011</b>	<b>2011</b>	<b>2010</b>	<b>2010</b>
Sale of Product				
Radiochemical Products	\$ 917,201	18%	\$ 848,660	33%
Cobalt Products <b>(including bulk cobalt sales)</b>	1,234,244	25%	646,262	25%
Nuclear Medicine Standards	2,579,556	51%	917,039	35%
Radiological Services	134,250	3%	105,533	4%
Fluorine Products	-	0%	-	0%
Transportation	162,808	3%	77,350	3%
Corporate revenue	-	0%	-	0%
Total Segments	\$ 5,028,059	100%	\$ 2,594,844	100%
Radiochemical Products	\$ 917,201	20%	\$ 848,660	33%
Cobalt Products <b>(excluding bulk cobalt sales)</b>	731,711	16%	646,262	25%
Nuclear Medicine Standards	2,579,556	57%	917,039	35%
Radiological Services	134,250	3%	105,533	4%
Fluorine Products	-	0%	-	0%
Transportation	162,808	4%	77,350	3%
Corporate revenue	-	0%	-	0%
Total Segments	\$ 4,525,526	100%	\$ 2,594,844	100%

Gross profit for the six-month period ended June 30, 2011 was \$1,918,258, compared to \$1,112,601, for the same period in 2010. This represents an increase of \$805,657, or approximately 72%. Gross profit for the six-month period ended June 30, 2011, includes TI Services, LLC revenues in the amount of \$1,555,368 and TI Services, LLC cost of sales in the amount of \$1,234,731. 2011 is the first year of reporting TI Services, LLC activity on a consolidated basis with all other business segments, therefore there are no corresponding sales or cost of sales to report for TI Services, LLC in 2010. The increase in gross profit for the six-month period is largely attributable to reporting no bulk cobalt sales for the six-month period in 2010, as compared to reporting \$502,533 of bulk cobalt sales for the same period in 2011.

Operating expenses were \$5,046,367 for the six-month period ended June 30, 2011, compared to \$3,837,049 for the same period in 2010. This represents an increase of \$1,209,318 or approximately 32%. This increase is attributable to the increase in research and development costs generated by work related to the continued planning and licensing of the uranium de-conversion facility. The following table shows a year to year comparison of total operating expenses for the six-month period:

	For the six-		For the six-			
	months ended		months ended			
	June 30,	June 30,			% change	\$ change
	2011	2010				
<u>Operating Costs and Expenses:</u>						
Salaries and Contract Labor	\$ 1,146,322	\$ 967,876			18%	\$ 178,446
General, Administrative and Consulting	901,161	850,203			6%	50,958
Research and Development	2,998,884	2,018,970			49%	979,914
Total operating expenses	\$ 5,046,367	\$ 3,837,049			32%	\$ 1,209,318

Our net loss for the six-month period ended June 30, 2011, was \$3,385,198, as compared to \$2,971,932 for the same period in 2010. This is an increase in loss of \$413,266, or 14%, and was largely attributable to the increases in research and development costs related to the planned depleted uranium de-conversion and fluorine extraction processing facility.

Radiochemical Products. Revenues from the sale of radiochemical products for the six-month period ended June 30, 2011, were \$917,201, compared to \$848,660 for the same period in 2010. This represents an increase in revenue of \$68,541, or approximately 8%. Increases in this segment's performance are attributable to increased sales of radiochemical iodine-131 which have remained strong for the six-month period. Gross profit in this segment for the six months ended June 30, 2011, was \$159,190, compared to \$146,164 for the same period in 2010. Gross profit percentages for the six months ended June 30, 2011 and 2010 were approximately 17% for each period. Operating expense for this segment for the six-month period ended June 30, 2011 was \$69,336, compared to \$68,314 for the same period in 2010. This slight increase of less than 1% is due to minor fluctuations in various operating expense accounts. Net income for this segment increased for the six-month period ended June 30, 2011, to \$89,954, an increase of \$12,304 or approximately 16%, compared to net income of \$77,550 for the same period in 2010.

The majority of the sales in the Radiochemical business segment are attributed to sales of radiochemical iodine. The iodine is purchased by the Company through a sole supply agreement with NTP Radioisotopes (Pty) Ltd. of South Africa. That agreement extends through August 2013, and includes annual provisions for price adjustment. The termination of our relationship with NTP Radioisotopes could adversely affect operating results by causing a delay in production or a possible loss of sales in this segment. The processing of iodine is also subject to inspection and the regulatory authority of the FDA. The FDA has inspected the Company's facility and determined that the Company's

handling of iodine is considered by the FDA as manufacturing of an active pharmaceutical ingredient. The Company will need to implement improvements in its Quality Assurance methods and controls to meet the FDA requirements resulting from this determination. In addition, the FDA may determine that manufacturing the iodine product will require an amended New Drug Application which would cause the Company to incur further regulatory fees and increase the cost of producing this product. Any of these regulatory issues could impact the Company's business decision to continue future iodine production.

*Cobalt Products.* Revenues from the sale of cobalt products for the six-month period ended June 30, 2011 were \$1,234,244, compared to \$646,262 for the same period in 2010. This represents an increase in revenue of \$587,982, or approximately 91%. This increase in segment revenue is largely the result of the timing of large bulk cobalt product sales which have a dramatic effect on period-to-period comparisons, as illustrated in the Sale of Product table above. Management believes that a period-to-period comparison excluding bulk cobalt sales offers a more useful comparison for the shareholder. However, this information has limitations as an analytical tool and you should not consider it in isolation or as a substitute for total revenue. Excluding bulk cobalt sales, total cobalt product sales increased to \$731,711 for the six months ended June 30, 2011, compared to \$646,262 for the same period in 2010. This is an increase of \$85,449, or approximately 13%. This increase in sales, excluding bulk cobalt sales, reflects the on-going marketing efforts of cobalt products into new markets; particularly our sealed source sales. Gross profit for the six-month period ended June 30, 2011 was \$744,566, as compared to \$383,801 for the same period in 2010. This increase in gross profit is primarily the result of reporting bulk cobalt sales of \$502,533 for this period in 2011, compared to reporting no bulk cobalt sales for the six months ending June 30, 2010. Operating expense in this segment increased slightly by \$528, to \$120,987 for the six-month period ended June 30, 2011, from \$120,459 for the same period in 2010. Net income for the six months ended June 30, 2011 was \$623,579, compared to \$263,342 for the same period in 2010. This increase of \$360,237, or approximately 137%, is attributable to reporting bulk cobalt sales for the six-month period ended June 30, 2011, and no bulk cobalt sales during the same period in 2010. We believe that both the continued development of our Quality Program as well as our recent ISO-9001 and ISO-13485 certification will enhance our efforts to expand teletherapy source sales into international markets and we anticipate continued strong performance in our cobalt products line of products.

The production of cobalt is dependent upon the DOE, and its prime operating contractor, which controls the reactor operations and, therefore, controls the continued production of cobalt in the government funded reactor. Previously, the Company's agreement with the prime operating contractor had been on a reactor cycle-by-cycle contract basis. In July 2010, the Company entered into a three-year Work For Others (WFO) agreement with the DOE prime operating contractor to continue cobalt production and cask handling. In January 2010, the Company was informed that DOE intended to transfer the existing WFO agreement to the NIDC. Negotiations have been underway since that time between the Company and NIDC on contract terms and costs for cobalt production services. While the Company believes it will be able to complete these contract negotiations with NIDC under reasonable contract pricing terms there is the possibility, however, that the new contract costs imposed by NIDC will make it prohibitive to continue cobalt production in the DOE reactor. Should that happen the Company would be forced to terminate cobalt production in the DOE reactor and attempt to locate an alternate source of supply of cobalt-60 from outside the U.S. A termination of our cobalt production business would have a material adverse effect on the financial results and the operations of the Company. In addition to the continued contract issues with NIDC the Company's continued access to the reactor for cobalt production, as always, remains subject to approval by the prime operating contractor of the reactor based upon the priorities of its experiments program.

*Nuclear Medicine Standards.* Revenues from nuclear medicine products for the six-month period ended June 30, 2011 were \$2,579,556, compared to \$917,039 for the same period in 2010. This represents an increase in revenue attributable to this segment of \$1,662,517, or approximately 181%. In December 2010, we formed a 50/50 joint venture, TI Services, LLC, with RadQual, LLC, to distribute products and services for nuclear medicine, nuclear cardiology, and PET imaging. For the six-month period ended June 30, 2011, revenues from this joint venture totaled \$1,555,368. The following table presents total sales for this segment for the six months ended June 30, 2011 and

2010.

	<b>For the six- months ended June 30, 2011</b>	<b>For the six- months ended June 30, 2010</b>	<b>% change</b>
Nuclear Medicine Standards Sales	\$ 838,585	\$ 697,565	20%
Flood Source Sales	185,603	219,474	-15%
Miscellaneous Source Sales	1,555,368	-	-
TI Services LLC	\$ 2,579,556	\$ 917,039	181%

Gross profit for the six-month period ended June 30, 2011 was \$796,443, as compared to \$460,080 for the same period in 2010, an increase of \$336,361, or approximately 73%. Because we are reporting our investment in TI Services, LLC on a consolidated basis, gross profit for the six months ended June 30, 2011 includes \$1,234,731 of costs attributable to TI Services, LLC with no corresponding expense for the same period in 2010. The following table presents cost of sales and gross profit for this segment for the six months ended June 30, 2011 and 2010.

	For the six-		For the six-		
	months ended		months ended		
	June 30,		June 30,		
	2011		2010	% change	
Nuclear Medicine Standards					
Cost of Sales					
Flood Sources	\$	459,957	\$	378,440	22%
Miscellaneous Sources		88,425		78,519	13%
TI Services LLC		1,234,731		-	-
	\$	1,783,113	\$	456,959	290%
Gross Profit	\$	796,443	\$	460,080	

Operating expense for this segment for the six-month period ended June 30, 2011 increased to \$396,479, from \$63,476 for the same period in 2010, an increase of \$333,003. Operating expense for the six months ended June 30, 2011 includes \$312,408 of expense for TI Services, LLC, whereas there was no such expense to report for the same period in 2010. Exclusive of the TI Services, LLC expense, operating expense increased approximately 33% and was primarily attributable to increased costs of general nuclear medicine labor support and production supplies used in production support. Net income for this segment increased by \$3,361, or less than 1%, to \$399,964 for the six-month period ended June 30, 2011, compared to \$396,603 for the same period in 2010. The increase in net income included \$8,129 attributable to net income generated by TI Services, LLC. We anticipate that sales of our nuclear medicine products will continue to increase as we expand this line of business through our new joint venture, TI Services, LLC. We believe our recent ISO certifications will also strengthen our value as a contract manufacturer of nuclear medicine products for RadQual, LLC as well as enhancing overall financial performance of this business segment by permitting expansion of international sales.

Radiological Services. The radiological services segment reported revenues of \$134,250 for the six-month period ended June 30, 2011 and \$105,533 for the same period in 2010. This is an increase of \$28,707, or approximately 27%. Gross profit was \$96,458 for this segment for the six months ended June 30, 2011 and \$62,386 for the same period in 2010. This is an increase in gross profit of \$34,069, or approximately 55%. Operating costs were \$12,898 and \$26,960 for 2011 and 2010, respectively, for the same six-month period. Topaz gemstone processing revenues continue to remain modest compared to historical levels, however there are very few companies in the U.S. that possess the qualifications and licensing necessary to perform this type of gemstone related service and management believes that demand will improve as economic conditions improve. Although the performance of this segment is

largely dependent on topaz gemstone processing, both radiological source disposal services and radiological consulting services have reported increased revenues for the six months ended June 30, 2011, as compared to the same period in 2010. Radiological consulting work and expended source disposal services are performed in conjunction with sealed source sales in our cobalt products segment and we anticipate that along with cobalt product sales, our radiological services segment's performance will continue to improve based on customer orders and contractual customer obligations.

*Fluorine Products.* There were no revenues to report for our fluorine products segment for the six-month period ended June 30, 2011. We are developing our fluorine products in conjunction with uranium de-conversion in order to take advantage of the anticipated need for depleted uranium de-conversion services. Our Fluorine Extraction Process (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 and, based on market studies, we believe that as funding becomes available continued financial investment in the uranium de-conversion facility is justified. During the six month period ended June 30, 2011, we incurred approximately \$2,998,884 of planning, licensing, and other expense as compared to approximately \$2,018,970 for the same period in 2010. This is an increase of \$979,914, or approximately 49%. During 2011 we will continue to use the FEP facility in Idaho for testing individual components and analytical processes required for the planned uranium de-conversion facility in New Mexico. We do not anticipate any revenues from the sales of fluoride products in 2011.



*Transportation Services.* Revenues from the transportation services segment for the six-month period ended June 30, 2011, were \$162,808, compared to \$77,350 for the same period in 2010. This is an increase of \$85,458, or approximately 110% and is largely the result of increased for hire revenues. Gross profit for this segment was \$121,605 for the six-month period ended June 30, 2011, and \$60,170 for the same period in 2010. This is an increase in gross profit of \$61,435, or approximately 102%. Operating expense for this segment was \$98,140 for the six-month period ended June 30, 2011, and \$111,142 for the same period in 2010. This represents a decrease of \$13,002 or approximately 12%. The transportation services business segment continues to provide hazardous and non-hazardous transportation services to us at significant savings as compared to outside commercial carriers. Our specially trained drivers and equipped vehicles are well suited to meeting the security and regulatory requirements necessary for the transport of these types of shipments while significantly reducing the costs of transport to our Company. It is anticipated that this segment will also provide some of the transportation services for the planned de-conversion facility.

## LIQUIDITY AND CAPITAL RESOURCES

On June 30, 2011 we had cash and cash equivalents of \$2,057,578. For the six months ended June 30, 2011, net cash used in operating activities was \$2,135,081. Use of cash in operating activities is a combination of typical operating purchases, including inventory purchases as well as cash paid for services in support of the planned de-conversion facility.

Inventories at June 30, 2011 totaled \$1,552,655, and inventories at December 31, 2010 totaled \$1,681,840. This significant investment in inventory is due to the time required to produce some cobalt products and the operating cycle for those products is considered to be approximately three years. Irradiation costs paid to the Department of Energy's prime contractor account for approximately 84% of total work in process inventory cost for the six-month period ended June 30, 2011, and approximately 86% of total inventory cost for the same period in 2010.

Increases in accounts receivable reflect normal fluctuations in segment sales as well as payment terms. Historically, we have not written off any accounts receivable and we expect that trend to continue. For the six-month period ended June 30, 2011, we used \$17,037 in investing activities. During this six-month period we purchased a new computer server, transportation equipment, and other capital equipment used in our manufacturing processes for a total of approximately \$150,000. We sold assets for proceeds of \$18,500. Financing activities used \$27,607 of cash during the six months ended June 30, 2011, primarily for loan payments. We borrowed \$45,000 from RadQual, LLC, for the purchase of a camera for use in the quality assurance processes related to the manufacture of flood source products. The loan is for one year and bears an interest rate of 8.5%.

At June 30, 2011, we had two outstanding loans with Compass Bank. One loan carries an outstanding balance of \$11,085 with an interest rate of 9.25%, maturing on September 15, 2011. The second loan, with an outstanding

balance of \$366,788 (the Term Loan ) matured April 20, 2011, but was extended to August 29, 2011. In June 2011 we received a notice of non-renewal from Compass Bank with respect to the Term Loan, therefore the outstanding balance of the Term Loan is expected to be paid in full with cash from our existing accounts by August 29, 2011. We also have an unsecured note payable totaling \$500,000 which is payable to the former Chairman of the Board. The loan requires annual interest payments on the principal balance at 7% per year, payable each April 1st, and the note matures on April 1, 2012. 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.

We are continuing to pursue the planning, licensing and construction of a depleted uranium de-conversion and fluorine extraction processing facility. We spent approximately \$3,300,000 during the first six months of 2011 on planning, licensing, and other expense for this project, and will continue this work as funding becomes available to us. During the first six months of 2011, we continued work in support of the licensing process with the NRC, worked on the transfer of property for the facility, completed contract negotiations and selected a design and build contractor for the project, and continued to work towards completing sales agreements for the sale of products from the proposed facility. In July 2011, we announced the selection of Parsons as the design-build contractor for the facility and completed a letter of intent documenting the contract terms.

It will require significant capital and time to design, license, and construct such a uranium de-conversion facility. Nonetheless, the Company believes that the commercial opportunity will justify this investment and it has taken several actions in 2010 and 2011, to put this plan in place. In February 2010, the Company issued convertible debentures with an aggregate principal balance of \$3,075,000 and in October 2010 completed a private offering generating proceeds of approximately \$5,800,000. These funds were raised to provide continuing support for the costs associated with the construction and licensing of the de-conversion facility, and it is planned, as funds become available, that significant costs will continue to be incurred.

We are exploring several options for funding of the project at this time including a loan under the Department of Energy Loan Guarantee Program solicitation for renewable energy, and energy savings in manufacturing projects. Under that program the DOE makes relatively low interest loans through the federal bank to approved projects. We have submitted an application under this program and anticipate some indication from the DOE of award status in 2012. We have submitted an application to the DOE Loan Guarantee Office for a loan for the construction of our de-conversion and FEP facility. There can be no guarantee that the DOE will determine our project to be a qualifying project or that the DOE will award us a loan. If the loan application is unsuccessful, we will have to raise the balance of the funds required for the planned facility through additional equity or debt financing. There can be no assurance that we will be able to secure additional equity or debt financing on acceptable terms, or at all, if the DOE loan is not available.

We have a long term investment of \$1,414,747, which represents a 24.5% ownership in units of RadQual, LLC. The value of this asset is based upon the purchase price of those shares and the continued business performance of RadQual, LLC. We purchased these shares with the intent to eventually acquire the remaining shares of RadQual, LLC and thus improve the revenues and profit margin for the nuclear medicine business segment. At the present time there is no immediate action pending or planned to acquire the remainder of those shares. Future plans to complete this acquisition will depend upon our ability to obtain additional capital and RadQual, LLC stockholders being willing to sell.

Our 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.

On October 29, 2010 we completed a private placement for cash proceeds of \$5,815,000. We issued 29,075,000 units with each unit consisting of one share of common stock and one warrant to purchase one share of common stock for an exercise price of \$0.40. The warrants expire in five years and contain a call provision that permits the Company to call the warrants in the event that the Company's closing stock price is greater than \$0.80 per share for any 20 consecutive trading days. The proceeds of this offering will be used to continue our efforts on the licensing and design of our planned uranium de-conversion and fluorine extraction processing facility in New Mexico. At June 30, 2011, there were 56,552,970 outstanding warrants to purchase common stock. Included in these are 8,200,000 Class F

warrants issued in November 2008, with an exercise price of \$0.30 per share and an expiration date of November 10, 2013. On March 20, 2011, 13,333,331 Class E warrants expired pursuant to the terms of the warrant agreement. On March 25, 2011, we issued 13,333,331 Class J Warrants, to previous holders of Class E warrants, with an exercise price of \$0.43 per share and an expiration date of September 25, 2011.

#### **ITEM 4. CONTROLS AND PROCEDURES**

##### **Evaluation of Disclosure Controls and Procedures**

The Company maintains disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the Exchange Act ) that are designed to ensure that material information relating to the Company is made known to the officers who certify the Company's financial reports and to other members of senior management and the Board of Directors. These disclosure controls and procedures are designed to ensure that information required to be disclosed in the Company's reports that are filed or submitted under the Exchange Act, are recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits 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 the CEO and CFO, has evaluated the effectiveness, as of June 30, 2011, of the Company's disclosure controls and procedures. Based on that evaluation, the CEO and CFO have concluded that the Company's disclosure controls and procedures were effective as of June 30, 2011.

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

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the three months ended June 30, 2011, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## **PART II. OTHER INFORMATION**

### **Item 1A. Risk Factors**

Other than as set forth below, as of the date of this filing, there have been no material changes or updates to the risk factors previously disclosed in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2010.

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

**Radioactive Waste.** All of our manufacturing processes generate some radioactive waste. We must handle this waste pursuant to the Low Level Radioactive Waste Policy Act of 1980, which requires the safe disposal of mildly radioactive materials. The estimated costs for storage and disposal of these materials have been included in the

manufacturing and sales price of our products. However, actual disposal costs are subject to change at the discretion of the disposal site and are ultimately applied at the time of disposal. The Nuclear Regulatory Commission (NRC) is revising its regulations on the disposal of depleted uranium waste at low level radioactive waste disposal facilities that accept substantial quantities of depleted uranium. If commercial low level radioactive waste disposal facilities are not readily available to us, we may not be able to provide the de-conversion services at the level assumed by our business model.

***Iodine Processing.*** The processing of iodine is subject to inspection and the regulatory authority of the FDA. The FDA has inspected the Company's facility and determined that the Company's handling of iodine is considered by the FDA as manufacturing of an active pharmaceutical ingredient. The Company will need to implement improvements in its Quality Assurance methods and controls to meet the FDA requirements resulting from this determination. In addition, the FDA may determine that manufacturing the iodine product will require an amended New Drug Application which would cause the Company to incur further regulatory fees and increase the cost of producing this product. Any of these regulatory issues could impact the Company's business decision to continue future iodine production.

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

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

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

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

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

**We will need to raise additional funds to complete the construction of our de-conversion FEP facility.** We need to raise approximately \$125 million additional funds to complete the design, license and construction of a de-conversion facility with a production scale FEP operation. We may seek additional debt financing for our projects and operations in the future. In April 2011 we received a notice of non-renewal from Compass Bank with respect to our term loan with the bank. There is no assurance that we will be able to secure additional debt financing on acceptable terms to us, or at all. The recent Japan nuclear crises may adversely impact our ability to raise such additional capital. In addition, the total funds required to complete this project have been based upon early preliminary estimates and, while we believe these estimates are conservative, there can be no assurance that unforeseen expense will not be incurred and additional funding required to complete the project.

**We will need additional financing to continue operations.** Because we may continue to experience negative cash flow, we will need to obtain additional financing to continue operations. In April 2011 we received a notice of non-renewal from Compass Bank with respect to our term loan with the bank. 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.



***We are dependent on various third parties in connection with our business operations.*** One of our main core business segments, cobalt products, is dependent on continued access to the Idaho research reactor and our continued ability to carry out work under the DOE's Federal Work for Others non-government sponsor programs. The production of high specific activity cobalt is dependent upon the DOE, and its prime-operating contractor, which controls the Idaho reactor. In January 2010, the Company was informed that DOE intended to transfer the existing WFO agreement to the National Isotope Development Center (NIDC). Negotiations have been underway since that time between the Company and NIDC on contract terms and costs for cobalt production services. While the Company believes it will be able to complete these contract negotiations with NIDC under reasonable contract pricing terms there is the possibility, however, that the new contract costs imposed by NIDC will make it prohibitive to continue cobalt production in the DOE reactor. Should that happen the Company would be forced to terminate cobalt production in the DOE reactor and attempt to locate an alternate source of supply of cobalt-60 from outside the U.S. A termination of our cobalt production business would have a material adverse effect on the financial results and the operations of the Company. In addition to the continued contract issues with NIDC the Company's continued access to the reactor for cobalt production, as always, remains subject to approval by the prime operating contractor of the reactor based upon the priorities of its experiments program. Loss of the ability to use these irradiation services would significantly impact our cobalt products business segment because there is not currently another reactor available in the United States that is capable of providing this type of service for us.

***Gemstone Production.*** Our gemstone production is tied to an exclusive agreement with Quali-Tech, Inc., and future gemstone irradiation services are dependent upon the continuation of that agreement. Should this agreement terminate, sales in our radiological services would be negatively impacted because the agreement prohibits us from processing gemstones for other customers for two years after the agreement terminates.

***Nuclear Medicine.*** Our nuclear medicine calibration and reference standard manufacturing is conducted under an exclusive contract with RadQual, LLC, which in turn has agreements in place with several companies for marketing and sales.

***Radiochemical Iodine.*** Our radiochemical iodine is supplied through a contract with a single supply source. Unanticipated contract terminations by any of these suppliers and other third parties can have a material adverse impact on operations, financial results, and cash flow.

## **Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.**

On April 22, 2011, the Company's compensation committee amended the stock option granted to its Chief Executive Officer, Steve Laflin, in April 2001 under the Company's 2000 Long Term Incentive Plan. The grant to purchase 1,000,000 shares of the Company's common stock was amended to allow a net exercise Option. This net exercise option permitted Mr. Laflin to direct the Company to withhold shares of the Company's common stock that would have otherwise been issued upon exercise of the option to meet withholding tax obligations. On April 22, 2011, immediately following the committee's approval, Mr. Laflin instructed the Company to "net" exercise the option as per the terms approved by the compensation committee which resulted in the issuance of 351,263 shares of the Company's common stock. The issuance was made pursuant to Section 4(2) of the Securities Act of 1933.

#### **Item 5. Other Information**

On May 1, 2011 the Company entered into two new lease agreements for the Company's facilities located in Idaho Falls, Idaho. The new lease for the main facility at 4137 Commerce Circle, Idaho Falls, Idaho, is for a period of ten years and includes an option to extend for an additional five years. The monthly rental payment under the terms of the new lease is \$11,359. The new lease for the FEP facility at 1359 Commerce Way, Idaho Falls, Idaho is for a period of one year and includes an option to extend for an additional five years. The monthly rental payment under the terms of the lease is \$4,717.

**Item 6. Exhibits**

3(i)

Restated Certificate of Formation, as amended (incorporated by reference to Exhibit 3(i) of the Company's Quarterly Report on Form 10-Q for period ended June 30, 2010).

3(ii)

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

10.1

Lease Agreement for 4137 Commerce Circle dated May 1, 2011 between Adrian Rand Robinson, Dorothy Robinson and the Company.\*

10.2

Lease Agreement for 1359 Commerce Way dated May 1, 2011 between Adrian Rand Robinson, Dorothy Robinson and the Company.\*

31.1

Certification under Section 302 of the Sarbanes-Oxley Act of 2002 for Chief Executive Officer.\*

31.2

Certification under Section 302 of the Sarbanes-Oxley Act of 2002 for Chief Financial Officer.\*

32.1

Certification by the Chief Executive Officer furnished pursuant to 18 U.S.C. Section 1350 adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.\*

32.2

Certification by the Chief Financial Officer furnished pursuant to 18 U.S.C. Section 1350 adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.\*

101

The following financial statements, formatted in XBRL: (i) Unaudited Condensed Consolidated Balance Sheets as of June 30, 2011 and December 31, 2011, (ii) Unaudited Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2011 and the three and six months ended June 30, 2010 (iii) Unaudited Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2011 and June 30, 2010 and (v) Notes to Unaudited Condensed Consolidated Financial Statements, tagged as blocks of text. The information is Exhibit 101 is furnished and not filed, as provided in Rule 402 of Regulation S-T.\*

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\* Filed herewith

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

International Isotopes Inc.  
(Registrant)

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

By: /s/ Laurie McKenzie-Carter  
Laurie McKenzie-Carter  
Chief Financial Officer

Date: August 10, 2011

**EXHIBIT INDEX**

**Exhibit**

**Number**

**Description of Document**

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